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#### EDITORIAL NOTICE.

Contributors of perturbed orbital elements are reminded (cf. MPC 17476) that use of the Epoch 1992 June 27.0 TT (rather than 1991 Dec. 10.0 ET) will become effective FOLLOWING the 1991 Nov. 21 batch of MPCs. As was also previously announced, no MPCs will be issued at the 1991 Dec. 21 full moon.

Contributors of orbits AND OF OBSERVATIONS are further reminded that use of the new standard reference system FK5/J2000.0 (rather than FK4/B1950.0, for example) will also become effective for everything published in the MPCs FOLLOWING the 1991 Nov. 21 batch. This effectively means that all astrometric observations made during and after the dark run starting in late October will be published in the J2000.0 system. Since many observers are already utilizing the PPM and the GSC for reducing their data, they will obviously find it convenient no longer to have to reconvert their data to B1950.0. Following the recommendation of IAU Commission 20, other observers are encouraged to introduce these or other appropriate J2000.0 star catalogues into their work as soon as possible. In addition to the relevant information on MPC 17474, it is noted that the northern-hemisphere portion of the PPM is now available also in printed form from Spektrum Akademischer Verlag (Heidelberg, Berlin and New York) and that the final magnetic-tape version of the southern-hemisphere portion is essentially now ready for distribution by the organizations mentioned on MPC 17474; the printed volumes for the southern hemisphere will be published some time during 1992.

For the next few months, it is therefore EXTREMELY IMPORTANT that the Minor Planet Center knows whether observations (particularly of newly-discovered objects) are being submitted in the B1950.0 or the J2000.0 system. To be on the safe side, observers might simply state the system being used. Otherwise, the Minor Planet Center may have to assume that data submitted by e-mail in, for example, the format described on MPC 4937-4938 (1979 Nov. 1) are for B1950.0. Observers are strongly encouraged to submit their J2000.0 observations by e-mail and in a new format to be described below; if this format is utilized, the Minor Planet Center will assume that the data are in fact for J2000.0.

Regular contributors of orbital elements are being advised individually of the new format to be used for J2000.0 orbits. The Minor Planet Center would greatly appreciate the cooperation of all observers and orbit computers during the changeover. Furthermore, because of the need to make the necessary changes in its own operation, the Minor Planet Center remarks THAT BETWEEN THE BEGINNING OF NOVEMBER 1991 AND THE MIDDLE OF JANUARY 1992 IT WILL GENERALLY NOT BE ABLE TO RESPOND TO SCIENTIFIC ENQUIRIES OR TO

SUPPLY IDENTIFICATIONS OR DESIGNATIONS OR ORBITS OR EPHEMERIDES FOR NEW DISCOVERIES. Contributors might therefore consider utilizing some of this time to make the appropriate changes in their operations. Of course, urgent observations, i.e., those referring to new discoveries of near-earth objects and new discoveries and recoveries of comets, will continue to be handled during this time, with the relevant data being published as usual on the IAU Circulars; it should be noted, however, that the changeover from B1950.0 to J2000.0 will not be made in the IAU Circulars until close to the "official" date of 1992 Jan. 1.

The format for the J2000.0 observations differs principally in the form in which objects (minor planets and comets) are designated and by having the fields for right ascension, declination and magnitude begin in columns 33, 45 and 66 (rather than columns 34, 46 and 68). Here are three examples showing UTC times, positions and magnitudes with increasing precision:

Col.	32	33	44	45	56	66	71	78	80
16									
1991 03 03.4532		02 02 35.9		+15 44 25		9	T	897	
1960 10 26.31531		23 50 05.80		-03 24 40.3		18.2		675	
1992 01 01.003471		06 45 08.871		-16 42 57.99		-1.46V		500	

It is anticipated that almost all observations in the future will be given to the medium precision, with the UTC time to 0.00001 day, right ascension to 0.01 timesec, declination to 0.1 arcsec and magnitude to 0.1. The first example above illustrates the least acceptable precision (generally for an observation made under very bad conditions), while the third should be used only for observations, such as those made with the Carlsberg transit circle at La Palma, where the final digits do have some absolute significance. The first observation above refers to a comet, and the T in column 71 indicates that the magnitude is "total" (the alternative of N indicating a "nuclear" magnitude). For minor planets, the default magnitude is in the B system and should not be specified, as in the second example. The third example is of a magnitude in the V system; other likely alternatives are R and I. Columns 78-80 give the observatory code as on MPC 16637-16645. Note that leading zeros should be given in all fields except for the magnitude; the magnitude field is generally optional, but at least an approximate magnitude should be provided for at least one observation of every unidentified object.

An object's designation is given in columns 1-12 as in the following examples:

Numbered minor planets (note the leading zeros):

Col.	1	5	
00001			= (1) Ceres
00374			= (374) Burgundia
04960			= (4960) 4657 P-L
10000			= (10000) Decachiliad

Unnumbered minor planets (initial J stands for century digits 19):

Col.	6	12	
J91M00A			= 1991 MA (note the zeros in columns 10-11)
J90H04V			= 1990 HV4 (note the zero in column 10)
J81E49T			= 1981 ET49
K00YA9Z			= 2000 YZ109 (initial K for 20; fifth character A = 10)

J24Y00E = A924 YE (pre-1925 assumed to be in "A" notation)  
 I73O00A = A873 OA (initial I stands for century digits 18)

Unnumbered minor planets in special surveys:

Col.	6	12	
	PLS2001		= 2001 P-L
	T2S4028		= 4028 T-2
	T3S5139		= 5139 T-3

Comets:

Col.	3	12	
	J8603J820i		= 1986 III = 1982i (note the zero in column 11)
	J8818J871c		= 1988 XVIII = 1987c1
	J910t		= 1991t (definitive designation not yet available)
	K25Bh		= 2025h11 (initial K for 20; fourth character B = 11)
	J8915	'	= 1989 XV (no provisional designation; ' implies a comet)

The character ' is ASCII 96, not an international standard. In addition, for each short-period comet columns 1-2 give a unique code (copies of which can be supplied on request), column 1 being a character in the range ASCII 33-39 (with future extension to ASCII 40-46); the code for P/Halley is '1 (corresponding to 901 in the current system).

For new discoveries the observer will need to provide his or her own temporary designations. Like the designations for unnumbered minor planets (including survey objects) these should begin in column 6, but there must be no more than six characters (i.e., column 12 must be blank). Furthermore all the characters used in these designations should be restricted to ASCII 47-90 (i.e., generally numerals and upper-case letters, although the symbols / and ? in column 6, for example, can usefully indicate that the object is not or is questionably equal to what follows).

As a general rule it is useful to adopt for temporary designations of minor planets a series of from one to three upper-case letters, followed by sequential numerals. If there is more than one observer associated with a program and it is necessary to specify different discoverers (or combinations of discoverers), this should be done using these letters, which can of course also be used to indicate different phases of the same general observing program. If necessary, temporary designations can be recycled, but this should not be done until the Minor Planet Center's designations for the objects are firmly established.

If he or she considers it important, the observer should indicate the discovery observation of a new minor planet with an asterisk in column 13; otherwise the Minor Planet Center will generally define the chronologically earliest observation to be the discovery observation. A discovery is normally credited only when there are observations on at least two nights; at the time of the initial report the observer should provide ALL the observations of the object on these two nights; except in the case of a near-earth object or other object of extraordinary interest, any further observations of the object on other nights in a particular dark run should also ALL be provided together (but this can certainly also be at the time that the first two nights' observations are provided).

For minor planets the standard notes (cf., e.g., MPC 18854-18855) that generally imply inferior images or conditions should be indicated with the

appropriate letter in column 14; this column is also sometimes used for a numeral to distinguish among different programs at the same observing site. Column 15 is now reserved for an indication of the manner in which an observation is made, the default being photographic, with the column then left blank. The characters to be used are C = CCD, E = encoder, M = micrometric, T = transit. However, precedence will be given to the use of the letter A to indicate that the J2000.0 position has simply been adjusted from a position originally specified in some other system.

\* \* \* \* \*

## ERRATA.

MPC	Line	
16445	-14	For (4349) Tiburcio read (4349) Tiburcio
16445	-11	For Tiburcio read Tiburcio
18486	13-14	The 15 selected minor planets in the ITA program should read: 1, 2, 3, 4, 6, 7, 11, 18, 25, 39, 40, 148, 389, 532 and 704.
18773	23	For Sept. 5-8 read Sept. 3-8

\* \* \* \* \*

## CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Mag.	N	Obs.
1957 WJ1	1957 11 27.23334	03 20 48.71	+03 59 53.6	MPC10504				760
1957 WJ1	1957 11 27.27709	03 20 46.29	+03 59 28.9	MPC10504				760
1981 SE	1981 09 29.19502	23 52 11.48	-01 46 05.4	MPC 6411				801
1981 SE *	1981 09 30.24638	23 51 17.38	-01 52 33.1	MPC 6411				801
1990 FT	1990 03 29.47361	11 57 54.65	-05 39 40.6	MPC16326	16.5			400
1990 FT	1990 03 29.48924	11 57 53.90	-05 39 41.0	MPC16326				400
1991 RD *	1991 09 04.59093	23 16 44.69	+00 19 32.3	MPC18675	16	V		413
217	1931 01 17.25694	07 30 19.25	+10 50 12.8	MPC 6265				690
997	1954 10 20.18689	00 24 22.90	+16 56 43.5	MPC 1398	17.0		1	760
997	1954 10 20.23549	00 24 20.87	+16 56 15.6	MPC 1398			1	760
1164	1951 03 05.38365	11 49 29.43	+12 55 32.9	MPC 555	15.2			760

Note 1: poor guiding.

\* \* \* \* \*

## IDENTIFICATION CHANGES.

Continuation to MPC 18665.

Object	Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	N	Obs.
1932 CN1 *	1932 02 12.98972	10 02 41.65	+15 36 05.4	1932 CR				024
1975 EG6 *	1975 03 15.87869	10 56 38.31	+11 26 19.6	1975 EP1	17.0			095
1977 ST3 *	1977 09 18.98690	01 14 27.84	+09 53 18.5	1977 RV6	17.0			095
1978 WD15*	1978 11 29.34653	04 05 08.25	+19 57 50.5	1761	17.5			675
1978 WD15	1978 11 30.34809	04 04 13.32	+19 56 16.6	1761				675
1981 TR4 *	1981 10 04.36042	00 56 39.87	+07 27 41.9	1981 SS1	17.0			688
1981 TR4	1981 10 04.39514	00 56 37.70	+07 27 21.1	1981 SS1				688
1985 JP2 *	1985 05 14.33611	15 37 19.07	-12 12 39.2	1985 JM1				675
1987 RR6 *	1987 09 03.04861	01 11 12.55	+12 46 23.8	1987 UE2	15.0V			095
1991 OB1 *	1991 07 16.38993	21 41 25.13	-07 32 46.7	1991 OM	17.8			675
1991 OB1	1991 07 16.42917	21 41 24.23	-07 32 55.3	1991 OM	18.0			675

## OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

- 046 Klet. Observers A. Mrkos and Z. Vavrova.  
 372 Geisei. 0.60-m reflector. Observer T. Seki. In part from Orient.  
 Astron. Assoc. Comet Bull.  
 402 Dync. 0.25-m f/3.4 Schmidt. Observer A. Sugie.  
 413 Siding Spring. U.K. Schmidt and Uppsala Southern Schmidt. Observers  
 M. Hartley, R. H. McNaught, K. S. Russell, C. S. Shoemaker and E. M.  
 Shoemaker. Measured by McNaught.  
 503 Cambridge. Observer J. D. Shanklin.  
 540 Linz. 0.3-m f/5.2 Schmidt-Cassegrain. Observers E. Meyer, E.  
 Obermair and H. Raab.  
 587 Sormano. 0.21-m f/4.9 astrograph. Observers M. Cavagna and  
 P. Sicoli.  
 589 Santa Lucia Stroncone. 0.5-m Ritchey-Chretien f/7.5 reflector.  
 Observers A. Vagnozzi, G. C. Morando, S. Casulli and R. Castellani.  
 657 Victoria. 0.5-m reflector + CCD. Observers J. B. Tatum and D. Balam.  
 675 Palomar. 0.46-m Schmidt. Observers S. Cohen, E. Helin, K. Lawrence,  
 D. H. Levy, P. Rose, C. S. Shoemaker and E. M. Shoemaker.  
 691 Steward Observatory, Kitt Peak. 0.9-m SPACEWATCH telescope. Observers  
 T. Gehrels and J. V. Scotti. Measured by Scotti.  
 801 Oak Ridge Observatory. 1.5-m reflector + CCD. Observers R. E.  
 McCrosky and C.-Y. Shao.  
 894 Otomo. 0.25-m f/3.4 reflector. Observer S. Otomo.  
 900 Ohtsu. 0.16-m f/2.5 Schmidt. Observer Y. Ikari.  
 978 Conder Brow. Observer D. Buczynski. Communicated by G. M. Hurst.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
Periodic Comet Arend-Rigaux							
/1984 XXI	1991 09	12.48439	07 32 48.22	+11 07 19.6	15.8T	1	691
/1984 XXI	1991 09	12.49352	07 32 49.97	+11 07 19.1		1	691
/1984 XXI	1991 09	12.50623	07 32 52.27	+11 07 18.4		1	691
/1984 XXI	1991 09	15.48922	07 42 32.66	+11 03 23.9	15.8T		691
/1984 XXI	1991 09	15.49771	07 42 34.28	+11 03 23.3			691
/1984 XXI	1991 09	15.50656	07 42 36.01	+11 03 22.3			691
Periodic Comet Machholz							
/1986 VIII	1991 08	03.85692	10 49 59.51	+27 12 36.8			587
Periodic Comet Gunn							
/1989 XI	1991 09	17.38643	03 22 32.14	+12 31 59.9			691
/1989 XI	1991 09	17.39730	03 22 32.03	+12 31 59.2		2	691
/1989 XI	1991 09	17.40841	03 22 31.88	+12 31 59.6			691
Periodic Comet Schwassmann-Wachmann 1							
/1989 XV	1991 09	07.38218	03 45 37.44	+29 52 35.7			801
/1989 XV	1991 09	08.36748	03 45 43.96	+29 54 25.6			801
/1989 XV	1991 09	17.34896	03 46 08.62	+30 09 27.5			691
/1989 XV	1991 09	17.36094	03 46 08.62	+30 09 28.6			691
/1989 XV	1991 09	17.37301	03 46 08.61	+30 09 29.9			691
Periodic Comet Wild 2							
/1989t	1991 09	07.05288	17 18 35.56	-21 02 33.7			801
/1989t	1991 09	07.06103	17 18 36.06	-21 02 34.4			801
/1989t	1991 09	13.01586	17 24 10.51	-21 15 16.3			801
/1989t	1991 09	13.02615	17 24 11.11	-21 15 19.2			801

## Periodic Comet Van Biesbroeck

/1989h1	1991 09 06.10021	21 03 23.09	-16 01 28.6		801
/1989h1	1991 09 06.13176	21 03 22.65	-16 01 36.4		801
/1989h1	1991 09 08.09295	21 03 01.90	-16 09 22.3		801
/1989h1	1991 09 08.15634	21 03 01.21	-16 09 36.9		801
/1989h1	1991 09 13.03546	21 02 30.79	-16 26 53.7		801
/1989h1	1991 09 13.06485	21 02 30.66	-16 26 59.3		801

## Comet Shoemaker-Levy (1991d)

/1991d	1991 05 13.16632	08 47 05.57	+21 34 20.4	13.6T	675
/1991d	1991 05 13.21146	08 47 06.68	+21 34 41.1		675

## Periodic Comet Takamizawa

/1991h	1991 09 12.01263	16 32 23.16	-18 45 28.8	3	801
/1991h	1991 09 12.01628	16 32 23.80	-18 45 31.8		801
/1991h	1991 09 13.00524	16 35 10.59	-18 58 34.8	4	801
/1991h	1991 09 13.00800	16 35 11.03	-18 58 39.5	4	801

## Periodic Comet Faye

/1991n	1991 09 05.58889	01 23 44.80	+14 37 49.5		900
/1991n	1991 09 05.62431	01 23 46.57	+14 37 45.7		900
/1991n	1991 09 06.28811	01 24 23.24	+14 36 35.9		801
/1991n	1991 09 06.30022	01 24 23.86	+14 36 34.6		801
/1991n	1991 09 07.98438	01 25 55.61	+14 32 55.0		978
/1991n	1991 09 07.99340	01 25 56.14	+14 32 53.9		978
/1991n	1991 09 08.32359	01 26 13.17	+14 32 06.0		801
/1991n	1991 09 08.33836	01 26 13.90	+14 32 03.7		801
/1991n	1991 09 09.92515	01 27 36.79	+14 27 28.6		046
/1991n	1991 09 09.93238	01 27 37.17	+14 27 27.1		046
/1991n	1991 09 10.01323	01 27 40.96	+14 27 12.4		046
/1991n	1991 09 10.01763	01 27 41.24	+14 27 11.8		046
/1991n	1991 09 10.86543	01 28 24.13	+14 24 20.8		046
/1991n	1991 09 10.87260	01 28 24.50	+14 24 18.6		046
/1991n	1991 09 11.68056	01 29 03.98	+14 21 28.4	12 T	402
/1991n	1991 09 11.70139	01 29 04.92	+14 21 24.1		402
/1991n	1991 09 17.39104	01 33 21.61	+13 53 39.2		657
/1991n	1991 09 17.41042	01 33 22.26	+13 53 31.7		657
/1991n	1991 09 17.44375	01 33 23.58	+13 53 18.7		657
/1991n	1991 09 19.78993	01 34 56.79	+13 38 31.1		413
/1991n	1991 09 20.11419	01 35 09.37	+13 36 02.2		503

## Periodic Comet Chernykh

/1991o	1991 09 17.27205	23 30 12.57	-09 09 32.1		691
/1991o	1991 09 17.28327	23 30 12.14	-09 09 35.6	5	691
/1991o	1991 09 17.29357	23 30 11.84	-09 09 38.8		691
/1991o	1991 10 02.15586	23 22 41.55	-10 21 03.0	16.6T	691
/1991o	1991 10 02.17129	23 22 41.03	-10 21 05.9	6	691
/1991o	1991 10 02.18477	23 22 40.73	-10 21 08.9		691

## Periodic Comet Shoemaker 1

/1991p	1991 08 31.56316	20 29 21.98	-37 34 35.7		413
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## Periodic Comet Levy

/1991q	1991 08 23.10000	07 05 48.22	+36 34 18.4		046
/1991q	1991 08 23.10347	07 05 49.09	+36 34 16.5		046
/1991q	1991 09 07.82073	07 56 04.02	+35 09 13.1	13 T	372
/1991q	1991 09 07.82292	07 56 04.50	+35 09 11.4		372

/1991q	1991 09 08.15265	07 56 59.79	+35 06 59.4	7 503
/1991q	1991 09 10.07692	08 02 18.60	+34 53 56.4	046
/1991q	1991 09 10.08418	08 02 19.80	+34 53 54.0	046
/1991q	1991 09 16.79965	08 19 34.98	+34 06 49.1	894
/1991q	1991 09 16.80278	08 19 35.01	+34 06 44.0	894
/1991q	1991 09 19.09167	08 25 02.11	+33 50 23.3	540
/1991q	1991 09 19.12569	08 25 07.01	+33 50 08.6	540

## Comet Helin-Alu (1991r)

/1991r	1991 09 07.04882	16 28 19.98	-14 23 22.7	801
/1991r	1991 09 08.16389	16 28 48.90	-14 19 48.7	17.0T 675
/1991r	1991 09 08.19948	16 28 49.90	-14 19 40.0	675
/1991r	1991 09 13.01166	16 31 04.38	-14 04 52.8	801
/1991r	1991 09 13.02255	16 31 04.68	-14 04 50.0	801

## Periodic Comet Hartley 2

/1991t	1991 08 18.03681	04 56 13.65	+30 05 59.3	589
/1991t	1991 08 18.04028	04 56 14.96	+30 05 57.9	589
/1991t	1991 08 18.04375	04 56 16.26	+30 05 56.5	589
/1991t	1991 08 18.04722	04 56 17.56	+30 05 54.9	589
/1991t	1991 08 18.05069	04 56 18.90	+30 05 53.5	589
/1991t	1991 08 18.05417	04 56 20.20	+30 05 52.0	589
/1991t	1991 08 18.05764	04 56 21.50	+30 05 50.6	589
/1991t	1991 08 18.06111	04 56 22.80	+30 05 48.9	589
/1991t	1991 08 19.04514	05 02 48.86	+29 59 09.8	589
/1991t	1991 08 19.04861	05 02 50.15	+29 59 08.0	589
/1991t	1991 08 19.05208	05 02 51.47	+29 59 06.1	589
/1991t	1991 08 19.05555	05 02 52.75	+29 59 03.9	589
/1991t	1991 08 19.05903	05 02 54.07	+29 59 02.3	589
/1991t	1991 08 19.06250	05 02 55.35	+29 59 00.5	589
/1991t	1991 08 19.06597	05 02 56.66	+29 58 58.3	589
/1991t	1991 08 19.06944	05 02 57.96	+29 58 56.4	589
/1991t	1991 09 06.12666	06 49 17.62	+25 15 33.4	046
/1991t	1991 09 06.12874	06 49 18.26	+25 15 32.5	046
/1991t	1991 09 08.14605	06 59 33.97	+24 30 51.6	503
/1991t	1991 09 08.39343	07 00 47.99	+24 25 19.3	801
/1991t	1991 09 08.39461	07 00 48.34	+24 25 17.7	801
/1991t	1991 09 09.38061	07 05 40.61	+24 02 51.7	801
/1991t	1991 09 09.38144	07 05 40.86	+24 02 50.8	801
/1991t	1991 09 10.05183	07 08 56.89	+23 47 22.3	046
/1991t	1991 09 10.05374	07 08 57.49	+23 47 19.9	046
/1991t	1991 09 10.09448	07 09 09.26	+23 46 22.9	046
/1991t	1991 09 10.09616	07 09 09.86	+23 46 20.8	046
/1991t	1991 09 12.39324	07 20 04.64	+22 52 36.6	801
/1991t	1991 09 12.39439	07 20 04.96	+22 52 34.9	801
/1991t	1991 09 13.38914	07 24 40.86	+22 28 55.1	801
/1991t	1991 09 19.17796	07 49 58.19	+20 08 17.7	978
/1991t	1991 09 19.18108	07 49 58.96	+20 08 12.8	978
/1991t	1991 09 20.12252	07 53 52.11	+19 45 03.7	503

## Periodic Comet Arend

/1991u	1991 08 11.78715	06 41 21.53	+37 59 17.4	18.5T 372
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## Comet McNaught-Russell (1991v)

/1991v	1991 09 06.53752	19 30 24.49	-53 34 49.0	8 413
/1991v	1991 09 13.48403	19 22 36.05	-54 11 32.3	413
/1991v	1991 09 26.44421	19 12 00.45	-55 00 22.4	413
/1991v	1991 10 05.46667	19 07 54.09	-55 24 16.9	413

## Comet McNaught-Russell (1991w)

/1991w	1991 09 09.60058	21 52 18.17	-02 43 17.6			413
/1991w	1991 09 09.61354	21 52 17.91	-02 43 22.5	18	T	372
/1991w	1991 09 13.51047	21 50 20.14	-03 15 38.6			413
/1991w	1991 09 28.46737	21 43 38.64	-05 15 45.5			413
/1991w	1991 09 29.50706	21 43 14.11	-05 23 47.1			413

## Periodic Comet Spacewatch

/1991x	1991 09 08.26146	23 14 25.94	-08 45 13.0			691
/1991x	1991 09 08.28191	23 14 24.87	-08 45 23.9	21.1N		691
/1991x	1991 09 08.30510	23 14 23.57	-08 45 35.2			691
/1991x	1991 09 08.32431	23 14 22.64	-08 45 45.9			691
/1991x	1991 09 08.34513	23 14 21.49	-08 45 56.9			691
/1991x	1991 09 08.36135	23 14 20.60	-08 46 05.6	21.0N		691
/1991x	1991 09 09.27110	23 13 33.30	-08 54 03.4			691
/1991x	1991 09 09.27780	23 13 33.01	-08 54 07.9	20.9N		691
/1991x	1991 09 09.28718	23 13 32.52	-08 54 13.1		9	691
/1991x	1991 09 10.24296	23 12 42.99	-09 02 30.2			691
/1991x	1991 09 10.25603	23 12 42.27	-09 02 36.4			691
/1991x	1991 09 10.26464	23 12 41.81	-09 02 40.3			691
/1991x	1991 09 12.30550	23 10 56.89	-09 20 03.1			691
/1991x	1991 09 12.31586	23 10 56.29	-09 20 08.1			691
/1991x	1991 09 12.32566	23 10 55.78	-09 20 12.8	21.1N		691
/1991x	1991 09 15.29476	23 08 26.48	-09 44 34.9	21.0N		691
/1991x	1991 09 15.30542	23 08 25.91	-09 44 39.1			691
/1991x	1991 09 15.31605	23 08 25.35	-09 44 44.9			691
/1991x	1991 09 15.33130	23 08 24.58	-09 44 51.7		A	691
/1991x	1991 09 17.32016	23 06 47.54	-10 00 29.3			691
/1991x	1991 09 17.33057	23 06 46.91	-10 00 35.8			691

Note 1: nuclear region poorly condensed with coma of diameter 16"; a curved tail extends 1'.6 from p.a. 310 to 272 . 2: coma diameter 14"; 1'.2 tail in p.a. 248 . 3: weak and diffuse. 4: image weak. 5: coma diameter 21", 1'.5 tail in p.a. 260 ; secondary with coma diameter 8", 3.2 mag fainter than primary, separated by 57".1 in p.a. 71 . 6: coma diameter 30"; secondary with coma diameter 11" separated by 58".4 in p.a. 71 . 7: low accuracy due to drive fault. 8: involved with star. 9: condensation essentially stellar with tail > 5' long in p.a. 258 . A: 5'.23 tail and 8'.14 fainter tail in p.a. 259 .

\* \* \* \* \*

## OBSERVATIONS OF MINOR PLANETS.

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

A earlier approximate position inferior  
a sense of motion ambiguous  
B black or dark plate  
b bad seeing  
C correction to earlier position  
c crowded star field  
D declination uncertain  
d diffuse image  
E at or near edge of plate



F faint image  
 f involved with emulsion or plate flaw  
 G poor guiding  
 g no guiding  
 I involved with star  
 i inkdot measured  
 M measurement difficult  
 N near edge of plate, measurement uncertain  
 O image out of focus  
 o plate measured in one direction only  
 P position uncertain  
 p poor image  
 R right ascension uncertain  
 r poor distribution of reference stars  
 S poor sky  
 s streaked image  
 T time uncertain  
 t trailed image  
 U uncertain image  
 u unconfirmed image  
 V very faint image  
 W weak image  
 w weak solution

Object Date UT R. A. (1950) Decl. Mag. N Obs.

## 010 Caussols

A. Maury, CERGA Caussols, F-06460 Saint Vallier de Thiey, France

Observer C. Pollas

Measurer C. Pollas

0.9-m Schmidt telescope

340	1983 10 05.00235	00 06 59.65	-02 24 00.8		010
340	1983 10 05.02318	00 06 58.67	-02 24 04.1		010
4214	1983 10 05.00235	00 06 43.62	-00 13 12.3		010
4214	1983 10 05.02318	00 06 42.52	-00 13 16.3		010
4759	1983 10 05.00235	00 04 48.34	-00 22 51.0		010
4759	1983 10 05.02318	00 04 47.66	-00 22 55.0		010

## 033 Tautenburg

F. Borngen, Karl Schwarzschild Observatorium, O-6901 Tautenburg,  
 Federal Republic of Germany

L. D. Schmadel, Astronomisches Rechen-Institut, W-6900 Heidelberg,  
 Federal Republic of Germany

Observers F. Borngen, L. D. Schmadel

1.3-m Schmidt telescope

PPM

1980 TW5	1991 09 13.06181	02 27 14.43	+19 28 05.0	18.3	033
1980 TW5	1991 09 13.11181	02 27 13.88	+19 28 05.1		033
1980 TW5	1991 09 14.07813	02 27 04.10	+19 28 08.5		033
1980 TW5	1991 09 15.11042	02 26 52.18	+19 28 04.8		033
1981 GC	1991 09 13.03507	01 08 12.65	+09 14 12.6	18.7	033
1981 GC	1991 09 13.08715	01 08 10.63	+09 14 02.1		033
1981 GC	1991 09 13.99479	01 07 35.72	+09 10 56.4		033
1981 GC	1991 09 14.05035	01 07 33.47	+09 10 45.4		033
1981 GC	1991 09 15.03090	01 06 54.70	+09 07 17.2		033
1981 GC	1991 09 15.08368	01 06 52.47	+09 07 05.9		033
1981 GC	1991 09 18.06076	01 04 48.92	+08 55 54.1		033
1984 UC1	1991 09 13.03507	01 06 33.13	+11 10 10.7	18.5	033
1984 UC1	1991 09 13.08715	01 06 31.20	+11 10 01.2		033

1984 UC1	1991 09 13.99479	01 05 58.54	+11 07 13.5	033
1984 UC1	1991 09 14.05035	01 05 56.42	+11 07 02.8	033
1984 UC1	1991 09 15.03090	01 05 19.56	+11 03 49.1	033
1984 UC1	1991 09 15.08368	01 05 17.36	+11 03 38.7	033
1984 UC1	1991 09 18.06076	01 03 17.01	+10 52 43.9	033
1989 CO3	1991 09 13.03507	01 05 03.93	+10 57 18.7	18.4 033
1989 CO3	1991 09 13.08715	01 05 02.56	+10 57 02.2	033
1989 CO3	1991 09 13.99479	01 04 40.03	+10 52 03.8	033
1989 CO3	1991 09 14.05035	01 04 38.42	+10 51 45.4	033
1989 CO3	1991 09 15.03090	01 04 12.29	+10 46 08.5	033
1989 CO3	1991 09 15.08368	01 04 10.70	+10 45 49.4	033
1989 CO3	1991 09 18.06076	01 02 41.96	+10 27 19.7	033
1989 UF7	1991 04 09.84722	09 14 09.86	+19 21 17.1	033
1989 UF7	1991 04 10.84792	09 14 19.87	+19 19 10.3	19.2 033
1989 UF7	1991 04 11.85486	09 14 31.58	+19 16 55.3	033
1989 UF7	1991 04 12.82639	09 14 44.50	+19 14 38.7	033
1989 UF7	1991 04 13.82778	09 14 59.32	+19 12 11.1	V 033
1991 BV	1991 04 08.87292	09 14 25.85	+20 18 31.3	033
1991 BV	1991 04 09.84722	09 14 51.09	+20 19 52.8	033
1991 BV	1991 04 10.84792	09 15 18.40	+20 21 06.2	16.3 033
1991 BV	1991 04 11.85486	09 15 47.37	+20 22 08.7	033
1991 BV	1991 04 12.82639	09 16 16.84	+20 22 59.7	033
1991 BV	1991 04 13.82778	09 16 48.57	+20 23 41.8	033
1991 EB	1991 04 11.83090	10 56 26.39	+02 07 58.7	033
1991 EB	1991 04 11.93715	10 56 24.07	+02 08 23.1	17.9 033
1991 FC	1991 04 11.82222	10 51 33.58	+01 58 39.0	033
1991 FC	1991 04 11.83958	10 51 33.54	+01 58 59.6	033
1991 FC	1991 04 11.92847	10 51 32.85	+02 01 00.3	16.9 033
1991 FC	1991 04 11.94583	10 51 32.77	+02 01 20.8	033
1991 RO2	1991 09 05.04167	00 49 04.20	+11 22 13.8	16.9 033
1991 RO2	1991 09 05.08819	00 49 03.67	+11 22 00.8	033
1991 RO2	1991 09 12.94167	00 47 01.20	+10 36 13.3	033
1991 RO2	1991 09 12.98472	00 47 00.11	+10 35 55.1	033
1991 RO2	1991 09 14.02326	00 46 35.52	+10 28 27.6	033
1991 RO2	1991 09 15.00313	00 46 10.99	+10 21 08.6	033
1991 RO2	1991 09 15.05729	00 46 09.48	+10 20 44.2	033
1991 RP2 *	1991 09 09.98889	00 21 58.53	+10 06 55.5	17.4 033
1991 RP2	1991 09 10.03264	00 21 56.89	+10 06 41.9	033
1991 RP2	1991 09 12.92014	00 20 08.31	+09 50 42.4	033
1991 RP2	1991 09 12.96389	00 20 06.58	+09 50 27.9	033
1991 RP2	1991 09 13.96840	00 19 27.53	+09 44 37.3	033
1991 RP2	1991 09 14.94965	00 18 48.87	+09 38 47.0	033
1991 RQ2 *	1991 09 09.98889	00 22 22.72	+07 58 58.9	18.5 033
1991 RQ2	1991 09 10.03264	00 22 21.66	+07 58 43.0	033
1991 RQ2	1991 09 12.92014	00 20 59.85	+07 39 24.2	033
1991 RQ2	1991 09 12.96389	00 20 58.56	+07 39 02.5	033
1991 RQ2	1991 09 13.96840	00 20 27.40	+07 31 45.6	033
1991 RQ2	1991 09 14.94965	00 19 55.83	+07 24 25.2	033
1991 RR2 *	1991 09 09.98889	00 24 45.17	+07 55 50.7	17.9 033
1991 RR2	1991 09 10.03264	00 24 43.99	+07 55 36.0	033
1991 RR2	1991 09 12.92014	00 23 23.26	+07 38 45.9	033
1991 RR2	1991 09 12.96389	00 23 21.96	+07 38 27.0	033
1991 RR2	1991 09 13.96840	00 22 51.11	+07 32 03.0	033
1991 RR2	1991 09 14.94965	00 22 19.73	+07 25 33.7	033
1991 RS2 *	1991 09 09.98889	00 25 25.54	+08 50 57.3	17.3 033
1991 RS2	1991 09 10.03264	00 25 23.72	+08 50 41.8	033
1991 RS2	1991 09 12.92014	00 23 20.17	+08 32 02.1	033
1991 RS2	1991 09 12.96389	00 23 18.21	+08 31 44.1	033
1991 RS2	1991 09 13.96840	00 22 33.10	+08 24 50.4	033

1991	RS2		1991	09	14.94965	00	21	48.02	+08	17	53.2		033
1991	RT2	*	1991	09	09.98889	00	25	36.14	+10	13	22.8	18.5	033
1991	RT2		1991	09	10.03264	00	25	34.25	+10	13	08.2		033
1991	RT2		1991	09	12.92014	00	23	29.91	+09	56	09.7		033
1991	RT2		1991	09	12.96389	00	23	27.83	+09	55	54.4		033
1991	RT2		1991	09	13.96840	00	22	42.14	+09	49	30.0		033
1991	RT2		1991	09	14.94965	00	21	56.43	+09	43	00.2		033
1991	RU2	*	1991	09	09.98889	00	25	57.06	+10	24	11.4	18.6	033
1991	RU2		1991	09	10.03264	00	25	54.99	+10	24	02.0		033
1991	RU2		1991	09	12.92014	00	23	35.56	+10	11	31.1		033
1991	RU2		1991	09	12.96389	00	23	33.32	+10	11	19.7		033
1991	RU2		1991	09	13.96840	00	22	42.82	+10	06	35.4		033
1991	RU2		1991	09	14.94965	00	21	52.65	+10	01	49.3		033
1991	RV2	*	1991	09	09.98889	00	25	58.60	+10	06	38.2	18.3	033
1991	RV2		1991	09	10.03264	00	25	56.49	+10	06	29.3		033
1991	RV2		1991	09	12.92014	00	23	36.28	+09	55	09.4		033
1991	RV2		1991	09	12.96389	00	23	34.02	+09	54	58.4		033
1991	RV2		1991	09	13.96840	00	22	43.41	+09	50	40.0		033
1991	RV2		1991	09	14.94965	00	21	53.22	+09	46	16.5		033
1991	RW2	*	1991	09	12.92014	00	23	49.12	+07	37	14.1		033
1991	RW2		1991	09	12.96389	00	23	47.52	+07	37	00.8		033
1991	RW2		1991	09	13.96840	00	23	08.90	+07	33	05.8		033
1991	RW2		1991	09	14.94965	00	22	30.59	+07	29	09.5		033
1991	RX2	*	1991	09	09.98889	00	29	48.84	+09	58	47.9	18.2	033
1991	RX2		1991	09	10.03264	00	29	46.89	+09	58	40.5		033
1991	RX2		1991	09	12.92014	00	27	34.68	+09	48	52.6		033
1991	RX2		1991	09	12.96389	00	27	32.59	+09	48	43.7		033
1991	RX2		1991	09	13.96840	00	26	44.55	+09	44	58.7		033
1991	RX2		1991	09	14.94965	00	25	56.79	+09	41	10.4		033
1991	RY2	*	1991	09	09.98889	00	30	36.83	+10	41	11.0	18.4	033
1991	RY2		1991	09	10.03264	00	30	35.01	+10	41	05.2		033
1991	RY2		1991	09	12.92014	00	28	33.94	+10	33	41.0		033
1991	RY2		1991	09	12.96389	00	28	31.98	+10	33	33.4		033
1991	RY2		1991	09	13.96840	00	27	47.46	+10	30	30.8		033
1991	RZ2	*	1991	09	09.98889	00	30	34.22	+09	53	17.4	18.3	033
1991	RZ2		1991	09	10.03264	00	30	32.52	+09	53	07.3		033
1991	RZ2		1991	09	12.92014	00	28	40.57	+09	41	10.0		033
1991	RZ2		1991	09	12.96389	00	28	38.79	+09	40	59.1		033
1991	RZ2		1991	09	13.96840	00	27	57.97	+09	36	29.7		033
1991	RZ2		1991	09	14.94965	00	27	17.25	+09	31	59.6		033
1991	RA3	*	1991	09	09.98889	00	31	36.40	+10	20	33.3	18.7	033
1991	RA3		1991	09	10.03264	00	31	34.78	+10	20	23.5		033
1991	RA3		1991	09	12.92014	00	29	44.72	+10	08	44.8		033
1991	RA3		1991	09	12.96389	00	29	42.93	+10	08	33.4		033
1991	RA3		1991	09	13.96840	00	29	02.87	+10	04	09.5		033
1991	RA3		1991	09	14.94965	00	28	22.97	+09	59	46.7		033
1991	RB3	*	1991	09	09.98889	00	32	23.85	+09	30	14.7	17.6	033
1991	RB3		1991	09	10.03264	00	32	22.16	+09	30	08.0		033
1991	RB3		1991	09	12.92014	00	30	30.15	+09	21	00.1		033
1991	RB3		1991	09	12.96389	00	30	28.24	+09	20	52.1		033
1991	RB3		1991	09	13.96840	00	29	46.22	+09	17	12.3		033
1991	RB3		1991	09	14.94965	00	29	03.95	+09	13	25.7		033
1991	RC3	*	1991	09	09.98889	00	32	37.66	+08	28	24.3	18.1	033
1991	RC3		1991	09	10.03264	00	32	35.82	+08	28	20.2		033
1991	RC3		1991	09	12.92014	00	30	36.68	+08	22	51.2		033
1991	RC3		1991	09	12.96389	00	30	34.71	+08	22	45.2		033
1991	RC3		1991	09	13.96840	00	29	51.13	+08	20	32.7		033
1991	RC3		1991	09	14.94965	00	29	07.70	+08	18	12.2		033
1991	RD3	*	1991	09	09.98889	00	32	58.11	+09	11	00.7	18.4	033

1991 RD3	1991 09 10.03264	00 32 56.43	+09 10 47.9		033
1991 RD3	1991 09 12.92014	00 31 07.29	+08 55 40.1		033
1991 RD3	1991 09 12.96389	00 31 05.54	+08 55 26.2		033
1991 RD3	1991 09 13.96840	00 30 26.27	+08 49 57.2		033
1991 RD3	1991 09 14.94965	00 29 47.49	+08 44 29.0		033
1991 RE3 *	1991 09 12.92014	00 20 17.24	+09 13 10.7	18.8	033
1991 RE3	1991 09 12.96389	00 20 15.08	+09 13 11.2		033
1991 RE3	1991 09 13.96840	00 19 27.39	+09 13 14.1		033
1991 RE3	1991 09 14.94965	00 18 39.72	+09 13 02.8		033
1991 RF3 *	1991 09 12.92014	00 20 25.63	+08 09 14.4	19.1	033
1991 RF3	1991 09 12.96389	00 20 23.97	+08 09 04.3		033
1991 RF3	1991 09 13.96840	00 19 46.15	+08 05 23.0		033
1991 RF3	1991 09 14.94965	00 19 08.15	+08 01 26.7		033
1991 RG3 *	1991 09 12.92014	00 22 18.60	+09 07 42.6	19.6	033
1991 RG3	1991 09 12.96389	00 22 16.37	+09 07 43.6		033
1991 RG3	1991 09 13.96840	00 21 25.47	+09 07 53.6		033
1991 RG3	1991 09 14.94965	00 20 35.16	+09 07 55.6		033
1991 RH3 *	1991 09 12.92014	00 22 45.74	+09 06 04.5	18.6	033
1991 RH3	1991 09 12.96389	00 22 43.50	+09 06 04.0		033
1991 RH3	1991 09 13.96840	00 21 51.98	+09 05 21.3		033
1991 RH3	1991 09 14.94965	00 21 00.81	+09 04 27.6		033
1991 RJ3 *	1991 09 12.92014	00 24 01.24	+10 11 19.2	19.3	033
1991 RJ3	1991 09 12.96389	00 23 59.36	+10 11 09.3		033
1991 RJ3	1991 09 13.96840	00 23 18.35	+10 07 04.5		033
1991 RJ3	1991 09 14.94965	00 22 37.24	+10 02 52.9		033
1991 RK3 *	1991 09 12.92014	00 26 16.15	+09 49 18.2	17.5	033
1991 RK3	1991 09 12.96389	00 26 13.63	+09 49 29.1		033
1991 RK3	1991 09 13.96840	00 25 16.36	+09 53 13.1		033
1991 RK3	1991 09 14.94965	00 24 19.26	+09 56 42.2		033
1991 RL3 *	1991 09 12.92014	00 26 31.48	+09 45 46.2	18.0	033
1991 RL3	1991 09 12.96389	00 26 29.14	+09 45 53.4		033
1991 RL3	1991 09 13.96840	00 25 36.42	+09 48 15.0		033
1991 RL3	1991 09 14.94965	00 24 43.73	+09 50 21.7		033
1991 RM3 *	1991 09 12.92014	00 26 48.86	+09 57 13.8	19.2	033
1991 RM3	1991 09 12.96389	00 26 47.56	+09 57 08.8		033
1991 RM3	1991 09 13.96840	00 26 19.90	+09 54 59.5		033
1991 RM3	1991 09 14.94965	00 25 51.42	+09 52 39.0		033
1991 RN3 *	1991 09 12.92014	00 29 27.81	+08 42 27.8	18.9	033
1991 RN3	1991 09 12.96389	00 29 25.59	+08 42 24.4		033
1991 RN3	1991 09 13.96840	00 28 34.35	+08 41 18.1		033
1991 RN3	1991 09 14.94965	00 27 43.53	+08 40 03.8		033
1991 RO3 *	1991 09 12.92014	00 19 12.86	+08 11 10.2	18.8	033
1991 RO3	1991 09 12.96389	00 19 10.35	+08 11 03.5		033
1991 RO3	1991 09 13.96840	00 18 14.27	+08 08 43.2		033
1991 RO3	1991 09 14.94965	00 17 18.88	+08 06 17.9		033
1991 RP3 *	1991 09 12.92014	00 18 54.43	+09 53 31.7	17.5	033
1991 RP3	1991 09 12.96389	00 18 52.79	+09 53 15.4		033
1991 RP3	1991 09 13.96840	00 18 18.11	+09 46 39.6		033
1991 RP3	1991 09 14.94965	00 17 43.36	+09 39 55.9		033
1991 RQ3 *	1991 09 12.94167	00 46 05.12	+10 24 55.7	18.2	033
1991 RQ3	1991 09 12.98472	00 46 03.28	+10 24 57.6		033
1991 RQ3	1991 09 14.02326	00 45 18.89	+10 25 59.0		033
1991 RQ3	1991 09 15.00313	00 44 36.06	+10 26 49.7		033
1991 RQ3	1991 09 15.05729	00 44 33.68	+10 26 52.3		033
1991 RR3 *	1991 09 12.94167	00 46 34.67	+11 46 48.4		033
1991 RR3	1991 09 12.98472	00 46 32.62	+11 46 53.3		033
1991 RR3	1991 09 14.02326	00 45 42.95	+11 48 48.4		033
1991 RR3	1991 09 15.00313	00 44 55.02	+11 50 25.5		033
1991 RR3	1991 09 15.05729	00 44 52.14	+11 50 31.4		033

1991	RS3	*	1991	09	05.04167	00	51	17.09	+10	38	53.8	18.5	033
1991	RS3		1991	09	05.08819	00	51	15.51	+10	38	44.6		033
1991	RS3		1991	09	12.94167	00	46	14.95	+10	08	27.2		033
1991	RS3		1991	09	12.98472	00	46	13.04	+10	08	14.8		033
1991	RS3		1991	09	14.02326	00	45	28.07	+10	03	29.6		033
1991	RS3		1991	09	15.00313	00	44	44.74	+09	58	50.7		033
1991	RS3		1991	09	15.05729	00	44	42.25	+09	58	35.0		033
1991	RT3	*	1991	09	05.04167	00	52	20.58	+12	26	42.7	17.4	033
1991	RT3		1991	09	05.08819	00	52	19.68	+12	26	36.3		033
1991	RT3		1991	09	12.94167	00	49	07.79	+12	01	20.8		033
1991	RT3		1991	09	12.98472	00	49	06.37	+12	01	09.8		033
1991	RT3		1991	09	14.02326	00	48	32.93	+11	56	34.1		033
1991	RT3		1991	09	15.00313	00	48	00.16	+11	51	57.2		033
1991	RT3		1991	09	15.05729	00	47	58.14	+11	51	41.4		033
1991	RU3		1991	09	05.04167	00	55	48.47	+10	03	59.2		033
1991	RU3		1991	09	05.08819	00	55	46.93	+10	03	55.9		033
1991	RU3	*	1991	09	12.94167	00	50	52.07	+09	48	45.6		033
1991	RU3		1991	09	12.98472	00	50	50.13	+09	48	38.4		033
1991	RU3		1991	09	14.02326	00	50	04.06	+09	45	45.9		033
1991	RU3		1991	09	15.00313	00	49	19.34	+09	42	52.0		033
1991	RU3		1991	09	15.05729	00	49	16.83	+09	42	41.9		033
1991	RV3	*	1991	09	05.04167	00	56	21.39	+12	05	13.2	18.4	033
1991	RV3		1991	09	05.08819	00	56	19.83	+12	05	14.1		033
1991	RV3		1991	09	12.94167	00	51	35.04	+12	04	06.7		033
1991	RV3		1991	09	12.98472	00	51	33.28	+12	04	05.5		033
1991	RW3	*	1991	09	12.94167	00	50	50.88	+09	35	59.0		033
1991	RW3		1991	09	12.98472	00	50	49.36	+09	35	57.4		033
1991	RW3		1991	09	14.02326	00	50	12.18	+09	35	01.8		033
1991	RW3		1991	09	15.05729	00	49	33.82	+09	33	57.3		033
1991	RX3	*	1991	09	12.94167	00	42	56.30	+09	25	36.2	18.9	033
1991	RX3		1991	09	12.98472	00	42	54.74	+09	25	30.9		033
1991	RX3		1991	09	14.02326	00	42	15.86	+09	23	10.3		033
1991	RX3		1991	09	15.00313	00	41	38.26	+09	20	50.3		033
1991	RX3		1991	09	15.05729	00	41	36.21	+09	20	41.4		033
1991	RY3		1991	09	05.04167	00	49	52.28	+09	43	37.2		033
1991	RY3		1991	09	05.08819	00	49	50.16	+09	43	49.5		033
1991	RY3	*	1991	09	12.94167	00	43	23.11	+10	13	44.5		033
1991	RY3		1991	09	12.98472	00	43	20.75	+10	13	52.9		033
1991	RY3		1991	09	14.02326	00	42	24.15	+10	17	14.5		033
1991	RY3		1991	09	15.00313	00	41	29.80	+10	20	17.6		033
1991	RY3		1991	09	15.05729	00	41	26.74	+10	20	28.2		033
1991	RZ3	*	1991	09	12.94167	00	45	47.08	+09	02	31.7	18.6	033
1991	RZ3		1991	09	12.98472	00	45	44.51	+09	02	36.8		033
1991	RZ3		1991	09	14.02326	00	44	42.49	+09	04	26.3		033
1991	RZ3		1991	09	15.00313	00	43	42.90	+09	05	59.2		033
1991	RZ3		1991	09	15.05729	00	43	39.57	+09	06	04.7		033
1991	RA4	*	1991	09	12.94167	00	49	01.53	+11	22	19.9	19.1	033
1991	RA4		1991	09	12.98472	00	48	59.75	+11	22	04.9		033
1991	RA4		1991	09	14.02326	00	48	17.10	+11	15	59.1		033
1991	RA4		1991	09	15.00313	00	47	35.91	+11	10	03.4		033
1991	RA4		1991	09	15.05729	00	47	33.57	+11	09	43.6		033
1991	RB4	*	1991	09	12.94167	00	50	20.14	+09	07	09.3	19.0	033
1991	RB4		1991	09	12.98472	00	50	18.15	+09	07	04.6		033
1991	RB4		1991	09	14.02326	00	49	30.40	+09	05	03.6		033
1991	RB4		1991	09	15.00313	00	48	44.06	+09	02	54.0		033
1991	RB4		1991	09	15.05729	00	48	41.54	+09	02	51.6		033
1991	RC4	*	1991	09	12.94167	00	52	07.71	+09	20	41.4	18.0	033
1991	RC4		1991	09	12.98472	00	52	06.00	+09	20	30.9		033
1991	RC4		1991	09	14.02326	00	51	25.91	+09	16	05.2		033

1991 RC4	1991 09 15.00313	00 50 46.66	+09 11 42.9		033
1991 RC4	1991 09 15.05729	00 50 44.48	+09 11 27.0		033
1991 RD4 *	1991 09 12.94167	00 53 24.34	+09 38 59.2	18.7	033
1991 RD4	1991 09 12.98472	00 53 22.42	+09 38 44.5		033
1991 RD4	1991 09 14.02326	00 52 37.35	+09 32 36.4		033
1991 RD4	1991 09 15.00313	00 51 53.72	+09 26 37.4		033
1991 RD4	1991 09 15.05729	00 51 51.31	+09 26 17.3		033
1991 RE4 *	1991 09 12.94167	00 53 32.03	+08 56 37.1	18.6	033
1991 RE4	1991 09 12.98472	00 53 29.98	+08 56 38.5		033
1991 RE4	1991 09 14.02326	00 52 42.30	+08 56 56.6		033
1991 RE4	1991 09 15.00313	00 51 55.71	+08 57 01.3		033
1991 RE4	1991 09 15.05729	00 51 53.08	+08 57 00.2		033
1991 RF4 *	1991 09 12.94167	00 54 00.64	+09 57 13.2	19.2	033
1991 RF4	1991 09 12.98472	00 53 58.84	+09 57 03.9		033
1991 RF4	1991 09 14.02326	00 53 16.17	+09 53 07.1		033
1991 RF4	1991 09 15.00313	00 52 34.78	+09 49 13.2		033
1991 RF4	1991 09 15.05729	00 52 32.47	+09 48 58.2		033
1991 RG4 *	1991 09 12.94167	00 53 58.12	+09 02 04.8	18.8	033
1991 RG4	1991 09 12.98472	00 53 56.66	+09 01 58.3		033
1991 RG4	1991 09 14.02326	00 53 21.16	+08 59 14.6		033
1991 RG4	1991 09 15.00313	00 52 46.17	+08 56 27.0		033
1991 RG4	1991 09 15.05729	00 52 44.20	+08 56 15.5		033
1991 RH4 *	1991 09 12.94167	00 54 14.37	+11 38 14.4	18.5	033
1991 RH4	1991 09 12.98472	00 54 12.60	+11 38 13.1		033
1991 RH4	1991 09 14.02326	00 53 29.43	+11 37 25.9		033
1991 RH4	1991 09 15.00313	00 52 47.44	+11 36 30.2		033
1991 RH4	1991 09 15.05729	00 52 45.00	+11 36 25.4		033
1991 RJ4 *	1991 09 12.94167	00 54 20.24	+09 05 30.1	19.1	033
1991 RJ4	1991 09 12.98472	00 54 18.52	+09 05 29.5		033
1991 RJ4	1991 09 14.02326	00 53 37.50	+09 04 55.9		033
1991 RJ4	1991 09 15.05729	00 52 55.67	+09 04 14.0		033
1991 RK4 *	1991 09 10.07847	01 34 14.96	+12 17 09.9		033
1991 RK4	1991 09 10.12396	01 34 13.81	+12 17 09.4	18.9	033
1991 RK4	1991 09 11.10486	01 33 49.75	+12 17 04.6		033
1991 RL4 *	1991 09 10.07847	01 39 49.55	+14 31 50.3		033
1991 RL4	1991 09 10.12396	01 39 48.64	+14 31 57.2	19.1	033
1991 RL4	1991 09 11.10486	01 39 28.96	+14 33 59.0		033
1991 RM4 *	1991 09 10.07847	01 40 18.95	+12 16 09.3		033
1991 RM4	1991 09 10.12396	01 40 18.30	+12 16 02.6	19.4	033
1991 RM4	1991 09 11.10486	01 40 05.06	+12 13 33.4		033
1991 RQ4 *	1991 09 13.03507	01 01 28.19	+11 36 52.5	18.9	033
1991 RQ4	1991 09 13.08715	01 01 26.10	+11 36 47.3		033
1991 RQ4	1991 09 13.99479	01 00 51.35	+11 35 27.4		033
1991 RQ4	1991 09 14.05035	01 00 49.10	+11 35 22.5		033
1991 RQ4	1991 09 15.03090	01 00 10.02	+11 33 44.5		033
1991 RQ4	1991 09 15.08368	01 00 07.71	+11 33 39.1		033
1991 RQ4	1991 09 18.06076	00 58 01.46	+11 27 41.2		033
1991 RR4 *	1991 09 13.03507	01 03 19.73	+10 18 01.7	18.1	033
1991 RR4	1991 09 13.08715	01 03 17.90	+10 18 03.4		033
1991 RR4	1991 09 13.99479	01 02 47.99	+10 18 30.2		033
1991 RR4	1991 09 14.05035	01 02 46.01	+10 18 31.8		033
1991 RR4	1991 09 15.03090	01 02 11.72	+10 18 48.3		033
1991 RR4	1991 09 15.08368	01 02 09.68	+10 18 49.2		033
1991 RR4	1991 09 18.06076	01 00 14.80	+10 18 29.9		033
1991 RS4 *	1991 09 13.03507	01 03 21.02	+09 17 36.3	19.3	033
1991 RS4	1991 09 13.08715	01 03 19.44	+09 17 34.5		033
1991 RS4	1991 09 13.99479	01 02 53.27	+09 16 41.8		033
1991 RS4	1991 09 14.05035	01 02 51.45	+09 16 38.1		033
1991 RS4	1991 09 15.03090	01 02 21.24	+09 15 28.8		033

1991	RS4		1991	09	15.08368	01	02	19.36	+09	15	24.8		033
1991	RS4		1991	09	18.06076	01	00	37.17	+09	10	41.6		033
1991	RT4	*	1991	09	13.03507	01	04	07.32	+10	37	54.8	19.7	033
1991	RT4		1991	09	13.08715	01	04	05.23	+10	37	46.8		033
1991	RT4		1991	09	13.99479	01	03	29.87	+10	35	22.3		033
1991	RT4		1991	09	14.05035	01	03	27.54	+10	35	11.2		033
1991	RT4		1991	09	15.03090	01	02	47.63	+10	32	21.4		033
1991	RT4		1991	09	15.08368	01	02	45.26	+10	32	12.8		033
1991	RT4		1991	09	18.06076	01	00	34.82	+10	22	26.9		033
1991	RU4	*	1991	09	13.03507	01	05	12.78	+10	32	52.7	18.6	033
1991	RU4		1991	09	13.08715	01	05	11.26	+10	32	37.1		033
1991	RU4		1991	09	13.99479	01	04	45.18	+10	28	00.6		033
1991	RU4		1991	09	14.05035	01	04	43.48	+10	27	43.6		033
1991	RU4		1991	09	15.03090	01	04	14.26	+10	22	34.9		033
1991	RU4		1991	09	15.08368	01	04	12.57	+10	22	18.2		033
1991	RU4		1991	09	18.06076	01	02	37.65	+10	05	49.1		033
1991	RV4	*	1991	09	13.03507	01	05	42.71	+10	21	50.4	19.1	033
1991	RV4		1991	09	13.08715	01	05	41.08	+10	21	40.2		033
1991	RV4		1991	09	13.99479	01	05	13.04	+10	18	38.3		033
1991	RV4		1991	09	14.05035	01	05	11.20	+10	18	27.2		033
1991	RV4		1991	09	15.03090	01	04	39.44	+10	15	00.2		033
1991	RV4		1991	09	15.08368	01	04	37.52	+10	14	48.1		033
1991	RV4		1991	09	18.06076	01	02	53.00	+10	03	14.4		033
1991	RW4	*	1991	09	13.03507	01	06	25.25	+08	43	30.9	18.4	033
1991	RW4		1991	09	13.08715	01	06	23.00	+08	43	32.2		033
1991	RW4		1991	09	13.99479	01	05	44.72	+08	43	39.3		033
1991	RW4		1991	09	14.05035	01	05	42.28	+08	43	39.5		033
1991	RW4		1991	09	15.03090	01	04	59.57	+08	43	39.9		033
1991	RW4		1991	09	15.08368	01	04	57.09	+08	43	39.2		033
1991	RX4	*	1991	09	13.03507	01	06	57.62	+10	32	42.8	18.8	033
1991	RX4		1991	09	13.08715	01	06	56.09	+10	32	26.3		033
1991	RX4		1991	09	13.99479	01	06	29.88	+10	27	38.4		033
1991	RX4		1991	09	14.05035	01	06	28.18	+10	27	20.8		033
1991	RX4		1991	09	15.03090	01	05	58.79	+10	22	00.2		033
1991	RX4		1991	09	15.08368	01	05	57.03	+10	21	42.6		033
1991	RX4		1991	09	18.06076	01	04	21.56	+10	04	35.6		033
1991	RY4	*	1991	09	13.03507	01	07	19.44	+09	06	42.5	19.1	033
1991	RY4		1991	09	13.08715	01	07	17.84	+09	06	31.1		033
1991	RY4		1991	09	13.99479	01	06	52.51	+09	03	17.1		033
1991	RY4		1991	09	14.05035	01	06	50.82	+09	03	05.0		033
1991	RY4		1991	09	15.03090	01	06	21.91	+08	59	23.9		033
1991	RY4		1991	09	15.08368	01	06	20.15	+08	59	11.9		033
1991	RY4		1991	09	18.06076	01	04	43.94	+08	47	01.0		033
1991	RZ4	*	1991	09	13.03507	01	07	22.11	+09	16	11.5	18.3	033
1991	RZ4		1991	09	13.08715	01	07	20.16	+09	15	58.7		033
1991	RZ4		1991	09	13.99479	01	06	47.36	+09	12	11.7		033
1991	RZ4		1991	09	14.05035	01	06	45.18	+09	11	57.4		033
1991	RZ4		1991	09	15.03090	01	06	08.04	+09	07	39.7		033
1991	RZ4		1991	09	15.08368	01	06	05.86	+09	07	26.0		033
1991	RZ4		1991	09	18.06076	01	04	03.91	+08	53	17.4		033
1991	RA5	*	1991	09	13.03507	01	07	57.72	+09	50	26.0	19.2	033
1991	RA5		1991	09	13.08715	01	07	55.62	+09	50	21.7		033
1991	RA5		1991	09	13.99479	01	07	19.75	+09	49	09.6		033
1991	RA5		1991	09	14.05035	01	07	17.39	+09	49	04.4		033
1991	RA5		1991	09	15.03090	01	06	37.00	+09	47	35.1		033
1991	RA5		1991	09	15.08368	01	06	34.68	+09	47	30.9		033
1991	RA5		1991	09	18.06076	01	04	22.52	+09	42	00.2		033
1991	RB5	*	1991	09	13.03507	01	08	46.36	+10	51	21.0	17.7	033
1991	RB5		1991	09	13.08715	01	08	44.31	+10	51	25.6		033

1991 RB5	1991 09	13.99479	01 08	11.12	+10 52	46.5		033
1991 RB5	1991 09	14.05035	01 08	08.93	+10 52	51.3		033
1991 RB5	1991 09	15.03090	01 07	31.19	+10 54	07.4		033
1991 RB5	1991 09	15.08368	01 07	28.87	+10 54	11.1		033
1991 RB5	1991 09	18.06076	01 05	23.98	+10 56	59.5		033
1991 RC5 *	1991 09	13.03507	01 09	47.23	+10 14	34.4	18.5	033
1991 RC5	1991 09	13.08715	01 09	45.27	+10 14	36.6		033
1991 RC5	1991 09	13.99479	01 09	11.37	+10 15	05.7		033
1991 RC5	1991 09	14.05035	01 09	09.20	+10 15	07.4		033
1991 RC5	1991 09	15.03090	01 08	31.42	+10 15	32.6		033
1991 RC5	1991 09	15.08368	01 08	29.21	+10 15	33.4		033
1991 RC5	1991 09	18.06076	01 06	27.56	+10 16	09.7		033
1991 RD5 *	1991 09	13.03507	01 10	16.47	+10 42	27.6	19.3	033
1991 RD5	1991 09	13.08715	01 10	14.10	+10 42	19.4		033
1991 RD5	1991 09	13.99479	01 09	34.31	+10 40	01.6		033
1991 RD5	1991 09	14.05035	01 09	31.72	+10 39	53.1		033
1991 RD5	1991 09	15.03090	01 08	47.11	+10 37	13.6		033
1991 RD5	1991 09	15.08368	01 08	44.51	+10 37	03.6		033
1991 RD5	1991 09	18.06076	01 06	20.40	+10 27	55.5		033
1991 RE5 *	1991 09	13.03507	01 11	52.53	+11 45	32.5	19.6	033
1991 RE5	1991 09	13.08715	01 11	51.57	+11 45	28.6		033
1991 RE5	1991 09	13.99479	01 11	35.85	+11 44	13.7		033
1991 RE5	1991 09	14.05035	01 11	34.76	+11 44	10.3		033
1991 RE5	1991 09	15.03090	01 11	15.88	+11 42	36.7		033
1991 RE5	1991 09	15.08368	01 11	14.40	+11 42	31.1		033
1991 RF5 *	1991 09	13.03507	01 13	31.31	+11 08	19.2	19.2	033
1991 RF5	1991 09	13.08715	01 13	29.03	+11 08	21.5		033
1991 RF5	1991 09	13.99479	01 12	50.99	+11 08	57.0		033
1991 RF5	1991 09	14.05035	01 12	48.52	+11 08	58.4		033
1991 RF5	1991 09	15.03090	01 12	06.00	+11 09	28.3		033
1991 RF5	1991 09	15.08368	01 12	03.37	+11 09	28.6		033
1991 RF5	1991 09	18.06076	01 09	46.17	+11 10	05.7		033
1991 RG5 *	1991 09	13.03507	01 13	52.33	+10 36	47.9	19.0	033
1991 RG5	1991 09	13.08715	01 13	50.38	+10 36	52.5		033
1991 RG5	1991 09	13.99479	01 13	18.00	+10 38	09.8		033
1991 RG5	1991 09	14.05035	01 13	15.89	+10 38	14.3		033
1991 RG5	1991 09	15.03090	01 12	39.59	+10 39	32.2		033
1991 RG5	1991 09	15.08368	01 12	37.46	+10 39	35.7		033
1991 RF7 *	1991 09	13.06181	02 21	39.89	+19 18	35.2	18.7	033
1991 RF7	1991 09	13.11181	02 21	39.38	+19 18	33.3		033
1991 RF7	1991 09	14.07813	02 21	29.13	+19 17	46.8		033
1991 RF7	1991 09	15.11042	02 21	16.24	+19 16	46.2		033
1991 RG7 *	1991 09	13.06181	02 24	20.61	+20 01	42.3	19.2	033
1991 RG7	1991 09	13.11181	02 24	21.23	+20 01	48.9		033
1991 RG7	1991 09	14.07813	02 24	32.42	+20 03	53.8		033
1991 RG7	1991 09	15.11042	02 24	42.11	+20 05	56.2		033
1991 RH7 *	1991 09	13.06181	02 25	10.47	+21 20	27.3	19.1	033
1991 RH7	1991 09	13.11181	02 25	09.79	+21 20	27.0		033
1991 RH7	1991 09	14.07813	02 24	56.76	+21 19	54.0		033
1991 RH7	1991 09	15.11042	02 24	41.24	+21 19	08.5		033
1991 RJ7 *	1991 09	13.06181	02 25	25.04	+19 32	04.2	19.2	033
1991 RJ7	1991 09	13.11181	02 25	24.30	+19 32	06.0		033
1991 RJ7	1991 09	14.07813	02 25	11.13	+19 32	42.0		033
1991 RJ7	1991 09	15.11042	02 24	55.14	+19 33	11.7		033
1991 RK7 *	1991 09	13.06181	02 26	00.17	+20 44	13.5	19.0	033
1991 RK7	1991 09	13.11181	02 25	59.49	+20 44	17.1		033
1991 RK7	1991 09	14.07813	02 25	47.18	+20 45	22.5		033
1991 RK7	1991 09	15.11042	02 25	31.94	+20 46	20.9		033
1991 RL7 *	1991 09	13.06181	02 26	07.84	+18 33	55.8	18.8	033



1991 RL7	1991 09 13.11181	02 26 07.82	+18 33 45.2		033
1991 RL7	1991 09 14.07813	02 26 06.74	+18 30 01.5		033
1991 RL7	1991 09 15.11042	02 26 03.66	+18 25 52.0		033
1991 RM7 *	1991 09 13.06181	02 28 13.14	+20 23 33.4	19.3	033
1991 RM7	1991 09 13.11181	02 28 12.99	+20 23 49.5		033
1991 RM7	1991 09 14.07813	02 28 08.72	+20 28 29.6		033
1991 RM7	1991 09 15.11042	02 28 08.27	+20 33 28.1		033
1991 RN7 *	1991 09 13.06181	02 29 21.50	+19 27 50.4	18.4	033
1991 RN7	1991 09 13.11181	02 29 21.26	+19 27 58.4		033
1991 RN7	1991 09 14.07813	02 29 16.36	+19 30 33.6		033
1991 RN7	1991 09 15.11042	02 29 09.23	+19 33 11.2		033
1991 RO7 *	1991 09 13.06181	02 30 12.42	+21 16 06.2	18.2	033
1991 RO7	1991 09 13.11181	02 30 12.32	+21 16 33.8		033
1991 RO7	1991 09 14.07813	02 30 10.20	+21 24 53.2		033
1991 RP7 *	1991 09 13.06181	02 34 18.26	+20 11 01.4	18.3	033
1991 RP7	1991 09 13.11181	02 34 18.17	+20 11 04.5		033
1991 RP7	1991 09 14.07813	02 34 15.23	+20 11 59.1		033
1991 RP7	1991 09 15.11042	02 34 10.31	+20 12 48.4		033
2041 T-3	1991 09 05.04167	00 58 00.88	+10 35 50.9	18.3	033
2041 T-3	1991 09 05.08819	00 57 59.53	+10 35 44.0		033
2041 T-3	1991 09 12.94167	00 53 44.31	+10 11 57.1		033
2041 T-3	1991 09 12.98472	00 53 42.69	+10 11 47.7		033
2041 T-3	1991 09 14.02326	00 53 03.83	+10 07 57.5		033
2041 T-3	1991 09 15.00313	00 52 26.37	+10 04 14.1		033
2041 T-3	1991 09 15.05729	00 52 24.31	+10 03 59.7		033
248	1991 09 13.06181	02 23 10.63	+18 30 50.5	15.4	033
248	1991 09 13.11181	02 23 10.14	+18 30 49.8		033
248	1991 09 14.07813	02 22 59.67	+18 30 15.9		033
248	1991 09 15.11042	02 22 46.78	+18 29 30.7		033
327	1991 09 13.06181	02 28 37.63	+19 48 57.3	15.5	033
327	1991 09 13.11181	02 28 37.00	+19 49 04.9		033
327	1991 09 14.07813	02 28 25.14	+19 51 36.6		033
327	1991 09 15.11042	02 28 10.73	+19 54 11.3		033
395	1991 09 05.04167	00 52 59.84	+10 49 49.1	15.5	033
395	1991 09 05.08819	00 52 58.39	+10 49 42.6		033
395	1991 09 12.94167	00 48 25.43	+10 26 57.2		033
395	1991 09 12.98472	00 48 23.70	+10 26 48.3		033
395	1991 09 14.02326	00 47 42.57	+10 23 05.4		033
395	1991 09 15.00313	00 47 02.96	+10 19 26.0		033
395	1991 09 15.05729	00 47 00.72	+10 19 13.5		033
465	1991 09 13.06181	02 31 30.05	+20 56 33.4	16.7	033
465	1991 09 13.11181	02 31 29.31	+20 56 35.4		033
465	1991 09 14.07813	02 31 14.23	+20 56 46.5		033
465	1991 09 15.11042	02 30 56.93	+20 56 52.2		033
627	1991 04 08.87292	09 08 35.52	+17 45 52.9		033
627	1991 04 09.84722	09 08 43.60	+17 46 23.8		033
627	1991 04 10.84792	09 08 53.19	+17 46 48.3	15.9	033
627	1991 04 11.85486	09 09 04.11	+17 47 07.0		033
627	1991 04 12.82639	09 09 16.00	+17 47 18.5		033
627	1991 04 13.82778	09 09 29.48	+17 47 22.9		033
830	1991 09 13.03507	01 04 00.95	+09 34 48.2	15.0	033
830	1991 09 13.08715	01 03 59.19	+09 34 42.3		033
830	1991 09 13.99479	01 03 29.12	+09 33 02.0		033
830	1991 09 14.05035	01 03 27.20	+09 32 55.7		033
830	1991 09 15.03090	01 02 53.73	+09 31 00.1		033
830	1991 09 15.08368	01 02 51.80	+09 30 53.9		033
830	1991 09 18.06076	01 01 04.54	+09 24 23.3		033
955	1991 04 08.87292	09 16 21.73	+20 04 29.8		033
955	1991 04 09.84722	09 16 16.65	+20 00 48.3		033

955	1991 04	10.84792	09 16	13.02	+19 56	55.6	16.4	033
955	1991 04	11.85486	09 16	11.01	+19 52	55.3		033
955	1991 04	12.82639	09 16	10.67	+19 48	57.7		033
955	1991 04	13.82778	09 16	11.89	+19 44	47.6		033
1050	1991 04	11.83090	11 00	29.97	+01 01	35.8		033
1050	1991 04	11.93715	11 00	26.28	+01 01	42.8	18.0	033
1268	1991 04	08.87292	09 14	00.25	+18 02	52.8		033
1268	1991 04	09.84722	09 14	04.09	+18 01	18.3		033
1268	1991 04	10.84792	09 14	09.16	+17 59	36.8	15.8	033
1268	1991 04	11.85486	09 14	15.34	+17 57	50.3		033
1268	1991 04	12.82639	09 14	22.42	+17 56	03.0		033
1268	1991 04	13.82778	09 14	30.81	+17 54	07.6		033
1315	1991 09	13.06181	02 27	41.26	+19 14	20.8	16.3	033
1315	1991 09	13.11181	02 27	40.67	+19 14	17.5		033
1315	1991 09	14.07813	02 27	29.63	+19 13	11.6		033
1315	1991 09	15.11042	02 27	16.54	+19 11	54.0		033
1641	1991 04	11.83090	10 50	37.61	+02 04	52.3		033
1641	1991 04	11.93715	10 50	34.58	+02 05	04.2	16.8	033
2026	1991 09	13.03507	01 01	12.64	+09 55	15.7	18.2	033
2026	1991 09	13.08715	01 01	10.49	+09 55	06.2		033
2026	1991 09	13.99479	01 00	33.64	+09 52	25.0		033
2026	1991 09	14.05035	01 00	31.26	+09 52	14.9		033
2026	1991 09	15.03090	00 59	50.23	+09 49	11.8		033
2026	1991 09	15.08368	00 59	47.92	+09 49	02.1		033
2026	1991 09	18.06076	00 57	36.42	+09 38	56.8		033
2039	1991 04	08.87292	09 16	16.55	+18 48	18.9		033
2039	1991 04	09.84722	09 16	32.10	+18 46	38.0		033
2039	1991 04	10.84792	09 16	49.37	+18 44	47.6	18.7	033
2039	1991 04	11.85486	09 17	08.19	+18 42	49.3		033
2039	1991 04	12.82639	09 17	27.80	+18 40	48.9		033
2039	1991 04	13.82778	09 17	49.34	+18 38	38.4		033
2130	1991 09	13.03507	01 07	48.50	+10 11	24.5	16.8	033
2130	1991 09	13.08715	01 07	46.16	+10 11	27.7		033
2130	1991 09	13.99479	01 07	06.65	+10 12	21.9		033
2130	1991 09	14.05035	01 07	04.06	+10 12	25.2		033
2130	1991 09	15.03090	01 06	19.46	+10 13	12.4		033
2130	1991 09	15.08368	01 06	16.82	+10 13	14.2		033
2130	1991 09	18.06076	01 03	50.95	+10 14	26.7		033
2232	1991 09	10.07847	01 40	04.18	+13 02	27.8		033
2232	1991 09	10.12396	01 40	03.25	+13 02	20.4	16.6	033
2232	1991 09	11.10486	01 39	43.86	+12 59	46.1		033
2234	1991 09	13.03507	01 08	43.80	+09 06	18.1	17.0	033
2234	1991 09	13.08715	01 08	40.58	+09 06	31.4		033
2234	1991 09	13.99479	01 07	45.75	+09 10	24.8		033
2234	1991 09	14.05035	01 07	42.27	+09 10	39.2		033
2234	1991 09	15.03090	01 06	41.61	+09 14	46.0		033
2234	1991 09	15.08368	01 06	38.22	+09 14	58.5		033
2234	1991 09	18.06076	01 03	26.51	+09 26	47.5		033
2331	1991 09	09.98889	00 27	19.58	+09 09	10.4	17.0	033
2331	1991 09	10.03264	00 27	17.60	+09 09	01.4		033
2331	1991 09	12.92014	00 25	06.58	+08 57	28.4		033
2331	1991 09	12.96389	00 25	04.51	+08 57	17.4		033
2331	1991 09	13.96840	00 24	16.79	+08 52	55.5		033
2331	1991 09	14.94965	00 23	29.17	+08 48	28.5		033
2532	1991 09	10.07847	01 41	31.16	+13 52	39.8		033
2532	1991 09	10.12396	01 41	30.48	+13 52	48.2	16.4	033
2532	1991 09	11.10486	01 41	16.36	+13 55	37.5		033
3056	1991 04	08.87292	09 14	11.32	+20 35	46.5		033
3056	1991 04	09.84722	09 14	18.72	+20 32	21.5		033

3056	1991 04 10.84792	09 14 27.77	+20 28 45.9	18.2	033
3056	1991 04 11.85486	09 14 38.48	+20 25 02.6		033
3056	1991 04 12.82639	09 14 50.33	+20 21 22.0		033
3056	1991 04 13.82778	09 15 04.01	+20 17 29.7		033
3297	1991 04 08.87292	09 09 42.41	+18 14 46.8		033
3297	1991 04 09.84722	09 09 50.66	+18 14 01.6		033
3297	1991 04 10.84792	09 10 00.37	+18 13 10.5	18.5	033
3297	1991 04 11.85486	09 10 11.36	+18 12 13.4		033
3297	1991 04 12.82639	09 10 23.20	+18 11 12.6		033
3297	1991 04 13.82778	09 10 36.53	+18 10 04.3		033
3470	1991 09 11.10486	01 38 10.81	+12 58 04.5	18.4	033
3625	1991 09 10.07847	01 45 24.04	+14 23 55.9		033
3625	1991 09 10.12396	01 45 23.28	+14 23 50.4	16.9	033
3625	1991 09 11.10486	01 45 06.92	+14 21 41.0		033
4038	1991 09 13.06181	02 23 33.52	+21 24 49.2	17.3	033
4038	1991 09 13.11181	02 23 33.55	+21 25 07.5		033
4860	1991 04 08.87292	09 08 22.97	+18 32 55.1		033
4860	1991 04 09.84722	09 08 24.16	+18 28 49.2		033
4860	1991 04 10.84792	09 08 26.78	+18 24 33.3	17.5	033
4860	1991 04 11.85486	09 08 30.85	+18 20 12.4		033
4860	1991 04 12.82639	09 08 36.22	+18 15 57.1		033
4860	1991 04 13.82778	09 08 43.09	+18 11 28.9		033

## 046 Klet

A. Mrkos, Klet Observatory, CS-38101 Cesky Krumlov, Czechoslovakia

Observers A. Mrkos, Z. Vavrova

0.6-m Maksutov reflector

1977 PE1	1991 09 09.85582	23 06 37.58	+02 16 23.4		046
1977 PE1	1991 09 09.86994	23 06 36.91	+02 16 16.7		046
1977 PE1	1991 09 10.83215	23 05 53.58	+02 10 32.2		046
1977 PE1	1991 09 10.84622	23 05 52.97	+02 10 26.9		046
1986 SD2	1991 09 02.86543	22 11 31.43	+00 15 55.1		046
1986 SD2	1991 09 02.87955	22 11 30.67	+00 15 55.6		046
1986 SD2	1991 09 03.84969	22 10 40.76	+00 14 21.8		046
1986 SD2	1991 09 03.86381	22 10 39.98	+00 14 18.5		046
1991 EE	1991 09 02.82017	15 45 44.22	+12 40 19.3		V 046
1991 EE	1991 09 02.82469	15 45 50.06	+12 39 56.4		V 046
1991 EE	1991 09 03.81184	16 11 42.46	+10 57 55.7		V 046
1991 EE	1991 09 03.81531	16 11 48.36	+10 57 32.8		V 046
1991 EE	1991 09 06.80628	17 52 45.28	+03 02 20.0		046
1991 EE	1991 09 06.80976	17 52 53.62	+03 01 35.1		046
1991 EE	1991 09 09.81253	19 43 28.86	-06 20 59.5		046
1991 EE	1991 09 09.81601	19 43 35.41	-06 21 32.0		046
1991 EE	1991 09 10.81392	20 14 42.06	-08 46 32.3		046
1991 EE	1991 09 10.81705	20 14 47.11	-08 46 55.7		046
1991 PO10	1991 09 09.85582	23 13 00.82	+02 07 46.9	15.8	046
1991 PO10	1991 09 09.86994	23 13 00.05	+02 07 37.4		046
1991 PO10	1991 09 10.83215	23 12 15.61	+01 58 30.7		046
1991 PO10	1991 09 10.84622	23 12 14.96	+01 58 23.1		046
1991 QG	1991 09 02.86543	22 11 18.94	+00 27 28.9	16.0	046
1991 QG	1991 09 02.87955	22 11 18.39	+00 27 18.5		046
1991 QG	1991 09 03.84969	22 10 52.38	+00 18 50.2		046
1991 QG	1991 09 03.86381	22 10 52.03	+00 18 42.4		046
7	1991 09 03.88476	22 53 07.70	+04 34 44.9		046
7	1991 09 03.89888	22 53 06.79	+04 34 40.8		046
133	1991 09 06.88753	23 04 37.04	-00 33 56.9		046
133	1991 09 06.90166	23 04 36.33	-00 33 59.8		046
133	1991 09 09.89083	23 02 11.22	-00 43 20.5		046
133	1991 09 09.90495	23 02 10.56	-00 43 23.7		046

324	1991 09 06.85142	23 05 49.91	+02 31 40.0	046
324	1991 09 06.86549	23 05 49.08	+02 31 46.3	046
324	1991 09 09.85582	23 02 49.55	+02 52 01.4	046
324	1991 09 09.86994	23 02 48.76	+02 52 06.9	046
324	1991 09 10.83215	23 01 50.75	+02 58 24.7	046
324	1991 09 10.84622	23 01 49.84	+02 58 29.9	046
417	1991 09 09.89083	23 06 14.45	-00 07 41.9	046
417	1991 09 09.90495	23 06 13.87	-00 07 47.2	046
571	1991 09 03.92376	23 00 37.58	-10 38 00.3	046
571	1991 09 03.93788	23 00 36.65	-10 38 02.3	046
571	1991 09 06.92503	22 57 41.72	-10 43 17.6	046
571	1991 09 06.93927	22 57 40.87	-10 43 20.5	046
920	1991 09 02.86543	22 16 16.25	+00 37 31.5	046
920	1991 09 02.87955	22 16 15.52	+00 37 23.1	046
920	1991 09 03.84969	22 15 30.42	+00 29 21.6	046
920	1991 09 03.86381	22 15 29.79	+00 29 15.2	046
1826	1991 09 02.86543	22 08 21.75	+01 35 14.3	046
1826	1991 09 02.87955	22 08 21.00	+01 35 10.3	046
1826	1991 09 03.84969	22 07 35.79	+01 31 40.9	046
1826	1991 09 03.86381	22 07 35.08	+01 31 36.4	046
1973	1991 09 06.88753	23 02 17.13	-00 42 31.7	046
1973	1991 09 06.90166	23 02 16.55	-00 42 37.3	046
2136	1991 09 03.92376	22 52 38.90	-10 39 22.2	046
2136	1991 09 03.93788	22 52 38.25	-10 39 28.9	046
2136	1991 09 06.92503	22 50 31.25	-11 01 13.6	046
2136	1991 09 06.93927	22 50 30.75	-11 01 18.4	046
2504	1991 09 03.92376	22 58 11.16	-09 44 38.8	046
2504	1991 09 03.93788	22 58 10.32	-09 44 46.2	046
3134	1991 09 03.88476	22 52 44.99	+04 16 00.5	046
3134	1991 09 03.89888	22 52 44.29	+04 15 56.8	046
4921	1991 08 13.85903	21 02 43.80	-06 55 13.7	046
4921	1991 08 13.87315	21 02 43.07	-06 55 17.6	046

293 Burlington remote site

T. Handley, 13 Linden Avenue, Burlington, NJ 08016, U.S.A.

0.26-m f/3.9 Wright-Schmidt camera

SAOC

1988 KA	1991 06 14.20764	18 03 37.78	-23 29 28.3	293
1988 RF7	1991 06 08.31319	17 21 11.50	-17 20 32.7	293

372 Geisei

T. Seki, Kamimachi 2-9-35, Kochi, Japan

0.60-m reflector

1974 SP1	1991 09 01.57846	23 26 53.69	-06 30 24.5	17	372
1974 SP1	1991 09 01.58994	23 26 53.20	-06 30 27.9		372
1974 SP1	1991 09 07.68437	23 22 32.89	-06 58 13.9	16.5	372
1974 SP1	1991 09 11.60451	23 19 39.10	-07 16 08.8	17.5	372
1974 SP1	1991 09 11.61633	23 19 38.62	-07 16 12.8		372
1991 PL13	1991 09 01.59861	22 27 59.62	-06 22 00.4	17.5	372
1991 PL13	1991 09 01.60920	22 27 59.10	-06 22 04.4		372
1991 PL13	1991 09 07.66111	22 23 01.08	-06 50 17.9	17.5	372
1991 PL13	1991 09 07.67188	22 23 00.60	-06 50 19.8		372
1991 PL13	1991 09 09.62709	22 21 29.77	-06 59 17.2	17.5	372
1991 PL13	1991 09 09.63646	22 21 29.30	-06 59 18.3		372
1991 PY14	1991 09 07.63473	21 54 23.35	-02 27 11.8	16.5	372
1991 PY14	1991 09 07.64827	21 54 22.56	-02 27 11.8		372
1991 PY14	1991 09 09.61354	21 52 41.16	-02 28 58.3	16.5	372
1991 PO16	1991 09 07.70556	23 26 21.38	-06 00 50.4	17	372
1991 PO16	1991 09 07.71875	23 26 20.73	-06 01 02.4		372

1991 PO16	1991 09 09.68765	23 24 53.22	-06 22 51.2	17	372
1991 PO16	1991 09 09.69826	23 24 52.98	-06 22 57.6		372
1991 RY *	1991 09 07.63473	21 55 20.43	-02 29 07.3		372
1991 RY	1991 09 07.64827	21 55 19.94	-02 29 17.3		372
1991 RY	1991 09 09.61354	21 54 07.42	-02 53 29.9	17	372
1991 RE1 *	1991 09 01.59861	22 28 11.57	-06 12 28.6	17.5	372
1991 RE1	1991 09 01.60920	22 28 11.19	-06 12 35.3		372
1991 RE1	1991 09 07.66111	22 22 03.38	-06 37 53.3	17	372
1991 RE1	1991 09 07.67188	22 22 02.64	-06 37 55.0		372
1991 RE1	1991 09 09.62709	22 20 07.34	-06 46 02.4	17	372
1991 RE1	1991 09 09.63646	22 20 06.78	-06 46 02.9		372
1991 RF1 *	1991 09 07.68437	23 19 44.22	-06 36 14.1	17	372
1991 RF1	1991 09 07.69549	23 19 43.78	-06 36 18.5		372
1991 RF1	1991 09 09.66771	23 17 56.72	-06 52 29.9	17	372
1991 RF1	1991 09 09.67813	23 17 56.15	-06 52 34.4		372
1991 RG1 *	1991 09 07.68437	23 21 32.00	-06 57 57.3	17	372
1991 RG1	1991 09 07.69549	23 21 31.53	-06 57 58.3		372
1991 RG1	1991 09 09.66771	23 19 49.70	-07 06 22.4	17	372
1991 RG1	1991 09 09.67813	23 19 49.21	-07 06 23.6		372
1991 RG1	1991 09 11.60451	23 18 09.51	-07 14 28.2	18	372
1991 RG1	1991 09 11.61633	23 18 09.05	-07 14 33.2		372
1991 RH1 *	1991 09 07.68437	23 24 30.70	-06 26 51.1	17.5	372
1991 RH1	1991 09 07.69549	23 24 30.23	-06 26 54.2		372
1991 RH1	1991 09 07.70556	23 24 29.01	-06 26 50.5	17	372
1991 RH1	1991 09 07.71875	23 24 28.28	-06 26 54.0		372
1991 RH1	1991 09 09.64688	23 22 38.72	-06 28 21.6	17	372
1991 RH1	1991 09 09.65729	23 22 38.02	-06 28 24.8		372
1991 RH1	1991 09 09.68765	23 22 36.03	-06 28 26.2	17	372
1991 RH1	1991 09 09.69826	23 22 35.37	-06 28 24.6		372
1991 RJ1 *	1991 09 07.68437	23 24 52.80	-07 15 20.2	16.5	372
1991 RJ1	1991 09 07.69549	23 24 52.24	-07 15 17.5		372
1991 RJ1	1991 09 09.64688	23 22 53.93	-07 04 53.9	16.5	372
1991 RJ1	1991 09 09.65729	23 22 53.30	-07 04 48.8		372
1991 RJ1	1991 09 11.60451	23 20 54.20	-06 54 23.8	17	372
1991 RJ1	1991 09 11.61633	23 20 53.62	-06 54 23.8		372
1991 RH2 *	1991 09 07.70556	23 24 50.37	-06 03 02.9	17	372
1991 RH2	1991 09 07.71875	23 24 49.65	-06 03 03.7		372
1991 RH2	1991 09 09.68765	23 23 06.45	-06 06 03.0	17	372
1991 RH2	1991 09 09.69826	23 23 05.85	-06 06 04.5		372

## 376 Uenohara

N. Kawasato, 3-51, Hana-Koganei, Kodaira, Tokyo 187, Japan

GSC

1988 VD7	1991 10 02.50104	21 06 09.43	-27 39 33.9		376
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## 385 Nihondaira Observatory Oohira station

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

0.30-m f/3.8 hyperboloid astrocamera

GSC

1986 VG	1991 09 28.49097	00 56 19.60	+11 50 33.3	16	385
1990 DX	1991 09 28.44167	22 44 51.25	-02 33 32.4	17	F 385
1990 DX	1991 09 28.44931	22 44 51.00	-02 33 39.3		F 385

## 392 JCPM Sapporo Station

K. Watanabe, 3-8-B203, Ashibetsu Chuo 3 Jo 4 Chome, Shiroishi-Ku,

Sapporo 005, Japan

0.30-m f/2.7 Schmidt camera

1991 PM	1991 09 07.52940	21 53 51.71	+01 12 01.1	16.0	392
1991 PM	1991 09 08.50318	21 53 12.06	+01 07 38.8	16.0	392

1991 PM	1991 09 08.50833	21 53 11.80	+01 07 32.6		392
1991 PA11	1991 09 10.56267	23 43 52.76	+02 28 30.6	16.0	392
1991 PA11	1991 09 10.58229	23 43 52.18	+02 28 17.4		392
1991 PM11	1991 09 10.57622	00 03 56.09	+05 19 35.6	16.0	392
1991 PM11	1991 09 10.59653	00 03 54.91	+05 19 37.6		392
1991 QA	1991 09 07.51198	22 03 15.65	-06 54 29.3	16.0	392
1991 QA	1991 09 07.53750	22 03 14.35	-06 54 32.2		392
1991 QA	1991 09 08.53426	22 02 28.52	-06 55 31.7	16.5	392
1991 QB	1991 09 07.52170	21 29 24.38	-10 29 47.4	16.5	392
1991 QB	1991 09 07.54554	21 29 23.66	-10 29 58.9		392
1991 QB	1991 09 08.52222	21 28 49.01	-10 36 48.9	16.5	392
1991 QB	1991 09 08.52743	21 28 48.78	-10 36 50.9		392
1991 RU1	1991 09 15.55556	00 21 02.92	+04 10 04.2	16.0	392
1991 RU1	1991 09 15.59080	00 21 01.46	+04 09 59.4		392

## 399 Kushiro

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

Observer S. Ueda

Measurer H. Kaneda

0.25-m f/3.4 Wright-Schmidt camera

AGK3, SAOC

1980 RP	1991 09 07.52934	22 12 47.33	-10 28 33.7	15.5	399
1980 RP	1991 09 07.54479	22 12 46.42	-10 28 33.1		399
1980 TQ14	1991 09 07.52934	22 22 31.50	-12 22 53.4	16.5	399
1980 TQ14	1991 09 07.54479	22 22 30.67	-12 23 01.4		399
1985 VP	1991 09 30.49167	01 45 35.34	+22 50 06.8	16.5	399
1985 VP	1991 09 30.50660	01 45 34.71	+22 50 09.3		399
1987 SQ3	1991 09 30.49167	01 47 03.46	+22 47 43.2	16	399
1987 SQ3	1991 09 30.50660	01 47 02.84	+22 47 43.9		399
1989 CN1	1991 09 07.62633	00 17 28.45	-01 11 57.3	16.5	399
1989 CN1	1991 09 07.64178	00 17 27.77	-01 12 00.5		399
1989 CN1	1991 09 30.45816	23 56 53.41	-02 54 27.8	16.5	399
1989 CN1	1991 09 30.47326	23 56 52.57	-02 54 31.8		399
1991 PW12	1991 09 07.52934	22 13 23.58	-11 31 35.2	16.5	399
1991 PW12	1991 09 07.54479	22 13 22.94	-11 31 38.9		399
1991 PB13	1991 09 07.52934	22 19 43.26	-13 28 10.5	16.5	399
1991 PB13	1991 09 07.54479	22 19 42.45	-13 28 14.4		399
1991 PC13	1991 09 07.52934	22 14 58.56	-09 13 34.1	16	399
1991 PC13	1991 09 07.54479	22 14 57.71	-09 13 34.4		399
1991 PN13	1991 09 07.52934	22 16 47.38	-09 43 38.9	15.5	399
1991 PN13	1991 09 07.54479	22 16 46.39	-09 43 37.6		399
1991 PT15	1991 09 07.49444	21 52 05.16	-19 09 39.1	16	399
1991 PT15	1991 09 07.50935	21 52 04.62	-19 09 44.9		399
1991 RA1	1991 09 07.57153	23 47 57.13	+11 11 55.6	16	399
1991 RA1	1991 09 07.58617	23 47 56.30	+11 11 58.6		399
1991 RB1	1991 09 07.57153	23 54 22.66	+10 42 42.9	16.5	399
1991 RB1	1991 09 07.58617	23 54 22.09	+10 42 40.8		399
1991 RQ1 *	1991 09 07.57153	23 52 00.51	+12 27 27.3	16.5	399
1991 RQ1	1991 09 07.58617	23 52 00.03	+12 27 24.4		399
1991 RQ1	1991 09 13.53686	23 47 42.73	+11 54 07.0	16	399
1991 RQ1	1991 09 13.54797	23 47 42.22	+11 54 02.0		399
1991 RR1 *	1991 09 07.57153	23 53 16.96	+12 19 13.4	15.5	399
1991 RR1	1991 09 07.58617	23 53 16.32	+12 19 08.0		399
1991 RR1	1991 09 13.53686	23 49 16.82	+11 46 47.6	16	399
1991 RR1	1991 09 13.54797	23 49 16.37	+11 46 42.3		399
1991 RR1	1991 09 15.59225	23 47 50.75	+11 34 09.2	16	399
1991 RO4 *	1991 09 07.57153	23 48 25.19	+12 50 11.4	16.5	399
1991 RO4	1991 09 07.58617	23 48 24.56	+12 50 05.0		399

1991 RO4	1991 09	13.53686	23 44	29.09	+12 16	00.0	16.5	399
1991 RO4	1991 09	13.54797	23 44	28.49	+12 15	56.0		399
1991 RO4	1991 09	15.59225	23 43	03.04	+12 02	00.7	16.5	399
1991 RP4 *	1991 09	07.57153	23 50	01.79	+12 57	09.9	16.5	399
1991 RP4	1991 09	07.58617	23 50	01.26	+12 57	07.8		399
1991 RP4	1991 09	13.53686	23 46	27.76	+12 20	48.4	16.5	399
1991 RP4	1991 09	13.54797	23 46	27.31	+12 20	44.5		399
1991 RQ7 *	1991 09	13.53686	23 42	11.44	+12 34	54.5	16	399
1991 RQ7	1991 09	13.54797	23 42	10.77	+12 34	54.4		399
1991 RQ7	1991 09	15.59225	23 40	22.97	+12 32	07.1	16.5	399
1991 SG1 *	1991 09	29.55035	01 47	05.15	+21 27	45.0	16	399
1991 SG1	1991 09	30.49167	01 46	26.25	+21 25	19.6	16	399
1991 SG1	1991 09	30.50660	01 46	25.65	+21 25	17.1		399
2018 P-L	1991 09	07.52934	22 21	47.68	-12 35	02.4	16.5	399
2018 P-L	1991 09	07.54479	22 21	46.75	-12 35	03.4		399

## 400 Kitami

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

Observer K. Endate

Measurer K. Watanabe

0.20-m f/4.0 reflector

GSC

1989 BY	1991 09	13.54340	23 41	13.98	-07 39	12.8	16.0	400
1989 BY	1991 09	13.56076	23 41	13.18	-07 39	22.0		400
1991 PA11	1991 09	07.50347	23 45	41.83	+02 57	17.3	15.5	400
1991 PA11	1991 09	07.52257	23 45	41.23	+02 57	07.2		400
1991 PM11	1991 09	07.58438	00 06	05.35	+05 18	43.9	15.5	400
1991 PM11	1991 09	07.60313	00 06	04.57	+05 18	42.4		400
1991 RS1 *	1991 09	07.61701	00 11	33.79	+04 56	11.6	16.5	400
1991 RS1	1991 09	07.64063	00 11	32.68	+04 56	13.0		400
1991 RS1	1991 09	13.48229	00 06	06.79	+05 00	00.8	16.0	400
1991 RS1	1991 09	13.49965	00 06	05.82	+05 00	01.5		400
1991 RS1	1991 09	30.46076	23 48	27.01	+04 53	43.8	16.0	400
1991 RS1	1991 09	30.47674	23 48	26.02	+04 53	44.5		400
1991 RT1 *	1991 09	07.61701	00 20	23.39	+02 30	53.9	16.0	400
1991 RT1	1991 09	07.64063	00 20	22.51	+02 30	44.8		400
1991 RT1	1991 09	13.51424	00 16	47.22	+01 50	07.6	16.0	400
1991 RT1	1991 09	13.53160	00 16	46.48	+01 49	59.0		400
1991 RU1 *	1991 09	13.51424	00 22	27.18	+04 15	37.4	16.5	400
1991 RU1	1991 09	13.53160	00 22	26.70	+04 15	34.7		400
1991 RT7	1991 09	13.55313	00 43	56.82	+04 30	47.4	17.0	400
1991 RT7	1991 09	13.57049	00 43	56.04	+04 30	44.8		400
1991 RT7 *	1991 09	30.50243	00 29	53.07	+03 06	41.4	16.5	400
1991 RT7	1991 09	30.51840	00 29	52.05	+03 06	37.2		400
1991 SB	1991 09	13.55313	00 44	53.45	+07 31	20.0	16.5	400
1991 SB	1991 09	13.57049	00 44	52.81	+07 31	15.1		400
1991 SB *	1991 09	16.61354	00 42	55.77	+07 16	22.3	16.5	400
1991 SB	1991 09	16.63090	00 42	54.92	+07 16	18.2		400
1991 SB	1991 09	16.64201	00 42	54.50	+07 16	14.9		400
1991 SB	1991 09	30.50243	00 32	08.49	+05 51	02.9	16.5	400
1991 SB	1991 09	30.51840	00 32	07.69	+05 50	56.9		400

## 402 Dynic Astronomical Observatory

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

0.25-m f/3.4 Schmidt

1991 RN	1991 09	10.65625	00 10	13.52	+09 06	17.0	16.5	402
1991 RN	1991 09	10.67014	00 10	12.80	+09 06	17.0		402

1991 RN	1991 09	11.61875	00 09	21.87	+09 06	38.8		402
1991 RN	1991 09	11.63264	00 09	21.10	+09 06	39.6		402
1991 RZ *	1991 09	10.63125	23 38	22.56	+11 55	28.6	17.5	402
1991 RZ	1991 09	10.64514	23 38	21.65	+11 55	28.2		402
1991 RZ	1991 09	11.59317	23 37	33.01	+11 57	10.1		402
1991 RZ	1991 09	11.60694	23 37	32.15	+11 57	12.3		402
1991 RA1 *	1991 09	10.63125	23 44	59.87	+11 24	21.8	17.0	402
1991 RA1	1991 09	10.64514	23 44	58.97	+11 24	23.9		402
1991 RA1	1991 09	11.59317	23 44	02.31	+11 27	47.1		402
1991 RA1	1991 09	11.60694	23 44	01.69	+11 27	51.6		402
1991 RA1	1991 10	02.57847	23 22	47.83	+11 55	01.2	17.0	402
1991 RA1	1991 10	02.59236	23 22	47.11	+11 55	02.8		402
1991 RB1 *	1991 09	10.63125	23 52	14.57	+10 31	20.6	17.5	402
1991 RB1	1991 09	10.64514	23 52	13.99	+10 31	20.0		402
1991 RB1	1991 09	11.59317	23 51	33.17	+10 27	21.7		402
1991 RB1	1991 09	11.60694	23 51	32.56	+10 27	19.7		402
1991 RO1 *	1991 09	10.68264	00 40	00.41	+10 27	04.3	17.5	402
1991 RO1	1991 09	10.69792	00 39	59.75	+10 27	05.6		402
1991 RO1	1991 09	11.64514	00 39	24.73	+10 27	16.4		402
1991 RO1	1991 09	11.66667	00 39	23.83	+10 27	16.2		402
1991 RP1 *	1991 09	10.68264	00 46	07.45	+12 08	49.9	17.0	402
1991 RP1	1991 09	10.69792	00 46	06.43	+12 08	52.0		402
1991 RP1	1991 09	11.64514	00 45	22.63	+12 13	10.0		402
1991 RP1	1991 09	11.66667	00 45	21.39	+12 13	15.2		402

## 413 Siding Spring

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

Observers J. Barton, R. D. Cannon, M. Hartley, S. M. Hughes, R. H. McNaught,  
K. S. Russell, A. Savage, L. Frederick, M. Begam, D. H. Morgan

Measurer R. H. McNaught

1.2-m U.K. Schmidt, 0.50-m Uppsala Southern Schmidt, 1.0-m reflector + CCD

1964 VT1	1991 09	02.64324	00 42	45.74	+00 08	53.5		413
1964 VT1	1991 09	03.76076	00 42	10.96	+00 05	15.8		413
1964 VT1	1991 09	03.78924	00 42	10.01	+00 05	10.3		413
1974 ST	1991 09	02.64324	00 49	05.77	+01 33	02.0		413
1974 ST	1991 09	03.76076	00 48	33.99	+01 28	36.9		413
1976 GN2	1982 12	09.46348	02 51	19.20	+00 59	29.1		413
1976 GN2	1990 06	20.77084	21 50	29.16	+01 45	21.0		413
1977 DY8	1991 09	02.61720	00 32	33.99	-00 35	17.7		413
1977 DY8	1991 09	02.66928	00 32	31.90	-00 35	28.1		413
1979 MK3	1991 09	02.64324	00 48	49.91	-01 37	52.5		413
1979 SL7	1991 09	03.53137	22 01	58.34	-03 48	49.8		413
1979 SL7	1991 09	03.57650	22 01	55.97	-03 49	06.1		413
1979 SL7	1991 09	04.63160	22 01	02.26	-03 55	44.2		413
1979 SL7	1991 09	04.65301	22 01	01.11	-03 55	52.0		413
1981 SQ2	1974 06	18.70321	20 42	19.10	-25 35	04.9		413
1981 SQ2	1974 08	09.52763	20 02	57.92	-28 18	27.9		413
1981 SQ2	1977 03	28.70124	15 23	32.26	-20 17	50.9		413
1981 SQ2	1980 02	21.67675	12 21	54.59	+00 39	30.5		413
1981 SQ2	1981 09	30.43858	22 01	38.09	-16 29	50.2		413
1981 SQ2	1983 04	06.44912	08 47	02.34	+22 02	24.7		413
1981 SQ2	1983 04	08.45168	08 47	33.27	+21 56	05.6		413
1982 XW4 *	1982 12	09.46348	03 06	27.51	+03 02	34.6	17.5V	413
1983 GY2 *	1983 04	06.44912	08 46	38.39	+21 56	55.8	18 V	413
1983 GY2	1983 04	08.45168	08 47	23.94	+21 54	21.5		413
1985 CE2	1991 09	02.64324	00 52	07.28	+02 26	34.7		413
1985 CH2	1991 09	29.50679	22 53	54.29	-11 37	15.8		413
1985 CH2	1991 09	30.52292	22 53	16.47	-11 43	42.6		413



1986 PQ	1978 11	21.42439	22 01	39.84	-16 06	06.5	17	V	413
1986 PQ	1978 11	22.42512	22 02	45.50	-16 00	16.8			413
1986 PQ	1978 11	23.42338	22 03	52.04	-15 54	20.6			413
1986 PQ	1978 11	24.41968	22 04	59.24	-15 48	16.5			413
1986 TM1	1990 10	12.51282	23 31	27.42	+10 51	03.3			413
1986 TM1	1990 10	12.56838	23 31	25.59	+10 50	27.6			413
1987 SG1	1991 09	03.53137	22 05	10.46	-02 39	07.7			413
1987 SG1	1991 09	03.57650	22 05	08.93	-02 39	47.7			413
1987 SG1	1991 09	04.63160	22 04	37.82	-02 55	53.6			413
1987 YH	1991 09	02.64324	00 49	01.29	-01 17	06.9			413
1987 YH	1991 09	03.78924	00 48	36.09	-01 25	06.3			413
1988 BL2	1991 10	01.60802	01 17	10.22	-00 33	20.0			413
1988 BL2	1991 10	02.74722	01 16	01.25	-00 32	09.5			413
1988 VN3	1991 09	03.53137	21 58	07.65	-03 47	38.2			413
1988 VN3	1991 09	03.57650	21 58	05.13	-03 47	54.9			413
1988 VN3	1991 09	04.63160	21 57	07.66	-03 54	46.0			413
1988 VN3	1991 09	04.65301	21 57	06.40	-03 54	54.1			413
1990 DM3	1991 09	02.61720	00 28	05.28	+02 29	54.2	16.5V		413
1990 DM3	1991 09	02.66928	00 28	02.85	+02 29	47.8			413
1990 DM3	1991 09	03.77500	00 27	11.74	+02 27	53.2			413
1991 EE	1991 09	13.47289	21 18	15.85	-13 00	55.6			413
1991 EE	1991 09	13.53539	21 19	24.71	-13 05	07.6			413
1991 MA	1986 07	26.75086	23 42	20.97	-50 35	50.6			413
1991 MA	1991 07	16.55847	19 28	50.83	-53 43	15.1			413
1991 MA	1991 07	16.60801	19 28	45.00	-53 44	06.5			413
1991 MA	1991 09	02.44587	18 46	24.58	-56 41	05.8			413
1991 PN10	1991 09	29.48596	22 53	55.02	-12 25	50.4	17.5V		413
1991 PN10	1991 09	29.52763	22 53	53.51	-12 26	38.0			413
1991 PN10	1991 09	30.52292	22 53	23.28	-12 45	18.0			413
1991 QE	1991 09	06.53752	19 26	42.31	-53 21	59.0			413
1991 QE	1991 09	13.48403	19 28	59.73	-51 54	03.4			413
1991 QF	1991 09	09.61389	19 41	23.96	-49 59	27.8			413
1991 QF	1991 09	13.49520	19 43	48.86	-49 09	28.9			413
1991 QF	1991 09	27.47350	19 58	06.14	-45 47	38.4			413
1991 QF	1991 09	29.47708	20 00	45.59	-45 16	19.1			413
1991 RA	1991 09	06.62617	00 40	31.81	+03 51	45.3			413
1991 RA	1991 09	12.59968	00 31	28.90	+04 59	35.0			413
1991 RB	1991 09	08.58380	21 21	57.59	-65 51	08.5			413
1991 RB	1991 09	21.43795	16 55	23.50	-47 07	38.3			413
1991 RB	1991 09	21.43954	16 55	22.00	-47 07	17.3			413
1991 RB	1991 09	21.44135	16 55	20.16	-47 06	51.8			413
1991 RB	1991 09	21.44333	16 55	18.23	-47 06	25.1			413
1991 RB	1991 09	21.44494	16 55	16.62	-47 06	02.8			413
1991 RB	1991 09	27.38481	15 42	07.98	-21 49	16.1			413
1991 RC	1991 09	13.54492	21 57	13.22	-11 12	27.5	18.5V		413
1991 RD	1991 09	07.57236	23 11	34.35	+00 59	30.0			413
1991 RF	1991 09	07.57236	23 09	54.40	+01 17	03.4			413
1991 RG	1991 09	07.57236	23 10	21.82	+01 05	33.2			413
1991 RH	1991 09	07.57236	23 15	15.02	+00 39	57.4			413
1991 RR	1991 09	03.53137	22 11	18.53	-06 30	00.0	17	V	413
1991 RR	1991 09	03.57650	22 11	16.19	-06 30	21.5			413
1991 RR	1991 09	04.62338	22 10	26.94	-06 38	42.4			413
1991 RM1 *	1991 09	05.71078	01 04	24.65	-24 23	26.8	16.5V		413
1991 RM1	1991 09	05.75244	01 04	22.46	-24 23	30.2			413
1991 RM1	1991 09	07.58750	01 02	44.29	-24 26	28.4			413
1991 RM1	1991 09	15.73895	00 54	37.01	-24 32	59.3			413
1991 RJ2	1991 09	26.42652	23 15	47.53	-09 10	00.0	18	V	413
1991 RJ2	1991 09	28.48634	23 18	12.75	-09 45	29.4	18	V	413
1991 RK2	1991 09	29.50679	23 05	41.74	-12 29	36.7	15	V	413

1991	RK2	1991	09	30.53403	23	05	07.19	-12	36	19.0			413
1991	RN4	1991	09	29.50679	22	49	52.50	-10	52	00.1	17	V	413
1991	RN4	1991	09	30.52292	22	49	26.08	-10	59	39.2			413
1991	RJ5	1991	09	02.61720	00	47	07.98	-00	27	36.4	16.5V		413
1991	RJ5	1991	09	02.66928	00	47	06.54	-00	27	49.0			413
1991	RJ5	1991	09	03.78924	00	46	35.79	-00	32	25.8			413
1991	RL5	1991	09	02.61720	00	46	07.41	-01	34	26.5	17	V	413
1991	RL5	1991	09	02.66928	00	46	05.80	-01	34	28.9			413
1991	RL5	1991	09	03.78924	00	45	30.92	-01	35	10.5			413
1991	RN6	1991	09	29.48596	23	01	07.02	-11	41	55.8	17	V	413
1991	RN6	1991	09	30.52292	23	00	50.62	-11	52	19.3			413
1991	RN6	1991	09	30.53403	23	00	50.43	-11	52	24.9			413
1991	RO6	* 1991	09	03.53137	21	48	05.86	-04	18	10.4	16	V	413
1991	RO6	1991	09	03.57650	21	48	03.78	-04	18	18.6			413
1991	RO6	1991	09	04.65301	21	47	15.66	-04	21	32.2			E 413
1991	RP6	* 1991	09	03.53137	21	57	53.67	-04	20	10.1	18	V	413
1991	RP6	1991	09	03.57650	21	57	51.37	-04	20	27.3			413
1991	RP6	1991	09	04.63160	21	57	00.81	-04	27	16.1			413
1991	RQ6	* 1991	09	03.53137	22	00	09.35	-03	16	02.9	18	V	413
1991	RQ6	1991	09	03.57650	22	00	06.98	-03	16	00.7			413
1991	RQ6	1991	09	04.63160	21	59	11.79	-03	15	32.2			p 413
1991	RR6	* 1991	09	03.53137	22	03	09.06	-06	02	45.6	18	V	413
1991	RR6	1991	09	03.57650	22	03	07.08	-06	03	12.7			413
1991	RR6	1991	09	04.62338	22	02	26.37	-06	13	48.8			413
1991	RS6	* 1991	09	03.53137	22	03	17.68	-06	08	47.7	17	V	413
1991	RS6	1991	09	03.57650	22	03	15.11	-06	08	55.4			413
1991	RS6	1991	09	04.62338	22	02	18.94	-06	11	52.6			413
1991	RT6	* 1991	09	03.53137	22	03	20.20	-04	12	20.7	17.5V		413
1991	RT6	1991	09	03.57650	22	03	17.75	-04	12	20.6			413
1991	RT6	1991	09	04.63160	22	02	22.43	-04	12	15.9			413
1991	RU6	* 1991	09	03.53137	22	06	46.89	-03	46	21.4	16.5V		413
1991	RU6	1991	09	03.57650	22	06	44.74	-03	46	42.6			413
1991	RU6	1991	09	04.63160	22	05	56.41	-03	55	10.9			413
1991	RV6	* 1991	09	03.53137	22	07	08.61	-05	17	25.9	18	V	413
1991	RV6	1991	09	03.57650	22	07	06.34	-05	17	31.3			413
1991	RV6	1991	09	04.62338	22	06	15.20	-05	19	40.3			413
1991	RV6	1991	09	04.63160	22	06	14.79	-05	19	40.9			413
1991	RW6	* 1991	09	03.53137	22	09	43.81	-04	49	43.9	17	V	413
1991	RW6	1991	09	03.57650	22	09	41.69	-04	50	05.7			413
1991	RW6	1991	09	04.63160	22	08	55.48	-04	59	07.5			413
1991	RX6	* 1991	09	03.53137	22	11	18.84	-04	47	24.7	17.5V		413
1991	RX6	1991	09	03.57650	22	11	16.70	-04	47	33.3			413
1991	RX6	1991	09	04.63160	22	10	28.19	-04	51	02.6			413
1991	RY6	* 1991	09	02.61720	00	27	42.98	+02	37	03.8	16.5V		413
1991	RY6	1991	09	02.66928	00	27	41.51	+02	36	48.6			413
1991	RY6	1991	09	03.77500	00	27	10.90	+02	31	38.3			413
1991	RZ6	* 1991	09	02.61720	00	33	18.49	+01	50	00.2	17	V	413
1991	RZ6	1991	09	02.66928	00	33	16.60	+01	49	54.4			413
1991	RZ6	1991	09	03.77500	00	32	36.73	+01	47	55.2			413
1991	RA7	* 1991	09	02.61720	00	35	24.04	+02	31	51.6	17.5V		413
1991	RA7	1991	09	02.66928	00	35	21.83	+02	31	49.6			p 413
1991	RA7	1991	09	03.77500	00	34	33.03	+02	31	23.9			413
1991	RB7	* 1991	09	02.61720	00	42	01.58	+02	41	53.2	17	V	413
1991	RB7	1991	09	02.66928	00	42	00.27	+02	41	57.1			413
1991	RB7	1991	09	03.76076	00	41	32.77	+02	43	19.8			413
1991	RC7	* 1991	09	02.61720	00	42	12.08	-02	21	23.1	17.5V		413
1991	RC7	1991	09	02.66928	00	42	10.27	-02	21	29.4			413
1991	RC7	1991	09	03.78924	00	41	31.08	-02	23	31.2			413
1991	RD7	* 1991	09	02.61720	00	43	52.82	+00	22	27.9	15.5V		413

1991	RD7	1991	09	02.66928	00	43	50.40	+00	22	44.6		413
1991	RD7	1991	09	03.76076	00	43	00.45	+00	28	53.8		413
1991	RD7	1991	09	03.78924	00	42	59.10	+00	29	03.1		413
1991	RE7	* 1991	09	02.61720	00	49	16.68	+02	21	55.4	16.5V	413
1991	RE7	1991	09	02.66928	00	49	14.69	+02	21	58.2		413
1991	RE7	1991	09	03.76076	00	48	31.69	+02	22	54.6		413
1991	SC	* 1991	09	29.50679	22	49	14.04	-11	54	04.8	17 V	413
1991	SC	1991	09	30.52292	22	48	32.28	-11	54	36.5		413
1991	SD	* 1991	09	29.50679	22	49	23.65	-11	27	43.7	16.5V	413
1991	SD	1991	09	30.52292	22	48	47.30	-11	31	56.1		413
1991	SE	* 1991	09	29.50679	22	50	23.00	-10	00	51.6	17.5V	413
1991	SE	1991	09	30.52292	22	49	43.63	-10	58	27.3		413
1991	SF	* 1991	09	29.50679	22	56	33.09	-10	55	38.8	17.5V	413
1991	SF	1991	09	30.52292	22	55	54.42	-10	58	27.3		413
1991	SF	1991	09	30.53403	22	55	53.95	-10	58	29.2		413
1991	SG	* 1991	09	29.50679	22	57	18.25	-10	09	38.0	17.5V	413
1991	SG	1991	09	30.52292	22	56	46.84	-10	15	40.3		413
1991	SG	1991	09	30.53403	22	56	46.52	-10	15	43.6		413
1991	SH	* 1991	09	29.50679	22	57	42.02	-12	44	42.8	16 V	413
1991	SH	1991	09	30.52292	22	57	08.24	-12	43	43.5		413
1991	SH	1991	09	30.53403	22	57	07.90	-12	43	42.5		413
1991	SJ	* 1991	09	29.50679	23	05	47.97	-11	04	28.2	18 V	413
1991	SJ	1991	09	30.53403	23	05	01.95	-11	10	11.3		413
1991	SK	* 1991	09	29.50679	23	06	06.76	-09	45	07.4	17 V	413
1991	SK	1991	09	30.53403	23	05	25.84	-09	46	20.8		413
1991	SL	* 1991	09	30.51236	22	59	57.58	-20	58	43.3	17 V	413
1991	SL	1991	09	30.55403	22	59	54.12	-20	58	09.8		413
1991	SL	1991	10	01.51586	22	58	38.67	-20	44	45.2		413
1991	SM	* 1991	09	30.53319	22	54	06.30	-20	19	59.8	17.5V	413
1991	SM	1991	10	01.51586	22	53	37.01	-20	23	04.6		413
1991	SN	* 1991	09	30.53319	22	57	56.92	-21	59	17.9	17.5V	413
1991	SN	1991	10	01.51586	22	57	24.31	-22	01	09.2		413
1991	SO	* 1991	09	30.53319	22	58	33.45	-21	00	02.6	18 V	413
1991	SO	1991	10	01.51586	22	57	49.93	-20	57	55.8		413
1991	SP	* 1991	09	30.53319	22	58	43.17	-20	37	29.2	18 V	413
1991	SP	1991	10	01.51586	22	58	14.28	-20	35	02.5		413
1991	SQ	* 1991	09	30.53319	23	00	21.27	-21	29	28.9	17.5V	413
1991	SQ	1991	10	01.51586	22	59	41.81	-21	24	21.6		413
1991	SR	* 1991	09	30.53319	23	00	27.19	-21	56	06.7	17.5V	413
1991	SR	1991	10	01.51586	22	59	53.75	-22	01	48.7		413
1991	SS	* 1991	09	30.53319	23	00	53.60	-20	59	19.9	18 V	413
1991	SS	1991	10	01.51586	23	00	20.00	-20	58	30.0		413
1991	ST	* 1991	09	30.53319	23	00	59.37	-21	41	53.3	16 V	413
1991	ST	1991	10	01.51586	23	00	31.62	-21	38	18.9		413
1991	SU	* 1991	09	30.53319	23	02	13.64	-20	22	57.9	17.5V	413
1991	SU	1991	10	01.51586	23	01	36.69	-20	25	41.5		413
1991	SV	* 1991	09	30.53319	23	06	54.12	-22	46	29.3	17 V	413
1991	SV	1991	10	01.51586	23	06	13.68	-22	46	19.9		413
1991	SW	* 1991	09	30.53319	23	07	21.08	-19	27	36.2	18 V	413
1991	SW	1991	10	01.45787	23	06	49.75	-19	30	15.9		413
1991	SX	* 1991	09	30.53319	23	07	25.99	-18	06	25.7	18 V	413
1991	SX	1991	10	01.45787	23	06	59.79	-18	08	32.0		413
1991	SY	* 1991	09	30.53319	23	09	33.88	-19	31	58.2	17.5V	413
1991	SY	1991	10	01.45787	23	08	48.93	-19	30	19.7		413
1991	SZ	* 1991	09	30.53319	23	10	59.21	-17	34	19.6	17 V	413
1991	SZ	1991	10	01.45787	23	10	19.50	-17	32	47.6		413
1991	SA1	* 1991	09	30.53319	23	12	21.09	-18	00	12.2	18 V	413
1991	SA1	1991	10	01.45787	23	11	53.14	-18	06	21.3		413
1991	SB1	* 1991	09	30.53319	23	13	50.45	-19	53	52.2	18 V	413

1991 SB1	1991 10 01.45787	23 13 13.41	-19 54 31.0					413
1991 SC1 *	1991 09 30.53319	23 13 51.86	-18 28 03.2			17.5V		413
1991 SC1	1991 10 01.45787	23 13 12.17	-18 27 23.5					413
1991 SD1 *	1991 09 30.53319	23 15 16.03	-19 15 34.4			18 V		413
1991 SD1	1991 10 01.45787	23 14 38.36	-19 20 12.2					413
1991 SE1 *	1991 09 30.53319	23 17 09.21	-19 27 25.4			18 V		413
1991 SE1	1991 10 01.45787	23 16 30.98	-19 28 59.6					413
1991 SH1 *	1991 09 28.44100	21 18 51.03	-37 09 00.1			16.5V		413
1991 SH1	1991 09 30.51354	21 19 13.30	-36 53 00.1					413
1991 TA *	1991 10 01.54639	23 05 46.02	-27 09 59.5			15.5V		413
1991 TA	1991 10 02.56667	23 05 13.04	-27 08 17.6					413
1991 TB *	1991 10 01.47297	21 52 05.29	-23 00 39.7			18 V		413
1991 TB	1991 10 02.54213	21 51 46.95	-22 54 04.5					413
1991 TC *	1991 10 01.45214	21 53 19.35	-22 08 37.8			17.5V		413
1991 TC	1991 10 01.49381	21 53 18.23	-22 07 34.9					413
1991 TC	1991 10 02.54213	21 52 57.08	-21 41 03.8					413
1991 TD *	1991 10 01.54639	23 04 58.33	-27 44 30.5			17.5V		413
1991 TD	1991 10 02.56667	23 04 12.15	-27 36 41.3					413
1991 TE *	1991 10 01.54639	23 13 54.43	-28 42 25.8			17 V		413
1991 TE	1991 10 02.56667	23 13 17.11	-28 36 44.1					413
1991 TF *	1991 10 01.58719	01 08 17.96	-02 49 59.6			17 V	E	413
1991 TF	1991 10 01.62885	01 08 16.64	-02 50 39.4				E	413
1991 TF	1991 10 02.74722	01 07 43.37	-03 09 10.4					413
1991 TG *	1991 10 01.58719	01 15 42.78	-01 48 51.8			17 V		413
1991 TG	1991 10 01.62885	01 15 41.55	-01 50 13.3					413
1991 TG	1991 10 02.74722	01 15 12.13	-02 28 04.4					413
1991 TH *	1991 10 01.60802	01 08 43.40	+00 07 04.1			17.5V	E	413
1991 TH	1991 10 02.74722	01 07 58.50	-00 05 40.2					413
1991 TJ *	1991 10 01.60802	01 09 03.21	-03 03 28.9			16 V	E	413
1991 TJ	1991 10 02.74722	01 08 06.76	-03 07 19.5					413
1991 TK *	1991 10 01.60802	01 10 07.29	-01 42 27.3			18 V		413
1991 TK	1991 10 02.74722	01 09 06.43	-01 49 06.8					413
1991 TL *	1991 10 01.60802	01 11 17.69	-01 56 59.5			18 V		413
1991 TL	1991 10 02.74722	01 10 15.47	-02 06 57.4					413
1991 TM *	1991 10 01.60802	01 11 25.99	-02 33 12.3			16.5V		413
1991 TM	1991 10 02.74722	01 10 26.88	-02 42 16.1					413
1991 TN *	1991 10 01.60802	01 11 50.30	-02 07 28.9			18 V		413
1991 TN	1991 10 02.74722	01 10 47.32	-02 14 14.5					413
1991 TO *	1991 10 01.60802	01 13 19.30	-02 36 58.0			18 V		413
1991 TO	1991 10 02.74722	01 12 21.13	-02 45 20.7					413
1991 TP *	1991 10 01.60802	01 13 19.92	-02 45 13.3			18 V		413
1991 TP	1991 10 02.74722	01 12 33.97	-02 55 11.9					413
1991 TQ *	1991 10 01.60802	01 14 42.63	-01 19 20.4			17.5V		413
1991 TQ	1991 10 02.74722	01 13 48.07	-01 23 42.7					413
1991 TR *	1991 10 01.60802	01 16 42.16	-02 24 39.6			18 V		413
1991 TR	1991 10 02.74722	01 15 41.98	-02 31 55.4					413
1991 TS *	1991 10 01.60802	01 17 41.38	-02 42 57.0			17.5V		413
1991 TS	1991 10 02.74722	01 16 43.97	-02 51 32.2					413
5016 T-3	1976 09 16.40586	19 35 59.09	-19 35 34.1					413
5016 T-3	1981 09 30.40385	22 10 49.28	-16 35 45.4					413
5016 T-3	1981 09 30.47330	22 10 47.58	-16 35 59.7					413
5016 T-3	1982 12 09.46348	03 05 55.12	+02 59 31.6					413
5016 T-3	1986 08 01.76640	01 01 56.71	-01 22 30.1					413
87	1991 09 30.53319	22 56 02.90	-23 10 01.7					413
104	1991 09 02.64324	00 46 17.65	+02 03 55.0					413
250	1991 09 30.53319	22 52 34.36	-19 15 07.7					413
261	1978 11 24.41968	21 49 47.26	-16 52 17.7			14 V		413
261	1978 11 25.41690	21 50 51.64	-16 45 56.4					413
261	1978 11 26.41557	21 51 56.84	-16 39 28.8					413

330	1978	11	22.42512	21	50	52.88	-17	50	18.0	16	V	413
330	1978	11	23.42338	21	52	28.93	-17	42	55.2			413
330	1978	11	24.41968	21	54	05.59	-17	35	26.4			413
330	1978	11	25.41690	21	55	43.20	-17	27	45.2			413
330	1978	11	26.41557	21	57	21.93	-17	19	57.5			413
338	1991	09	03.55394	22	03	19.80	-04	42	49.8			413
338	1991	09	04.63160	22	02	29.12	-04	46	32.7			413
339	1991	09	03.55394	22	09	41.16	-06	00	40.8			413
339	1991	09	04.62338	22	08	58.20	-06	09	17.0			413
520	1991	09	30.53319	22	55	05.71	-19	44	44.0			413
520	1991	10	01.51586	22	54	25.46	-19	43	40.2			413
522	1991	09	29.50679	23	02	36.66	-11	25	53.6			413
522	1991	09	30.53403	23	02	03.49	-11	29	13.8			413
1044	1991	09	29.50679	23	04	51.49	-13	02	19.5			413
1044	1991	09	30.53403	23	04	09.51	-13	03	59.9			413
1164	1991	09	30.51236	23	16	28.40	-16	49	43.3		E	413
1164	1991	09	30.55403	23	16	26.54	-16	50	10.3		E	413
1239	1991	09	02.64324	00	36	45.41	+01	19	50.9			413
1239	1991	09	03.77500	00	36	08.27	+01	15	23.8			413
1318	1991	09	29.50679	23	09	06.02	-09	56	46.9			413
1318	1991	09	30.53403	23	07	58.11	-09	54	31.5			413
1545	1991	09	29.50679	22	59	35.69	-10	26	26.3			413
1545	1991	09	30.52292	22	58	53.33	-10	29	52.7			413
1787	1991	09	03.55394	21	56	48.74	-06	20	09.3			413
1967	1978	11	21.42439	21	51	48.80	-17	03	50.7	15.5V		413
1967	1978	11	22.42512	21	53	14.05	-16	54	14.8			413
1967	1978	11	23.42338	21	54	39.90	-16	44	34.9			413
1967	1978	11	24.41968	21	56	06.40	-16	34	48.7			413
1967	1978	11	25.41690	21	57	33.92	-16	24	58.9			413
1967	1978	11	26.41557	21	59	02.35	-16	14	59.4			413
2291	1991	09	02.64324	00	44	57.87	-02	35	50.0			413
2408	1991	09	02.64324	00	46	41.82	-02	20	57.4			413
2539	1991	09	03.55394	21	54	00.18	-07	41	06.6			413
2801	1991	09	30.53319	22	54	14.15	-19	06	26.2			413
2806	1991	09	02.64324	00	47	46.81	+01	25	09.9			413
2826	1991	10	01.60802	01	15	37.48	+00	07	38.6			413
2959	1991	09	29.50679	23	05	23.46	-11	57	17.5			413
2959	1991	09	30.53403	23	04	49.72	-12	00	58.2			413
3019	1991	09	29.50679	23	01	52.19	-11	02	26.4			413
3019	1991	09	30.53403	23	01	12.64	-11	06	06.4			413
3032	1991	09	29.50679	23	02	51.57	-11	30	31.9			413
3032	1991	09	30.53403	23	02	12.89	-11	33	37.8			413
3090	1991	09	02.64324	00	41	34.68	+01	57	26.4			413
3728	1991	09	04.60417	21	55	32.33	-03	35	00.0			413
3823	1991	09	02.64324	00	52	10.71	-02	03	49.7			413
4170	1991	09	02.64324	00	41	39.88	+02	02	44.8			413
4466	1991	09	02.61720	00	28	19.02	+02	37	07.5			413
4466	1991	09	02.66928	00	28	17.34	+02	36	53.5			413
4466	1991	09	03.77500	00	27	42.01	+02	32	14.0			413
4518	1991	09	02.61720	00	35	10.89	+01	50	03.2			413
4518	1991	09	02.66928	00	35	09.16	+01	49	39.6			413
4518	1991	09	03.77500	00	34	31.81	+01	41	02.9			413
4522	1991	09	30.47640	21	56	04.06	-23	44	25.0			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

1991 RB	1991 09	10.35627	20 49	17.51	-66 01	17.3		474
1991 RB	1991 09	10.38370	20 48	43.59	-66 01	16.9		474
1991 RB	1991 09	15.61948	18 51	25.81	-62 23	05.9		474
1991 RB	1991 09	15.63348	18 51	06.91	-62 21	47.9	S	474
1991 RB	1991 09	16.61219	18 28	50.18	-60 42	17.9		474
1991 RB	1991 09	16.64240	18 28	10.04	-60 38	47.7	I	474

## 493 Calar Alto

J. M. Baur, Via Zara 20, I-33083 Chions, Italy

Observer K. Birkle

Measurers K. Birkle, J. M. Baur

0.8-m f/3 Schmidt

1990 TG3	1991 02	15.80098	02 26	53.00	+09 51	06.7	18.5	493
1990 TG3	1991 02	15.82182	02 26	54.75	+09 51	13.5		493
1990 VC	1991 02	15.80098	02 26	19.66	+12 15	13.3	19.2	493
1990 VC	1991 02	15.82182	02 26	20.89	+12 15	16.7		493
1990 WC	1991 02	15.80098	02 19	25.60	+13 20	44.8	18.2	493
1990 WC	1991 02	15.82182	02 19	27.78	+13 21	00.4		493
296	1991 02	15.80098	02 23	36.09	+12 48	31.1	18	493
296	1991 02	15.82182	02 23	38.33	+12 48	41.3		493
346	1991 02	15.80098	02 29	03.13	+10 00	50.3	11	493
346	1991 02	15.82182	02 29	04.71	+10 01	02.2		493
367	1991 02	15.80098	02 12	37.09	+12 13	00.9	14.5	493
367	1991 02	15.82182	02 12	38.96	+12 13	10.6		493
614	1991 02	15.80098	02 19	02.16	+11 14	20.1	15.8	493
614	1991 02	15.82182	02 19	03.80	+11 14	26.2		493
868	1991 02	15.80098	02 21	09.10	+09 15	02.7	15.5	493
868	1991 02	15.82182	02 21	10.85	+09 15	13.9		493
1055	1991 02	15.80098	02 33	27.80	+09 44	41.4	17	493
1055	1991 02	15.82182	02 33	29.49	+09 44	49.8		493
1108	1991 02	15.80098	02 25	37.69	+11 34	55.7	17.2	493
1108	1991 02	15.82182	02 25	39.27	+11 34	56.5		493
1902	1991 02	15.80098	02 11	58.44	+11 08	12.3	15.5	493
1902	1991 02	15.82182	02 11	59.48	+11 08	18.4		493
1912	1991 02	15.80098	02 28	06.21	+13 45	06.9	17	493
1912	1991 02	15.82182	02 28	07.63	+13 45	11.9		493
2319	1991 02	15.80098	02 30	30.09	+12 26	35.3	17.5	493
2319	1991 02	15.82182	02 30	31.33	+12 26	40.3		493
2769	1991 02	15.80098	02 33	27.66	+13 17	22.8	18	493
2769	1991 02	15.82182	02 33	28.72	+13 17	27.8		493
3132	1991 02	15.80098	02 31	16.62	+11 12	02.4	17.2	493
3132	1991 02	15.82182	02 31	17.68	+11 12	08.3		493
3284	1991 02	15.80098	02 25	20.94	+13 04	17.0	18	493
3284	1991 02	15.82182	02 25	22.65	+13 04	25.6		493
3334	1991 02	15.80098	02 17	18.15	+12 02	38.0	18	493
3334	1991 02	15.82182	02 17	19.44	+12 02	44.1		493

## 511 Haute Provence

E. W. Elst, Royal Observatory, B-1180 Brussels, Belgium

Observers E. W. Elst, B. M. Ritzmann

Measurers E. W. Elst, J. P. Olivier

0.6-m Schmidt

1977 DR1	1991 09	06.10833	23 39	21.89	+04 46	41.3	16.8	511
1977 DR1	1991 09	07.99722	23 37	28.77	+04 45	54.4		511
1977 DR1	1991 09	08.02500	23 37	27.01	+04 45	54.6		511
1979 QZ1	1990 08	16.94722	21 56	26.75	-13 08	28.0	18.2	511
1981 EO40	1991 09	05.97639	23 11	17.85	-01 39	26.4		511
1981 EO40	1991 09	06.01458	23 11	16.18	-01 39	58.3	18.0	511
1981 EO40	1991 09	07.95139	23 09	59.64	-02 05	32.1		511

1984 SX5	1991 09 06.04931	23 27 19.65	-04 30 03.0		511
1984 SX5	1991 09 06.08403	23 27 17.90	-04 30 24.0	17.5	511
1984 SX5	1991 09 07.01146	23 26 33.36	-04 39 06.4		511
1984 SX5	1991 09 07.03681	23 26 31.92	-04 39 20.4		511
1987 QW7	1991 09 05.97639	23 10 38.12	-01 29 50.4		511
1987 QW7	1991 09 06.01458	23 10 36.21	-01 30 03.4	17.2	511
1987 QW7	1991 09 07.95139	23 09 03.38	-01 41 07.8		511
1989 CA	1991 09 05.97639	23 14 36.84	-02 07 27.3		511
1989 CA	1991 09 06.01458	23 14 34.72	-02 07 39.4	17.7	511
1989 CA	1991 09 07.95139	23 12 52.18	-02 19 27.4		511
1991 PH11	1991 09 06.10833	23 45 27.20	+07 18 09.3	17.2	511
1991 PH11	1991 09 07.99722	23 44 00.03	+07 08 33.6		511
1991 PH11	1991 09 08.02500	23 43 58.72	+07 08 24.3		511
1991 PJ11	1991 09 06.10833	23 50 21.09	+04 30 41.4	17.7	511
1991 PJ11	1991 09 07.99722	23 49 00.18	+04 21 46.4		511
1991 PJ11	1991 09 08.02500	23 48 58.92	+04 21 38.6		511
1991 PK11	1991 09 06.10833	23 50 47.70	+06 40 34.8	17.5	511
1991 PK11	1991 09 07.99722	23 49 17.07	+06 36 57.2		511
1991 PK11	1991 09 08.02500	23 49 15.62	+06 36 54.6		511
1991 PQ11	1991 09 06.10833	23 40 00.91	+04 38 33.6	17.5	511
1991 PQ11	1991 09 07.99722	23 38 23.14	+04 33 35.1		511
1991 PQ11	1991 09 08.02500	23 38 21.59	+04 33 31.0		511
1991 PR11	1991 09 06.10833	23 45 52.43	+06 04 39.4	17.6	511
1991 PR11	1991 09 07.99722	23 44 30.28	+05 51 11.0		511
1991 PR11	1991 09 08.02500	23 44 29.08	+05 50 59.1		511
1991 PP16	1991 09 06.04931	23 35 57.72	-05 52 21.0		511
1991 PP16	1991 09 06.08403	23 35 56.30	-05 52 40.8	17.4	511
1991 PP16	1991 09 07.01146	23 35 16.53	-06 01 13.7		511
1991 PP16	1991 09 07.03681	23 35 15.43	-06 01 28.1		511
1991 PQ16	1991 09 06.04931	23 37 47.24	-02 16 55.5		511
1991 PQ16	1991 09 06.08403	23 37 45.64	-02 17 16.4	17.6	511
1991 PQ16	1991 09 07.01146	23 37 04.07	-02 26 03.3		511
1991 PQ16	1991 09 07.03681	23 37 02.80	-02 26 19.7		511
1991 RE	1991 09 05.97639	23 09 49.31	-00 34 50.7		511
1991 RE	1991 09 06.01458	23 09 47.28	-00 34 58.4	18.0	511
1991 RE	1991 09 07.95139	23 08 13.70	-00 41 11.5		511
1991 RN1	1991 09 05.97639	23 20 44.49	-02 38 09.6		511
1991 RN1	1991 09 06.01458	23 20 42.68	-02 38 24.5	16.7	511
1991 RO1	1991 09 08.10486	00 41 30.42	+10 25 46.9	17.7	511
1991 RO1	1991 09 08.11979	00 41 29.87	+10 25 44.5		511
1991 RO1	1991 09 10.10000	00 40 21.37	+10 26 50.5		511
1991 RW1 *	1991 09 06.04931	23 36 33.80	-03 19 37.8		511
1991 RW1	1991 09 06.08403	23 36 31.57	-03 19 44.8	18.2	511
1991 RW1	1991 09 07.01146	23 35 37.69	-03 21 42.0		511
1991 RW1	1991 09 07.03681	23 35 35.68	-03 21 59.7		511
1991 RX1 *	1991 09 06.04931	23 38 43.58	-04 36 47.4		511
1991 RX1	1991 09 06.08403	23 38 41.37	-04 36 53.3	17.5	511
1991 RX1	1991 09 07.01146	23 37 46.18	-04 39 02.7		511
1991 RX1	1991 09 07.03681	23 37 44.59	-04 39 04.8		511
1991 RB2 *	1991 09 05.97639	23 07 23.60	-00 13 41.9		511
1991 RB2	1991 09 06.01458	23 07 21.56	-00 13 50.3	18.3	511
1991 RB2	1991 09 07.95139	23 05 30.52	-00 20 22.4	18.3	511
1991 RC2 *	1991 09 05.97639	23 09 25.44	-02 12 26.0		511
1991 RC2	1991 09 06.01458	23 09 22.85	-02 12 29.6	17.8	511
1991 RC2	1991 09 07.95139	23 07 20.88	-02 15 53.8		511
1991 RD2 *	1991 09 05.97639	23 16 15.74	-03 27 13.7		511
1991 RD2	1991 09 06.01458	23 16 13.78	-03 27 23.1	18.1	511
1991 RD2	1991 09 07.95139	23 14 42.24	-03 36 07.8		511
1991 RE2 *	1991 09 06.10833	23 39 19.17	+07 14 17.2	17.6	511

1991 RE2	1991 09 07.99722	23 37 42.67	+07 07 25.8		511
1991 RE2	1991 09 08.02500	23 37 41.11	+07 07 19.2		511
1991 RF2 *	1991 09 06.10833	23 50 58.16	+06 01 23.9	17.6	511
1991 RF2	1991 09 07.99722	23 49 31.80	+05 58 59.1		511
1991 RF2	1991 09 08.02500	23 49 30.48	+05 58 56.4		511
1991 RG2 *	1991 09 06.10833	23 51 34.23	+06 26 09.4	17.7	511
1991 RG2	1991 09 07.99722	23 50 01.19	+06 27 33.9		511
1991 RG2	1991 09 08.02500	23 49 59.76	+06 27 34.6		511
1991 RN2 *	1991 09 08.10486	00 44 09.73	+08 38 15.0	17.6	511
1991 RN2	1991 09 08.11979	00 44 09.26	+08 38 06.6		511
1991 RN2	1991 09 10.10000	00 43 02.47	+08 27 05.4		511
1991 RO2 *	1991 09 08.10486	00 48 30.09	+11 06 43.0	17.5	511
1991 RO2	1991 09 08.11979	00 48 29.91	+11 06 36.2		511
1991 RO2	1991 09 10.10000	00 47 58.24	+10 55 00.0		511
32	1991 09 08.10486	00 43 38.24	+10 00 00.7	15.0	511
32	1991 09 08.11979	00 43 37.65	+09 59 53.7		511
32	1991 09 10.10000	00 42 24.17	+09 51 12.3		511
420	1991 09 06.10833	23 39 47.71	+07 25 13.6	15.0	511
420	1991 09 07.99722	23 38 35.38	+07 17 54.0		511
420	1991 09 08.02500	23 38 34.25	+07 17 47.3		511
937	1990 08 17.08958	23 25 31.94	+04 54 51.4	16.0	511
937	1990 08 17.11042	23 25 31.36	+04 54 50.8		511
1807	1991 09 08.10486	00 41 29.86	+11 01 57.3	17.0	511
1807	1991 09 08.11979	00 41 29.50	+11 01 53.1		511
1807	1991 09 10.10000	00 40 38.70	+10 56 52.7		511
1823	1991 09 08.10486	00 42 47.80	+08 43 04.8	17.4	511
1823	1991 09 08.11979	00 42 47.20	+08 43 00.1		511
1823	1991 09 10.10000	00 41 13.87	+08 36 46.3		511
1837	1991 09 08.10486	00 41 39.74	+11 23 31.5	17.5	511
1837	1991 09 08.11979	00 41 39.00	+11 23 26.8		511
1837	1991 09 10.10000	00 40 09.68	+11 17 51.4		511
3515	1991 09 06.04931	23 34 00.53	-02 29 47.5		511
3515	1991 09 06.08403	23 33 58.79	-02 29 57.1	17.7	511
3515	1991 09 07.01146	23 33 15.74	-02 34 05.6		511
3515	1991 09 07.03681	23 33 14.63	-02 34 12.6		511
3626	1991 09 06.10833	23 50 44.26	+05 36 11.3	16.8	511
3626	1991 09 07.99722	23 49 25.30	+05 30 03.0		511
3626	1991 09 08.02500	23 49 24.16	+05 29 57.6		511
3969	1991 09 06.04931	23 33 48.82	-02 27 42.4		511
3969	1991 09 06.08403	23 33 46.99	-02 27 56.6	17.7	511
3969	1991 09 07.01146	23 33 01.63	-02 34 29.6		511
3969	1991 09 07.03681	23 33 00.26	-02 34 41.6		511
4488	1990 08 16.04028	23 09 40.82	+02 29 50.6	17.0	511

## 552 San Vittore

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

Observers C. Vacchi, G. Sassi, R. di Luca

Measurers C. Vacchi, V. Goretti, E. Colombini

AGK3, SAOC

0.25-m f/2.5 Schmidt and (1) 0.45-m f/5 reflector

1981 EH11	1991 09 08.89028	23 09 46.28	-04 19 51.2	17.0	552
1981 EH11	1991 09 08.91944	23 09 44.03	-04 19 47.1		552
1981 EH11	1991 09 09.99583	23 08 32.52	-04 16 37.6	17.0	1 552
1981 EH11	1991 09 10.01458	23 08 31.26	-04 16 34.6		1 552
1981 EH11	1991 09 10.95764	23 07 28.83	-04 13 50.0	17.0	1 552
1981 EH11	1991 09 10.97083	23 07 27.48	-04 13 46.9		1 552
1990 QC1	1990 08 24.90347	22 01 14.43	-05 16 14.1	16.0	552
1990 QC1	1990 08 24.92986	22 01 12.69	-05 16 16.0		552
1990 QC1	1990 08 24.96007	22 01 10.84	-05 16 17.2		552



1991 RN1 *	1991 09 08.89028	23 18 34.96	-02 57 15.7	16.5	552
1991 RN1	1991 09 08.91944	23 18 33.61	-02 57 28.4		552
1991 RN1	1991 09 10.90625	23 17 02.90	-03 10 48.8	16.5	1 552
1991 RN1	1991 09 10.92708	23 17 02.01	-03 10 56.9		1 552
1991 RN1	1991 09 11.89167	23 16 18.03	-03 17 32.4	16.5	1 552
1991 RN1	1991 09 11.94722	23 16 15.37	-03 17 55.2		1 552
1991 RN1	1991 09 11.96806	23 16 14.32	-03 18 03.5		1 552
1991 RN1	1991 09 16.87222	23 12 30.52	-03 51 34.9	16.5	552
1991 RN1	1991 09 16.89097	23 12 29.62	-03 51 42.5		552
107	1991 09 08.89028	23 17 59.50	-03 05 36.4	13.0	552
107	1991 09 08.91944	23 17 58.31	-03 05 47.2		552
107	1991 09 10.90625	23 16 43.87	-03 17 56.2	13.0	1 552
107	1991 09 10.92708	23 16 43.05	-03 18 03.1		1 552
107	1991 09 11.89167	23 16 06.98	-03 24 00.9	13.0	1 552
107	1991 09 11.94722	23 16 04.83	-03 24 20.9		1 552
107	1991 09 11.96806	23 16 04.01	-03 24 28.8		1 552
107	1991 09 16.87222	23 13 00.26	-03 54 39.1	13.0	552
107	1991 09 16.89097	23 12 59.58	-03 54 45.7		552
2996	1991 09 08.89028	23 18 14.14	-03 00 40.3	16.5	552
2996	1991 09 08.91944	23 18 12.79	-03 00 47.7		552
2996	1991 09 10.90625	23 16 32.22	-03 08 38.9	16.5	1 552
2996	1991 09 10.92708	23 16 31.21	-03 08 43.8		1 552
2996	1991 09 11.89167	23 15 42.63	-03 12 36.4	16.5	1 552
2996	1991 09 11.94722	23 15 39.77	-03 12 49.4		1 552
2996	1991 09 11.96806	23 15 38.67	-03 12 54.0		1 552

## 563 Seewalchen

F. Frevert, Dilichstrasse 1, D-6330 Wetzlar, Federal Republic of Germany

Observer M. Bressler

0.25-m f/6 reflector

AGK3, SAOC

1986 WE	1991 01 08.89028	07 04 53.00	+23 57 15.2		563
1986 WE	1991 01 08.92361	07 04 50.90	+23 57 28.1		563
1986 WE	1991 01 08.95417	07 04 48.93	+23 57 41.2		563
1986 WE	1991 01 08.97639	07 04 47.58	+23 57 50.2		563
1509	1990 01 22.81076	06 47 59.87	+15 05 42.7		563
1509	1990 01 22.82847	06 47 58.35	+15 05 28.0		563
1509	1990 01 22.86319	06 47 55.30	+15 04 57.8		563
1509	1990 01 22.87014	06 47 54.89	+15 04 52.9		563
4374	1989 11 29.85629	04 17 34.63	+11 46 21.4		563
4374	1989 11 29.87153	04 17 33.61	+11 46 18.1		563
4374	1989 11 29.87847	04 17 33.20	+11 46 16.7		563
4374	1989 11 29.88542	04 17 32.74	+11 46 16.7		563
4374	1989 11 29.88958	04 17 32.44	+11 46 14.4		563
4374	1989 11 29.91319	04 17 30.79	+11 46 12.3		563
4435	1990 02 21.77778	08 10 28.39	+31 44 19.3		563
4435	1990 02 21.78819	08 10 27.87	+31 44 05.0		563
4435	1990 02 21.79861	08 10 27.42	+31 43 47.6		563
4435	1990 02 21.80903	08 10 27.02	+31 43 31.7		563

## 565 Bassano Bresciano

U. Quadri, Osservatorio di Bassano Bresciano, Via S. Michele 4,

I-25020 Bassano Bresciano (Brescia), Italy

Observers U. Quadri, L. Strabla

0.3-0.4-m f/3.3 Schmidt

AGK3, SAOC

358	1991 04 16.83596	12 36 09.86	-01 45 24.8		565
358	1991 04 16.87218	12 36 08.36	-01 45 13.7		565
769	1991 04 16.83596	12 42 48.96	-00 01 16.8		565

769	1991 04 16.87218	12 42 47.36	-00 01 10.9	565
794	1991 04 16.83596	12 42 13.52	+00 29 20.1	565
1378	1991 04 16.83596	12 43 58.53	-01 35 48.1	565
1378	1991 04 16.87218	12 43 56.67	-01 35 41.5	565
1447	1991 04 16.83596	12 41 29.74	-01 42 04.8	565
1447	1991 04 16.87218	12 41 27.84	-01 41 57.1	565

## 568 Mauna Kea Observatory

D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive,  
Honolulu, HI 96822, U.S.A.

Observers D. J. Tholen, W. F. Golisch, D. M. Griep

2.24-m, IRTF encoders

SAOC, Lick Gaspra catalog

1991 EE	1991 10 03.31553	23 27 38.23	-17 05 55.4	15.7V	568
243	1991 10 02.60436	05 47 40.17	+24 42 03.5	15.0V	568
951	1991 08 03.27396	15 26 50.29	-18 15 55.5		568
951	1991 10 02.22134	16 39 41.65	-20 46 32.9	16.3V	568
951	1991 10 02.22361	16 39 41.91	-20 46 32.5		568
951	1991 10 03.21994	16 41 22.73	-20 49 07.6	16.6V	568
951	1991 10 05.21545	16 44 46.85	-20 54 08.6		568

## 573 Eldagsen

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

AGK3

345	1991 09 01.87728	00 13 16.64	+12 08 54.8		573
345	1991 09 01.88785	00 13 16.61	+12 08 54.0		573
550	1991 09 01.85280	00 13 31.41	+20 42 56.2		573
550	1991 09 01.85784	00 13 31.23	+20 42 57.0		573
675	1991 09 01.83058	23 21 14.80	+13 22 52.7		573
675	1991 09 01.83944	23 21 14.37	+13 22 51.1		573
901	1991 09 02.86484	23 22 01.06	+04 32 19.1		573
901	1991 09 02.87919	23 22 00.37	+04 32 16.2		573

## 587 Sormano

P. Sicoli, Via Valli 9, I-22040 Garbagnate Monastero (Como), Italy

0.5-m f/5.9 reflector

Observers M. Cavagna, C. Gualdoni

Measurer M. Cavagna

SAOC

1991 OA	1991 08 15.92406	21 30 02.84	-06 38 02.5		587
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## 589 Santa Lucia Stroncone

A. Vagnozzi, Santa Lucia 68, I-05039 Stroncone (Terni), Italy

Observers A. Vagnozzi, G. C. Morando, S. Casulli, R. Castellani

0.5-m f/7.5 Ritchey-Chretien

SAOC, AGK3

1991 OA	1991 08 16.94583	21 30 05.33	-06 25 42.4		589
1991 OA	1991 08 16.95278	21 30 05.11	-06 25 37.5		589
1991 OA	1991 08 16.95972	21 30 04.93	-06 25 33.1		589
1991 OA	1991 08 16.98681	21 30 04.79	-06 25 04.5		589
1857	1991 08 18.96528	21 28 32.38	-06 17 28.8		589
1857	1991 08 18.97222	21 28 32.09	-06 17 30.0		589
1857	1991 08 18.97917	21 28 31.77	-06 17 31.4		589
1857	1991 08 18.99306	21 28 30.70	-06 17 37.3		589
1857	1991 08 19.00000	21 28 30.42	-06 17 38.8		589
1857	1991 08 19.00694	21 28 30.06	-06 17 40.3		589
4911	1991 08 03.86528	19 59 16.28	+02 16 47.6		589
4911	1991 08 03.87222	19 59 16.06	+02 16 47.0		589
4911	1991 08 03.87917	19 59 15.84	+02 16 46.4		589

4911	1991 08 03.93750	19 59 12.72	+02 16 29.4	589
4911	1991 08 03.94444	19 59 12.48	+02 16 28.8	589
4911	1991 08 03.95139	19 59 12.20	+02 16 27.9	589

## 595 Farra d'Isonzo

L. Bittesini, Via dei Conventi 10, I-34070 Farra D'Isonzo (GO), Italy  
 Observers G. Lombardi, E. Pettarin, F. Piani

Measurers L. Bittesini, F. Piani, G. Lombardi, F. Bressan, G. Jerman  
 0.4-m f/4.5 reflector

SAOC				
547	1991 08 05.86105	18 24 28.41	+01 25 59.3	595
547	1991 08 05.87569	18 24 28.01	+01 25 51.1	595
547	1991 08 06.82778	18 23 59.95	+01 19 48.7	595
547	1991 08 07.83264	18 23 31.94	+01 13 16.0	595
547	1991 08 07.85486	18 23 31.31	+01 13 07.9	595
1168	1991 08 05.89306	19 51 33.42	+03 48 42.8	595
1168	1991 08 05.91458	19 51 32.33	+03 48 37.6	595
1168	1991 08 06.85000	19 50 51.21	+03 44 39.6	595
1168	1991 08 06.90625	19 50 48.49	+03 44 24.4	595

## 596 Colleverde di Guidonia

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

Long. and Parallax 12.62, -317, -284 (see MPC 16637)

GSC				
1991 RN1	1991 09 17.85486	23 11 46.41	-03 58 15.3	596
1991 RN1	1991 09 17.87222	23 11 45.53	-03 58 22.1	596
25	1991 08 01.84389	21 07 22.78	+28 52 07.6	596
25	1991 08 01.87062	21 07 21.62	+28 52 05.8	596
266	1991 08 06.83153	20 00 53.06	+00 06 24.1	596
266	1991 08 06.86021	20 00 51.67	+00 06 20.6	596
875	1991 08 07.86056	20 32 46.86	+05 55 28.9	596
875	1991 08 07.87681	20 32 46.09	+05 55 21.0	596
995	1991 08 06.88236	20 54 53.50	+07 10 41.2	596
995	1991 08 06.90063	20 54 52.59	+07 10 37.6	596

## 657 Victoria, Climenhaga Observatory

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

Observers J. B. Tatum, D. D. Balam, P. M. Krol

0.25-m Schmidt, 0.5-m reflector + CCD

1991 EE	1991 09 05.20498	16 54 54.64	+07 47 00.1	657
1991 EE	1991 09 05.20580	16 54 56.29	+07 46 51.9	657
7	1991 09 14.32500	22 43 42.02	+03 45 02.7	657
324	1991 09 14.33194	22 58 19.98	+03 20 08.3	657
324	1991 09 14.37569	22 58 17.20	+03 20 24.9	657
449	1991 04 21.30226	14 14 19.70	-09 01 29.6	657
449	1991 04 21.34167	14 14 17.40	-09 01 20.0	657
640	1991 07 07.27604	20 09 37.24	-01 55 42.9	657
640	1991 07 07.28993	20 09 36.62	-01 55 42.4	657
1112	1991 08 15.30312	21 38 12.25	-09 01 20.1	657
1112	1991 08 15.36771	21 38 08.91	-09 01 26.3	657
1388	1991 04 17.33403	14 15 00.71	-06 40 05.5	657
1388	1991 04 17.39861	14 14 57.47	-06 39 59.6	657
1388	1991 04 20.28750	14 12 31.85	-06 34 59.1	657
1388	1991 04 20.33542	14 12 29.43	-06 34 54.9	657
1709	1991 08 02.35104	21 23 32.29	-11 08 04.9	657

1709	1991 08 02.38368	21 23 30.35	-11 07 58.9	657
1709	1991 08 15.28785	21 10 52.30	-10 32 51.7	657
1709	1991 08 15.33160	21 10 49.59	-10 32 47.3	657

675 Palomar

E. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A. (2)

C. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A. (3)

C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The Netherlands (4)

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. (6)

9 = 3 + 6

Observers S. Cohen (2, S), T. Gehrels (4, L), E. Helin (2, S), H. E. Holt (9, S), T. M. King (9, S), K. Lawler (9, S), K. Lawrence (2, S), C. T. Kowal (6, L), D. H. Levy (3, S), P. Rose (2, S), C. S. Shoemaker (3, S), E. M. Shoemaker (3, S), J. Stiffler (9, S), K. W. Zeigler (9, S)

Measurers S. J. Bus (9), S. Cohen (2), K. A. Lawler (9), K. Lawrence (2), T. M. King (9), C. M. Olmstead (9), P. Rose (2), B. A. Skiff (9), C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)

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

1949 PQ	1990 03 27.45243	14 00 58.07	-10 57 03.1	17.2	9 675
1949 PQ	1990 03 27.49114	14 00 56.56	-10 56 57.4		9 675
1949 PQ	1990 04 01.44357	13 57 33.43	-10 38 44.9		9 675
1949 PQ	1990 04 01.48906	13 57 31.21	-10 38 33.4		9 675
1949 PQ	1990 04 22.36840	13 37 56.49	-08 55 14.1	16.8	9 675
1949 PQ	1990 04 22.39826	13 37 54.40	-08 55 03.3		9 675
1949 PQ	1990 05 25.17083	13 14 41.42	-07 03 46.6		9 675
1949 PQ	1990 05 25.20920	13 14 40.78	-07 03 45.4		9 675
1964 VT1	1991 09 13.33733	00 36 14.23	-00 30 33.7	17.2	9 675
1964 VT1	1991 09 13.37378	00 36 12.64	-00 30 41.8		9 675
1964 VT1	1991 09 16.39935	00 33 59.96	-00 43 17.0	17.2	9 675
1964 VT1	1991 09 16.43946	00 33 58.08	-00 43 27.4		9 675
1970 WD	1989 01 11.31614	06 48 24.22	+16 42 59.5		9 675
1970 WD	1989 01 11.35173	06 48 21.80	+16 42 53.9		9 675
1971 QN	1990 04 01.44357	13 45 58.52	-15 34 32.4	18.0	9 675
1971 QN	1990 04 01.48906	13 45 56.09	-15 34 20.9		9 675
1971 QN	1990 05 25.17083	13 00 56.98	-10 07 15.5		9 675
1972 RY3	1991 09 13.33733	00 53 11.47	-00 57 21.0	17.2	9 675
1972 RY3	1991 09 13.37378	00 53 10.08	-00 57 26.9		9 675
1972 RY3	1991 09 16.39935	00 51 15.08	-01 05 22.3	17.2	9 675
1972 RY3	1991 09 16.43946	00 51 13.43	-01 05 28.8		9 675
1973 SY	1991 04 15.28299	13 04 45.55	-05 42 56.5	18.4	3 675
1973 SY	1991 04 15.31441	13 04 44.68	-05 42 49.8		3 675
1973 SG4	1990 03 27.33767	12 18 54.93	-03 00 56.0	17.0	9 675
1973 SG4	1990 03 27.37135	12 18 53.13	-03 00 38.0		9 675
1974 ST	1991 09 13.33733	00 43 07.98	+00 46 02.3	17.2	9 675
1974 ST	1991 09 13.37378	00 43 06.48	+00 45 52.7		9 675
1974 ST	1991 09 16.39935	00 41 05.49	+00 31 08.5	16.5	9 675
1974 ST	1991 09 16.43946	00 41 03.77	+00 30 56.3		9 675
1974 SP1	1988 03 17.27636	10 23 49.37	+12 47 48.5	18.0	9 675
1974 SP1	1988 03 17.31520	10 23 47.95	+12 47 55.1		9 675
1974 SP1	1988 03 22.23594	10 20 52.86	+13 01 49.9	17.2	9 675
1974 SP1	1988 03 22.26736	10 20 51.81	+13 01 54.9		9 675
1975 QC	1989 07 06.21875	15 22 34.49	-07 59 16.3	17.5	9 675
1975 QC	1989 07 06.25625	15 22 34.21	-07 59 22.6		9 675
1975 TS3	1990 04 22.36840	13 48 03.12	-08 02 56.3	17.8	9 675

1975 TS3	1990 04	22.39826	13 48	01.54	-08 02	51.5		9 675
1975 TS3	1990 05	25.17083	13 25	40.74	-07 07	34.3		9 675
1975 TS3	1990 05	25.20920	13 25	39.54	-07 07	33.5		9 675
1975 VP	1991 09	12.37795	00 59	30.74	+02 06	39.5	17.0	9 675
1975 VP	1991 09	12.43078	00 59	29.02	+02 06	18.9		9 675
1975 VP	1991 09	13.33733	00 59	01.04	+02 00	17.3	17.0	9 675
1975 VP	1991 09	13.37378	00 58	59.73	+02 00	02.9		9 675
1975 VP	1991 09	14.41973	00 58	25.36	+01 52	55.1	16.8	9 675
1975 VP	1991 09	14.47101	00 58	23.56	+01 52	35.1		9 675
1975 VP	1991 09	16.39935	00 57	15.48	+01 39	01.8	16.5	9 675
1975 VP	1991 09	16.43946	00 57	13.92	+01 38	44.3		9 675
1975 VR5	1991 08	06.35503	22 04	00.58	-13 18	29.0	17.2	9 675
1975 VR5	1991 08	06.38698	22 03	59.01	-13 18	44.5		9 675
1975 VR5	1991 08	10.35599	22 00	39.26	-13 50	11.4		9 675
1975 VR5	1991 08	10.39149	22 00	37.42	-13 50	28.2	17.0	9 675
1976 EB	1991 08	07.45712	23 56	33.34	-01 06	35.4	16.8	9 675
1976 EB	1991 08	08.44913	23 56	21.11	-01 05	14.9	16.5	9 675
1977 DN4	1991 09	12.37795	01 05	09.47	+02 35	44.5	19.0	9 675
1977 DN4	1991 09	12.43078	01 05	07.70	+02 35	31.3		9 675
1977 DN4	1991 09	14.41973	01 04	02.60	+02 27	23.1		9 675
1977 DN4	1991 09	14.47101	01 04	00.94	+02 27	08.7	18.5	9 675
1977 RG	1991 08	08.42483	23 21	50.55	-01 49	29.9	17.0	9 675
1977 RG	1991 08	08.43003	23 21	50.21	-01 49	32.2	18.2	9 675
1977 RG	1991 08	08.45660	23 21	49.77	-01 49	39.1		9 675
1977 RG	1991 08	08.46441	23 21	49.44	-01 49	41.6		9 675
1977 RK	1990 05	25.17083	13 25	12.00	-06 19	11.9		9 675
1977 RK	1990 05	25.20920	13 25	10.12	-06 19	42.1		9 675
1977 RW6	1990 04	01.44357	13 42	41.01	-10 34	10.1	18.2	9 675
1977 RW6	1990 04	01.48906	13 42	38.86	-10 33	59.4	18.5	9 675
1977 RW6	1990 05	25.17083	13 06	40.00	-07 31	57.6		9 675
1978 SM5	1991 09	12.37795	01 09	12.60	+02 48	17.8	18.8	9 675
1978 SM5	1991 09	12.43078	01 09	10.50	+02 48	06.9		9 675
1978 SM5	1991 09	14.41973	01 07	56.48	+02 40	57.4	18.2	9 675
1978 SM5	1991 09	14.47101	01 07	54.25	+02 40	46.2		9 675
1978 SL6	1991 08	06.35503	22 12	13.31	-12 30	00.8	17.0	9 675
1978 SL6	1991 08	06.38698	22 12	11.87	-12 30	10.4		9 675
1978 SL6	1991 08	10.35599	22 09	17.17	-12 49	12.3	17.2	9 675
1978 SL6	1991 08	10.39149	22 09	15.43	-12 49	23.2		9 675
1978 WS	1978 11	30.31702	04 03	27.68	+21 00	42.8	17.8V	6 675
1978 WS	1978 12	01.33472	04 02	36.33	+20 55	15.4		6 675
1978 WU	1978 11	30.31702	04 03	41.15	+19 36	21.0	18.0V	6 675
1978 WU	1978 12	01.33472	04 02	40.78	+19 29	14.9		6 675
1978 WD15	1978 11	30.31702	04 04	17.16	+19 56	19.6	16.5V	6 675
1978 WD15	1978 12	01.33472	04 03	23.59	+19 54	44.3		6 675
1978 WE15*	1978 11	30.31702	03 43	27.81	+17 17	56.4	18.5V	6 675
1978 WE15	1978 12	01.33472	03 42	31.80	+17 09	37.2		6 675
1978 WF15*	1978 11	30.31702	03 44	42.15	+19 58	49.4	18.8V	6 675
1978 WF15	1978 12	01.33472	03 43	41.21	+19 55	07.5		6 675
1978 WG15*	1978 11	30.31702	03 44	43.26	+21 06	15.0	17.2V	6 675
1978 WG15	1978 12	01.33472	03 43	48.72	+21 05	16.3		6 675
1978 WH15*	1978 11	30.31702	03 44	50.80	+17 13	42.0	18.5V	6 675
1978 WH15	1978 12	01.33472	03 43	59.68	+17 11	38.8		6 675
1978 WJ15*	1978 11	30.31702	03 44	56.29	+18 55	34.1	18.0V	6 675
1978 WJ15	1978 12	01.33472	03 44	02.63	+18 50	05.2		6 675
1978 WK15*	1978 11	30.31702	03 45	08.67	+20 27	57.6	18.5V	6 675
1978 WK15	1978 12	01.33472	03 44	01.98	+20 23	49.7		6 675
1978 WL15*	1978 11	30.31702	03 45	16.36	+17 51	54.7	18.2V	6 675
1978 WL15	1978 12	01.33472	03 44	17.43	+17 45	07.2		6 675
1978 WM15*	1978 11	30.31702	03 45	23.28	+16 12	52.1	18.5V	6 675

1978	WM15	1978	12	01.33472	03	44	20.59	+16	11	17.5		6	675
1978	WN15*	1978	11	30.31702	03	45	23.48	+20	28	53.2	19.5V	6	675
1978	WN15	1978	12	01.33472	03	44	33.53	+20	26	25.8		6	675
1978	WO15*	1978	11	30.31702	03	47	48.14	+19	01	17.5	17.8V	6	675
1978	WO15	1978	12	01.33472	03	46	51.73	+19	00	46.1		6	675
1978	WP15*	1978	11	30.31702	03	47	51.84	+19	23	49.5	18.5V	6	675
1978	WP15	1978	12	01.33472	03	46	52.28	+19	25	28.3		6	675
1978	WQ15*	1978	11	30.31702	03	47	56.69	+18	16	22.6	18.8V	6	675
1978	WQ15	1978	12	01.33472	03	47	08.18	+18	13	49.3		6	675
1978	WR15*	1978	11	30.31702	03	49	21.34	+16	51	43.1	16.0V	6	675
1978	WR15	1978	12	01.33472	03	48	23.31	+16	45	51.2		6	675
1978	WS15*	1978	11	30.31702	03	50	08.26	+19	50	14.0	17.8V	6	675
1978	WS15	1978	12	01.33472	03	49	09.07	+19	40	55.0		6	675
1978	WT15*	1978	11	30.31702	03	50	14.64	+18	10	44.3	18.0V	6	675
1978	WT15	1978	12	01.33472	03	49	09.43	+17	54	41.4		6	675
1978	WU15*	1978	11	30.31702	03	50	22.94	+19	10	24.8	18.2V	6	675
1978	WU15	1978	12	01.33472	03	49	23.85	+19	06	15.1		6	675
1978	WV15*	1978	11	30.31702	03	51	00.05	+16	57	17.5	18.0V	6	675
1978	WV15	1978	12	01.33472	03	50	09.31	+16	51	35.2		6	675
1978	WW15*	1978	11	30.31702	03	51	57.22	+17	59	24.8	18.5V	6	675
1978	WW15	1978	12	01.33472	03	50	58.75	+17	59	18.1		6	675
1978	WX15*	1978	11	30.31702	03	52	26.72	+20	56	35.5	17.5V	6	675
1978	WX15	1978	12	01.33472	03	51	16.52	+20	55	19.9		6	675
1978	WY15*	1978	11	30.31702	03	52	31.29	+21	37	04.4	17.5V	6	675
1978	WY15	1978	12	01.33472	03	51	37.38	+21	34	41.1		6	675
1978	WZ15*	1978	11	30.31702	03	52	50.03	+20	00	23.9	17.8V	6	675
1978	WZ15	1978	12	01.33472	03	51	53.91	+19	59	15.7		6	675
1978	WA16*	1978	11	30.31702	03	53	32.29	+17	14	05.8	19.5V	6	675
1978	WA16	1978	12	01.33472	03	52	39.73	+17	12	16.3		6	675
1978	WB16*	1978	11	30.31702	03	54	55.46	+16	04	14.8	16.5V	6	675
1978	WB16	1978	12	01.33472	03	53	59.54	+16	05	03.1		6	675
1978	WC16*	1978	11	30.31702	03	55	20.16	+18	13	25.3	17.2V	6	675
1978	WC16	1978	12	01.33472	03	54	14.40	+18	19	48.9		6	675
1978	WD16*	1978	11	30.31702	03	55	39.27	+20	53	03.2	16.0V	6	675
1978	WD16	1978	12	01.33472	03	54	45.00	+20	46	57.4		6	675
1978	WE16*	1978	11	30.31702	03	55	51.80	+20	21	41.2	17.5V	6	675
1978	WE16	1978	12	01.33472	03	54	54.57	+20	18	20.6		6	675
1978	WF16*	1978	11	30.31702	03	56	12.83	+21	57	06.4	15.2V	6	675
1978	WF16	1978	12	01.33472	03	55	05.76	+21	57	41.2		6	675
1978	WG16*	1978	11	30.31702	03	56	40.86	+21	56	25.7	18.0V	6	675
1978	WG16	1978	12	01.33472	03	55	44.98	+21	54	30.1		6	675
1978	WH16*	1978	11	30.31702	03	57	04.96	+21	49	32.4	16.5V	6	675
1978	WH16	1978	12	01.33472	03	56	08.07	+21	49	41.2		6	675
1978	WJ16*	1978	11	30.31702	03	57	50.89	+16	52	59.1	18.8V	6	675
1978	WJ16	1978	12	01.33472	03	56	53.49	+16	47	03.4		6	675
1978	WK16*	1978	11	30.31702	03	57	56.03	+16	55	11.8	18.2V	6	675
1978	WK16	1978	12	01.33472	03	56	52.12	+16	56	21.2		6	675
1978	WL16*	1978	11	30.31702	03	57	56.45	+21	18	40.8	16.0V	6	675
1978	WL16	1978	12	01.33472	03	56	42.71	+21	18	22.8		6	675
1978	WM16*	1978	11	30.31702	03	58	09.64	+16	14	00.0	18.0V	6	675
1978	WM16	1978	12	01.33472	03	57	05.88	+16	15	01.9		6	675
1978	WN16*	1978	11	30.31702	03	58	46.32	+18	53	49.6	16.2V	6	675
1978	WN16	1978	12	01.33472	03	57	50.82	+18	50	47.6		6	675
1978	WO16*	1978	11	30.31702	03	59	07.80	+18	27	29.2	18.5V	6	675
1978	WO16	1978	12	01.33472	03	58	32.54	+18	27	29.0		6	675
1978	WP16*	1978	11	30.31702	03	59	14.74	+21	01	37.5	16.2V	6	675
1978	WP16	1978	12	01.33472	03	58	09.86	+20	55	43.0		6	675
1978	WQ16*	1978	11	30.31702	04	00	16.15	+18	26	15.8	17.5V	6	675
1978	WQ16	1978	12	01.33472	03	59	09.43	+18	22	56.3		6	675

1978	WR16*	1978	11	30.31702	04	00	50.02	+18	55	01.0	17.8V	6	675
1978	WR16	1978	12	01.33472	03	59	49.59	+18	48	42.6		6	675
1978	WS16*	1978	11	30.31702	04	01	27.33	+20	57	46.8	16.5V	6	675
1978	WS16	1978	12	01.33472	04	00	28.46	+21	00	03.1		6	675
1978	WT16*	1978	11	30.31702	04	01	41.31	+22	11	56.7	18.0V	6	675
1978	WT16	1978	12	01.33472	04	00	36.83	+22	10	23.8		6	675
1978	WU16*	1978	11	30.31702	04	02	33.39	+21	15	08.3	16.5V	6	675
1978	WU16	1978	12	01.33472	04	01	29.82	+21	08	34.6		6	675
1978	WV16*	1978	11	30.31702	04	02	46.99	+19	42	23.3	17.8V	6	675
1978	WV16	1978	12	01.33472	04	01	12.93	+19	58	10.7		6	675
1978	WW16*	1978	11	30.31702	04	03	59.70	+16	21	53.2	17.8V	6	675
1978	WW16	1978	12	01.33472	04	03	04.79	+16	18	01.8		6	675
1978	WX16*	1978	11	30.31702	04	05	16.94	+17	33	48.9	18.0V	6	675
1978	WX16	1978	12	01.33472	04	04	08.86	+17	33	10.8		6	675
1979	MK3	1988	03	17.27636	10	14	00.30	+15	05	36.2	18.5	9	675
1979	MK3	1988	03	17.31520	10	13	58.95	+15	05	44.0		9	675
1979	MK3	1988	03	21.28315	10	11	54.20	+15	21	24.2	17.5	9	675
1979	MK3	1988	03	21.31493	10	11	53.24	+15	21	30.5		9	675
1979	MK3	1988	03	22.23594	10	11	26.99	+15	24	49.1	18.0	9	675
1979	MK3	1988	03	22.26736	10	11	26.03	+15	24	54.9		9	675
1979	MK3	1991	09	16.39935	00	41	35.61	-02	55	14.8	18.5	9	675
1979	MK3	1991	09	16.43946	00	41	34.05	-02	55	26.7		9	675
1979	MU8	1991	07	10.27917	17	22	51.89	-10	26	05.1	16.0	2	675
1979	MU8	1991	07	11.29705	17	22	11.70	-10	33	38.6		2	675
1979	OD15	1988	03	17.27636	10	23	28.11	+09	25	50.8	17.8	9	675
1979	OD15	1988	03	17.31520	10	23	26.40	+09	26	05.5		9	675
1979	OD15	1988	03	21.28315	10	20	32.33	+09	51	26.1	17.5	9	675
1979	OD15	1988	03	21.31493	10	20	30.92	+09	51	37.7		9	675
1979	OD15	1988	03	22.23594	10	19	53.70	+09	57	11.2	17.5	9	675
1979	OD15	1988	03	22.26736	10	19	52.43	+09	57	23.0		9	675
1980	FH12	1991	08	10.35599	21	59	40.01	-09	35	50.4	17.2	9	675
1980	FH12	1991	08	10.39149	21	59	37.72	-09	35	54.1		9	675
1980	TC5	1989	07	09.36927	20	56	27.97	-03	57	05.6		9	675
1980	TC5	1989	07	09.40590	20	56	26.60	-03	57	00.7		9	675
1980	UC	1991	09	12.37795	01	05	03.33	+02	24	30.0	17.0	9	675
1980	UC	1991	09	12.43078	01	05	01.69	+02	24	16.6		9	675
1980	UC	1991	09	14.41973	01	04	01.23	+02	15	41.1	17.0	9	675
1980	UC	1991	09	14.47101	01	03	59.53	+02	15	28.3		9	675
1981	DT2	1991	08	10.40851	22	54	21.45	-04	48	51.2	17.8	9	675
1981	EK10	1988	03	17.27636	10	05	43.37	+08	30	35.6	18.8	9	675
1981	EK10	1988	03	17.31520	10	05	41.88	+08	30	42.5		9	675
1981	EK10	1988	03	21.28315	10	03	23.67	+08	40	29.4	18.5	9	675
1981	EK10	1988	03	21.31493	10	03	22.73	+08	40	32.9		9	675
1981	EZ47	1990	04	22.36840	13	38	13.88	-11	40	53.0	19.0	9	675
1981	EZ47	1990	04	22.39826	13	38	12.00	-11	40	45.8		9	675
1981	QP3	1991	09	13.33733	00	36	31.24	-01	04	19.6	17.5	9	675
1981	QP3	1991	09	13.37378	00	36	29.69	-01	04	30.4		9	675
1981	QP3	1991	09	16.39935	00	34	21.75	-01	18	55.6	17.5	9	675
1981	RM3	1991	08	10.34201	21	49	59.46	-08	56	53.4	17.0	9	675
1981	RM3	1991	08	10.37049	21	49	58.22	-08	57	01.0		9	675
1981	TM3	1991	08	07.39306	23	34	02.44	-12	13	57.8	17.0	9	675
1981	TM3	1991	08	07.42257	23	34	01.42	-12	14	02.0		9	675
1981	YO1	1988	05	12.18750	13	49	53.11	+24	19	34.9	17.2	3	675
1981	YO1	1988	05	13.26667	13	48	44.52	+24	06	13.6		3	675
1981	YO1	1988	05	13.29896	13	48	42.48	+24	05	49.1		3	675
1982	UQ6	1991	08	06.35503	21	52	53.04	-10	49	59.9	17.8	9	675
1982	UQ6	1991	08	06.38698	21	52	51.52	-10	50	07.2	18.2	9	675
1982	UX10	1978	11	30.31702	03	44	24.77	+16	38	30.8	17.8V	6	675
1982	UX10	1978	12	01.33472	03	43	29.33	+16	30	48.1		6	675

1983	CM	1991	09	14.41973	01	13	15.22	+05	56	06.7		9	675
1983	CM	1991	09	14.47101	01	13	12.86	+05	56	00.6	18.5	9	675
1983	HJ	1991	09	14.41973	01	20	43.23	+05	34	24.0		9	675
1983	HJ	1991	09	14.47101	01	20	41.52	+05	34	11.0		9	675
1983	PY	1990	03	27.45243	14	10	46.90	-09	48	22.1	17.8	9	675
1983	PY	1990	03	27.49114	14	10	45.55	-09	48	07.7		9	675
1984	FS	1990	08	26.36111	22	56	42.24	-12	07	14.6		9	675
1984	QR	1991	08	10.35599	22	03	21.79	-10	54	07.0	17.2	9	675
1984	QR	1991	08	10.39149	22	03	18.87	-10	53	51.8		9	675
1984	QR	1991	09	04.22500	21	26	52.86	-07	45	11.4	15.5	2	675
1984	QR	1991	09	04.25174	21	26	50.50	-07	45	00.1		2	675
1984	SX5	1991	08	07.45712	23	42	23.46	-00	59	03.2	17.2	9	675
1984	SX5	1991	08	08.44913	23	42	14.64	-01	03	15.4		9	675
1984	SX5	1991	09	05.45451	23	27	47.97	-04	24	29.4	16.0	2	675
1984	SX5	1991	09	05.47170	23	27	47.04	-04	24	38.4		2	675
1984	SX5	1991	09	08.40278	23	25	25.08	-04	52	13.3		2	675
1984	SX5	1991	09	08.43090	23	25	23.59	-04	52	29.7		2	675
1985	CE2	1991	09	13.33733	00	46	17.85	+01	21	17.1	18.0	9	675
1985	CE2	1991	09	13.37378	00	46	16.38	+01	21	01.6		9	675
1985	CE2	1991	09	16.39935	00	44	13.71	+01	00	19.9	17.2	9	675
1985	CE2	1991	09	16.43946	00	44	11.99	+01	00	03.2		9	675
1985	TQ1	1988	02	17.42309	11	03	45.50	+15	59	34.8	17.5	9	675
1985	TQ1	1988	02	17.45399	11	03	44.06	+15	59	42.2		9	675
1985	UW4	1989	07	05.21111	14	50	33.87	-09	55	03.2		9	675
1986	PX5	1988	02	17.42309	10	48	14.81	+13	17	19.1	18.0	9	675
1986	PX5	1988	02	17.45399	10	48	13.15	+13	17	28.8		9	675
1986	QB1	1991	08	07.45712	00	01	26.08	-04	39	33.8	17.2	9	675
1986	QB1	1991	08	08.44913	00	01	12.51	-04	41	59.7	17.0	9	675
1986	QN3	1988	02	17.42309	11	01	48.92	+11	33	36.0	18.8	9	675
1986	QN3	1988	02	17.45399	11	01	47.11	+11	33	46.8		9	675
1986	RU5	1989	07	05.22240	14	48	00.76	-01	24	24.8		9	675
1986	RU5	1989	07	05.26667	14	48	01.59	-01	24	32.4		9	675
1986	RU5	1989	07	07.20087	14	48	45.25	-01	30	28.4		9	675
1986	RU5	1989	07	07.24155	14	48	46.21	-01	30	36.4		9	675
1986	TB5	1991	08	06.33281	21	24	37.33	-17	56	43.2	16.8	9	675
1986	TB5	1991	08	07.32240	21	23	51.22	-18	00	17.2	17.0	9	675
1986	TB5	1991	08	07.35069	21	23	49.76	-18	00	23.7		9	675
1986	UU	1989	08	02.27483	19	45	20.66	-07	35	51.6		9	675
1986	UU	1989	08	02.30573	19	45	19.01	-07	35	52.4		9	675
1986	VT	1991	08	07.45712	00	01	49.49	+01	13	13.5	17.5	9	675
1986	VT	1991	08	08.44913	00	01	43.27	+01	12	24.2	17.2	9	675
1986	VG1	1991	03	12.48889	14	09	31.99	+12	20	50.6	17.9	3	675
1986	VG1	1991	03	12.51892	14	09	31.43	+12	20	57.4		3	675
1986	VG1	1991	04	15.35764	13	54	54.81	+13	52	21.5	17.8	3	675
1986	VG1	1991	04	15.38941	13	54	53.78	+13	52	23.0		3	675
1986	VG1	1991	04	17.35517	13	53	52.82	+13	55	21.2		3	675
1986	VG1	1991	04	17.38472	13	53	51.88	+13	55	23.9		3	675
1986	VG1	1991	05	13.27431	13	41	07.87	+13	59	07.4	17.5	3	675
1986	VG1	1991	05	13.31267	13	41	06.67	+13	59	03.6		3	675
1986	VG1	1991	05	15.19722	13	40	18.44	+13	56	37.5		3	675
1986	WP8	1988	03	17.27636	10	02	15.84	+12	27	23.6	18.0	9	675
1986	WP8	1988	03	17.31520	10	02	14.63	+12	27	31.5		9	675
1986	WP8	1988	03	21.28315	10	00	18.72	+12	40	40.1	17.0	9	675
1986	WP8	1988	03	21.31493	10	00	17.83	+12	40	45.6		9	675
1986	WP8	1988	03	22.23594	09	59	53.98	+12	43	31.3	17.2	9	675
1986	WP8	1988	03	22.26736	09	59	53.06	+12	43	37.8		9	675
1987	HE1	1991	09	12.37795	01	20	11.06	+03	48	39.7	18.0	9	675
1987	HE1	1991	09	12.43078	01	20	09.10	+03	48	16.8		9	675
1987	HE1	1991	09	14.41973	01	18	55.06	+03	33	19.8	17.5	9	675



1987 HE1	1991 09	14.47101	01 18	52.93	+03 32	55.3		9 675
1987 QN7	1991 08	07.45712	23 44	47.02	-02 38	40.5	17.2	9 675
1987 QN7	1991 08	08.44913	23 44	58.26	-02 42	46.5	17.0	9 675
1987 QW7	1991 08	08.43003	23 26	07.97	+00 03	27.9	17.0	9 675
1987 QW7	1991 08	08.45660	23 26	07.73	+00 03	28.2		9 675
1987 QW7	1991 08	08.46441	23 26	07.59	+00 03	27.7		9 675
1987 SG2	1991 08	07.45712	23 47	40.16	-00 21	28.4	18.2	9 675
1987 SG2	1991 08	08.44913	23 47	28.89	-00 25	03.3	18.0	9 675
1987 SS3	1990 04	01.44357	13 49	03.47	-08 07	10.6	17.5	9 675
1987 SS3	1990 04	01.48906	13 49	01.26	-08 06	56.8	17.8	9 675
1987 SS3	1990 05	25.17083	13 08	25.01	-04 31	03.9	17.5	9 675
1987 SM4	1991 08	07.46545	23 30	30.65	+08 49	41.5		9 675
1987 SM4	1991 08	07.48229	23 30	30.43	+08 49	49.0	16.8	9 675
1987 SN12	1991 08	06.35503	21 55	13.67	-12 23	47.8	16.8	9 675
1987 SN12	1991 08	06.38698	21 55	12.30	-12 23	57.4		9 675
1987 SN12	1991 08	10.35599	21 52	24.40	-12 43	44.2		9 675
1987 SN12	1991 08	10.39149	21 52	22.83	-12 43	54.3		9 675
1987 YH	1991 09	13.33733	00 44	02.14	-02 37	49.4	17.5	9 675
1987 YH	1991 09	13.37378	00 44	00.82	-02 38	06.9		9 675
1987 YH	1991 09	16.39935	00 42	11.84	-03 02	51.3	17.5	9 675
1987 YH	1991 09	16.43946	00 42	10.26	-03 03	10.9		9 675
1988 BH5	1989 08	02.27483	19 30	38.25	-11 23	58.8		9 675
1988 BH5	1989 08	02.30573	19 30	36.71	-11 23	56.8		9 675
1988 CL	1988 03	17.27636	10 00	08.13	+10 28	46.6	18.0	9 675
1988 CL	1988 03	17.31520	10 00	06.60	+10 28	47.4		9 675
1988 CL	1988 03	21.28315	09 57	34.68	+10 27	26.1	17.5	9 675
1988 CL	1988 03	21.31493	09 57	33.50	+10 27	25.1		9 675
1988 CL	1988 03	22.23594	09 57	02.05	+10 26	53.4	17.2	9 675
1988 CL	1988 03	22.26736	09 57	00.92	+10 26	52.2		9 675
1988 CA1	1988 03	17.27636	10 16	16.66	+15 44	21.3	18.0	9 675
1988 CA1	1988 03	17.31520	10 16	14.99	+15 44	33.6		9 675
1988 CA1	1988 03	21.28315	10 13	41.00	+16 04	50.0	18.2	9 675
1988 CA1	1988 03	21.31493	10 13	39.79	+16 04	58.3		9 675
1988 CA1	1988 03	22.23594	10 13	08.28	+16 09	07.3	18.0	9 675
1988 CA1	1988 03	22.26736	10 13	07.16	+16 09	14.5		9 675
1988 CW2	1978 11	30.31702	04 04	54.77	+19 45	24.7	17.5V	6 675
1988 CW2	1978 12	01.33472	04 03	54.88	+19 43	17.8		6 675
1988 CC6	1988 03	17.27636	10 06	17.67	+11 36	40.0	18.5	9 675
1988 CC6	1988 03	17.31520	10 06	16.37	+11 36	45.3		9 675
1988 DE	1988 03	21.28315	10 10	43.80	+15 31	23.5	16.8	9 675
1988 DE	1988 03	21.31493	10 10	42.22	+15 31	15.9		9 675
1988 DE	1988 03	22.23594	10 10	01.24	+15 27	40.8	17.0	9 675
1988 DE	1988 03	22.26736	10 09	59.74	+15 27	32.6		9 675
1988 EL	1991 09	04.33420	22 28	58.11	-19 45	06.9	16.0	2 675
1988 EL	1991 09	04.35694	22 28	55.63	-19 44	58.0		2 675
1988 EL	1991 09	07.26753	22 24	02.09	-19 23	10.8	16.0	2 675
1988 EL	1991 09	07.29531	22 23	59.16	-19 22	56.2		2 675
1988 EL	1991 09	09.22934	22 20	50.11	-19 07	24.9		2 675
1988 EL	1991 09	09.25538	22 20	47.66	-19 07	13.5		2 675
1988 EM1	1989 08	02.27483	19 25	26.94	-07 12	38.3		9 675
1988 EM1	1989 08	02.30573	19 25	25.45	-07 12	49.0		9 675
1988 FK	1991 06	06.35851	17 53	53.85	+20 26	29.9	17.5	3 675
1988 FK	1991 06	06.39861	17 53	51.44	+20 26	29.9		3 675
1988 FK	1991 06	08.38125	17 51	54.01	+20 24	50.2		3 675
1988 FK	1991 06	08.42465	17 51	51.27	+20 24	46.6		3 675
1988 FS3 *	1988 03	22.23594	10 12	55.16	+13 21	41.5	19.0	9 675
1988 RO	1989 11	22.25399	01 58	06.12	+09 24	05.8	17.2	3 675
1988 RO	1989 11	22.28889	01 58	05.39	+09 23	58.3		3 675
1988 RO	1990 11	13.43611	04 58	27.22	+10 01	48.2	18.2	3 675

1988 RO	1990 11	14.44271	04 57	59.44	+09 58	31.6		3 675
1988 RO	1990 11	14.47448	04 57	58.50	+09 58	25.2		3 675
1988 RA1	1990 11	11.38872	04 39	16.82	+40 08	58.8	19.3	3 675
1988 RA1	1990 11	11.42101	04 39	15.68	+40 08	56.2		3 675
1988 RA1	1990 11	14.43472	04 37	26.74	+40 08	29.4		3 675
1988 RA1	1990 11	14.46632	04 37	25.51	+40 08	28.8		3 675
1988 RD3	1991 08	10.35599	22 13	54.19	-07 40	54.5	17.5	9 675
1988 RD3	1991 08	10.39149	22 13	52.35	-07 41	06.8		9 675
1988 RL13	1978 11	30.31702	03 51	29.33	+21 11	56.1	19.5V	6 675
1988 RL13	1978 12	01.33472	03 50	53.49	+21 11	44.4		6 675
1988 UB	1990 05	25.17083	13 19	12.76	-10 25	11.0		9 675
1988 VK	1991 09	04.33420	22 37	28.44	-18 24	11.3	16.0	2 675
1988 VK	1991 09	04.35694	22 37	27.18	-18 24	23.5		2 675
1988 VK	1991 09	05.41545	22 36	31.49	-18 32	54.6		2 675
1988 VO2	1991 09	04.23819	19 40	51.47	-17 47	45.8	17.0	2 675
1988 VO2	1991 09	04.26458	19 40	50.98	-17 47	45.7		2 675
1988 VZ3	1991 08	10.34201	21 34	09.16	-05 43	20.3	18.0	9 675
1988 VZ3	1991 08	10.37049	21 34	07.43	-05 43	24.6		9 675
1988 VK4	1991 09	12.37795	00 58	53.42	+00 13	25.0	17.8	9 675
1988 VK4	1991 09	12.43078	00 58	50.67	+00 13	16.9		9 675
1988 VK4	1991 09	13.33733	00 58	04.69	+00 11	00.6	17.5	9 675
1988 VK4	1991 09	13.37378	00 58	02.75	+00 10	55.2		9 675
1988 VK4	1991 09	16.39935	00 55	20.77	+00 03	03.0	17.5	9 675
1988 VK4	1991 09	16.43946	00 55	18.53	+00 02	56.1		9 675
1989 AF1	1989 01	11.31614	07 02	23.57	+20 08	41.3	16.5	9 675
1989 AF1	1989 01	11.35173	07 02	21.04	+20 08	52.7		9 675
1989 AZ1	1989 01	11.31614	06 55	16.08	+20 24	16.2	16.0	9 675
1989 AZ1	1989 01	11.35173	06 55	13.86	+20 24	31.2		9 675
1989 BY	1991 08	07.45712	00 02	14.91	-04 13	21.5	17.5	9 675
1989 BY	1991 08	08.44913	00 02	07.80	-04 16	25.0	17.2	9 675
1989 BN1	1991 08	10.35599	22 05	16.63	-10 50	38.9	18.0	9 675
1989 BN1	1991 08	10.39149	22 05	14.85	-10 50	53.0		9 675
1989 CA	1991 08	08.42483	23 32	54.63	-00 11	23.9	17.8	9 675
1989 CA	1991 08	08.45660	23 32	53.89	-00 11	25.3		9 675
1989 CM	1990 04	22.36840	13 35	39.44	-09 59	04.4	18.2	9 675
1989 CM	1990 04	22.39826	13 35	37.94	-09 58	57.0		9 675
1989 CK2	1991 03	12.48889	14 12	42.47	+11 51	52.6	18.2	3 675
1989 CK2	1991 03	12.51892	14 12	41.99	+11 52	00.7		3 675
1989 CK2	1991 04	15.35764	13 59	01.59	+13 53	52.2	18.0	3 675
1989 CK2	1991 04	15.38941	13 59	00.67	+13 53	55.3		3 675
1989 CK2	1991 04	17.35517	13 58	01.66	+13 58	33.5		3 675
1989 CK2	1991 04	17.38472	13 58	00.77	+13 58	37.7		3 675
1989 CK2	1991 05	13.27431	13 45	36.82	+14 21	21.2	18.2	3 675
1989 CK2	1991 05	13.31267	13 45	35.64	+14 21	20.4		3 675
1989 CK2	1991 05	15.19722	13 44	48.85	+14 20	04.5		3 675
1989 EO11	1991 03	09.41389	14 01	42.86	+13 38	55.8	18.5	3 675
1989 EO11	1991 03	12.47361	14 00	59.23	+13 57	12.4		3 675
1989 EO11	1991 03	12.50399	14 00	58.75	+13 57	24.1		3 675
1989 FJ	1991 09	13.33733	00 47	13.12	-01 16	12.5	18.2	9 675
1989 FJ	1991 09	13.37378	00 47	11.54	-01 16	20.3		9 675
1989 FJ	1991 09	16.39935	00 45	00.07	-01 28	03.2	18.5	9 675
1989 FJ	1991 09	16.43946	00 44	58.22	-01 28	13.0		9 675
1989 GL5	1991 09	07.35851	22 48	16.70	-17 24	34.3	16.0	2 675
1989 GL5	1991 09	07.37222	22 48	16.13	-17 24	37.9		2 675
1989 GL5	1991 09	09.31892	22 46	52.30	-17 33	58.4		2 675
1989 GL5	1991 09	09.34271	22 46	51.29	-17 34	06.5		2 675
1989 HA	1989 07	05.22240	14 53	50.67	+05 22	14.2		9 675
1989 HA	1989 07	05.26667	14 53	51.34	+05 21	45.5		9 675
1989 HD	1989 07	10.25226	15 23	44.73	+01 07	34.8		9 675

1989	HD	1989	07	10.27830	15	23	45.00	+01	07	18.0		9	675
1989	JK	1989	07	05.23110	15	12	24.52	+01	46	11.1		9	675
1989	JK	1989	07	10.25226	15	13	51.22	+01	04	05.5		9	675
1989	JK	1989	07	10.27830	15	13	51.62	+01	03	52.1		9	675
1989	KE	1989	07	10.25226	15	27	01.85	+01	43	40.9		9	675
1989	KE	1989	07	10.27830	15	27	02.16	+01	43	26.0		9	675
1989	KF	1989	07	05.21111	15	09	34.82	-11	06	31.2	17.5	9	675
1989	KF	1989	07	05.29184	15	09	34.42	-11	07	06.2		9	675
1989	KF	1989	07	06.21875	15	09	31.09	-11	14	16.0	17.2	9	675
1989	KF	1989	07	06.25625	15	09	30.91	-11	14	33.9		9	675
1989	LJ	1989	07	05.21111	15	11	33.97	-10	04	40.2	17.0	9	675
1989	LJ	1989	07	05.29184	15	11	33.91	-10	05	24.5		9	675
1989	LJ	1989	07	06.21875	15	11	35.63	-10	13	42.9		9	675
1989	LJ	1989	07	06.25625	15	11	35.64	-10	14	03.8		9	675
1989	SA3	1978	11	30.31702	03	44	44.82	+19	52	26.6	16.0V	6	675
1989	SA3	1978	12	01.33472	03	43	51.26	+19	52	21.9		6	675
1989	TO11	1990	11	14.31858	02	53	41.06	+08	29	14.0	17.8	3	675
1989	TO11	1990	11	15.30451	02	53	11.76	+08	26	01.3		3	675
1989	TO11	1990	11	15.33385	02	53	10.95	+08	25	55.1		3	675
1989	UE7	1978	11	30.31702	03	40	28.56	+17	51	12.7	18.2V	6	675
1989	UE7	1978	12	01.33472	03	39	39.17	+17	48	28.1		6	675
1989	WV1	1978	11	30.31702	04	03	47.78	+21	05	31.7	18.2V	6	675
1989	WV1	1978	12	01.33472	04	02	37.97	+21	05	49.9		6	675
1990	ES1	1991	08	10.34201	21	44	43.52	-06	21	13.6	18.0	9	675
1990	ES1	1991	08	10.37049	21	44	41.90	-06	21	15.6		9	675
1990	FS	1991	09	12.37795	01	18	41.65	+02	20	43.6	17.0	9	675
1990	FS	1991	09	12.43078	01	18	39.63	+02	20	17.0		9	675
1990	FS	1991	09	14.41973	01	17	26.82	+02	03	25.6	17.2	9	675
1990	FS	1991	09	14.47101	01	17	24.73	+02	02	58.0		9	675
1990	FP1	1990	04	01.44357	13	37	25.12	-14	32	30.7	18.0	9	675
1990	FP1	1990	04	01.48906	13	37	22.62	-14	32	26.3	17.5	9	675
1990	FQ1	1990	05	25.17083	13	08	00.43	-04	58	37.5		9	675
1990	FQ1	1990	05	25.20920	13	08	00.20	-04	58	12.6	16.8	9	675
1990	HK	1990	03	27.45243	14	31	42.03	-11	37	15.5	16.8	9	675
1990	HK4	* 1990	04	22.36840	13	36	02.42	-09	29	40.2	17.8	9	675
1990	HK4	1990	04	22.39826	13	36	00.88	-09	29	24.2		9	675
1990	HL4	* 1990	04	22.36840	13	36	18.65	-12	09	29.7		9	675
1990	HL4	1990	04	22.39826	13	36	16.32	-12	09	23.3	17.2	9	675
1990	HM4	* 1990	04	22.36840	13	38	32.84	-11	38	56.7	17.5	9	675
1990	HM4	1990	04	22.39826	13	38	31.00	-11	38	50.8		9	675
1990	HN4	* 1990	04	22.36840	13	39	26.66	-10	33	23.8	16.8	9	675
1990	HN4	1990	04	22.39826	13	39	24.66	-10	33	20.2		9	675
1990	HO4	* 1990	04	22.36840	13	44	21.88	-09	36	36.1	17.2	9	675
1990	HO4	1990	04	22.39826	13	44	20.31	-09	36	26.3		9	675
1990	HP4	* 1990	04	22.36840	13	50	40.07	-11	16	37.1	17.5	9	675
1990	HP4	1990	04	22.39826	13	50	38.27	-11	16	24.2		9	675
1990	HQ4	* 1990	04	22.36840	13	54	00.81	-13	59	36.4	15.5	9	675
1990	HQ4	1990	04	22.39826	13	53	58.76	-13	59	26.5		9	675
1990	HR4	* 1990	04	22.36840	13	54	47.25	-13	02	48.1	16.5	9	675
1990	HR4	1990	04	22.39826	13	54	45.11	-13	02	53.0		9	675
1990	HS4	* 1990	04	22.36840	13	58	29.82	-09	20	51.0	16.8	9	675
1990	HS4	1990	04	22.39826	13	58	28.26	-09	20	44.6		9	675
1990	HT4	* 1990	04	22.36840	14	00	42.53	-10	49	45.7	17.2	9	675
1990	HT4	1990	04	22.39826	14	00	40.56	-10	49	34.1		9	675
1990	HU4	* 1990	04	22.36840	14	00	43.53	-10	44	43.2	18.0	9	675
1990	HU4	1990	04	22.39826	14	00	41.82	-10	44	31.3		9	675
1990	HV4	* 1990	04	22.36840	14	01	35.29	-12	46	33.4	17.5	9	675
1990	HV4	1990	04	22.39826	14	01	33.68	-12	46	22.1		9	675
1990	LA	1991	08	08.44913	23	48	34.60	+03	05	49.1	17.8	9	675

1990 OX1	1990 09 15.26840	22 00 52.54	-22 26 10.7	17.8	9 675
1990 OX1	1990 09 15.30330	22 00 51.07	-22 26 14.6		9 675
1990 QP5	1990 09 15.25885	21 49 53.87	-11 08 04.1	16.5	9 675
1990 QP5	1990 09 15.29497	21 49 52.69	-11 08 19.9		9 675
1990 QE8	1990 09 16.26406	22 30 36.42	-13 14 53.9	17.8	9 675
1990 QE8	1990 09 16.30069	22 30 34.79	-13 15 06.5		9 675
1990 QT8	1990 09 16.26406	22 31 57.64	-12 22 41.6	18.2	9 675
1990 QT8	1990 09 16.30069	22 31 55.89	-12 22 55.6		9 675
1990 QH9	1990 09 16.26406	22 41 32.99	-13 33 37.6	17.8	9 675
1990 QH9	1990 09 16.30069	22 41 31.44	-13 33 48.0		9 675
1990 QM9	1990 09 16.26406	22 39 22.24	-12 24 12.0	18.5	9 675
1990 QM9	1990 09 16.30069	22 39 20.40	-12 24 16.1		9 675
1990 QN9	1990 09 16.26406	22 38 00.63	-13 13 46.4	17.8	9 675
1990 QN9	1990 09 16.30069	22 37 58.55	-13 14 00.2		9 675
1990 QR9	1990 09 13.31979	22 48 16.30	-09 59 13.2	18.2	9 675
1990 QR9	1990 09 13.35122	22 48 14.86	-09 59 24.9		9 675
1990 RW2	1990 09 16.33872	23 46 36.03	+06 17 07.6	17.2	9 675
1990 RW2	1990 09 16.37431	23 46 34.30	+06 17 04.6		9 675
1990 RX2	1990 09 16.33872	23 47 59.15	+06 22 47.7	17.0	9 675
1990 RX2	1990 09 16.37431	23 47 56.91	+06 22 50.7		9 675
1990 RH3	1990 10 22.14306	23 30 40.02	-05 19 12.3	17.5	9 675
1990 RH3	1990 10 22.17517	23 30 39.40	-05 19 22.9		9 675
1990 RG5	1990 09 16.33872	23 48 08.80	+05 54 08.1	17.8	9 675
1990 RG5	1990 09 16.37431	23 48 06.30	+05 54 13.2		9 675
1990 RJ5	1990 09 16.33872	23 50 24.74	+04 03 42.6	17.8	9 675
1990 RJ5	1990 09 16.37431	23 50 22.77	+04 03 33.3		9 675
1990 RK5	1990 09 16.33872	23 51 18.19	+04 01 33.4	17.0	9 675
1990 RK5	1990 09 16.37431	23 51 16.60	+04 01 17.4		9 675
1990 RG13	1990 09 18.30295	00 04 43.80	-04 02 15.6	17.5	9 675
1990 RG13	1990 09 18.33576	00 04 41.65	-04 02 12.2		9 675
1990 SQ14	1990 09 14.33976	23 44 21.87	-02 35 09.7	17.8	9 675
1990 SQ14	1990 09 14.37673	23 44 18.02	-02 34 48.1		9 675
1990 SN16	1990 09 20.25590	21 51 29.04	-19 23 41.7	18.5	9 675
1990 SN16	1990 09 20.29097	21 51 28.15	-19 23 35.7		9 675
1990 TG3	1989 07 06.21875	15 28 15.45	-11 11 02.8		9 675
1990 TG3	1989 07 06.25625	15 28 15.06	-11 11 03.5		9 675
1990 TU4	1990 09 15.31146	22 47 38.99	-02 21 24.0	17.5	9 675
1990 TU4	1990 09 15.34701	22 47 36.90	-02 21 27.3		9 675
1990 UY	1989 08 02.27483	19 30 52.02	-08 57 26.6		9 675
1990 UY	1989 08 02.30573	19 30 50.73	-08 57 37.6		9 675
1990 UH2	1988 03 21.28315	10 15 42.61	+08 06 16.7	18.5	9 675
1990 UH2	1988 03 21.31493	10 15 41.45	+08 06 30.6		9 675
1990 UH2	1989 07 10.25226	15 38 21.11	-00 13 53.1	17.8	9 675
1990 UH2	1989 07 10.27830	15 38 20.99	-00 14 03.0		9 675
1991 AN	1988 02 17.42309	10 53 46.23	+14 09 07.5	17.2	9 675
1991 AN	1988 02 17.45399	10 53 44.17	+14 09 15.8		9 675
1991 DS	1978 11 30.31702	04 02 57.37	+17 52 03.8	15.8V	6 675
1991 DS	1978 12 01.33472	04 02 04.37	+17 50 08.5		6 675
1991 EE	1991 09 04.15491	16 21 37.08	+10 16 46.1	14	2 675
1991 EE	1991 09 04.18194	16 22 24.62	+10 13 14.6		2 675
1991 EE	1991 09 08.17136	18 44 48.34	-01 25 46.4	14	2 675
1991 EE	1991 09 08.19218	18 45 34.31	-01 29 49.2		2 675
1991 GW1	1991 06 08.21181	14 36 48.05	+00 09 24.3	18.2	3 675
1991 GW1	1991 06 08.24844	14 36 47.79	+00 09 51.8		3 675
1991 GW1	1991 06 09.18819	14 36 45.49	+00 20 54.5		3 675
1991 GZ1	1991 05 15.17413	12 49 10.99	+09 27 35.0	18.4	3 675
1991 GZ1	1991 05 15.21215	12 49 09.26	+09 26 51.3		3 675
1991 GZ1	1991 06 07.19653	12 43 03.27	+01 49 23.2	18.3	3 675
1991 GZ1	1991 06 07.22569	12 43 03.43	+01 48 50.2		3 675

1991	GZ1	1991	06	08.19583	12	43	14.86	+01	29	47.1		3	675
1991	GZ1	1991	06	08.23021	12	43	15.25	+01	29	05.5		3	675
1991	GA2	1991	06	06.27257	15	08	45.37	+15	38	13.3	17.7	3	675
1991	GA2	1991	06	06.30434	15	08	44.23	+15	38	20.5		3	675
1991	GA2	1991	06	08.30139	15	07	38.14	+15	45	22.0		3	675
1991	GB2	1991	06	06.26563	14	55	23.21	+05	45	04.0	17.0	3	675
1991	GB2	1991	06	06.29566	14	55	22.19	+05	44	56.3		3	675
1991	GB2	1991	06	08.26406	14	54	26.68	+05	35	34.2		3	675
1991	GB2	1991	06	08.29462	14	54	25.87	+05	35	25.9		3	675
1991	GC2	1991	06	06.26563	14	56	53.08	+02	44	54.6	17.4	3	675
1991	GC2	1991	06	06.29566	14	56	52.17	+02	44	42.3		3	675
1991	GC2	1991	06	08.26406	14	55	58.89	+02	31	19.7		3	675
1991	GC2	1991	06	08.29462	14	55	58.01	+02	31	07.7		3	675
1991	GE2	1991	06	06.26563	14	52	57.81	+02	05	10.0	17.0	3	675
1991	GE2	1991	06	06.29566	14	52	56.55	+02	04	54.5		3	675
1991	GE2	1991	06	08.26406	14	51	40.30	+01	47	31.0		3	675
1991	GE2	1991	06	08.29462	14	51	39.13	+01	47	14.8		3	675
1991	JW1	1991	06	06.27257	15	21	27.82	+15	18	54.1	17.7	3	675
1991	JW1	1991	06	06.30434	15	21	26.54	+15	18	50.3		3	675
1991	JW1	1991	06	08.30139	15	20	14.80	+15	13	31.4		3	675
1991	KD	1991	06	07.27899	15	32	17.42	+14	31	32.7	18.5	3	675
1991	KD	1991	06	07.32031	15	32	15.45	+14	30	29.7		3	675
1991	KD	1991	06	09.26892	15	30	51.20	+13	40	43.3		3	675
1991	NG1	1991	08	08.30399	21	39	21.49	-10	36	24.7	17.2	9	675
1991	NG1	1991	08	08.33264	21	39	20.09	-10	36	25.3		9	675
1991	NH1	1991	08	10.29236	21	39	20.57	-15	31	28.7	17.5	9	675
1991	NL1	1991	08	05.29363	21	45	51.59	-16	38	37.2		9	675
1991	NL1	1991	08	06.33281	21	45	05.69	-16	43	00.0	17.0	9	675
1991	NL1	1991	08	06.37153	21	45	03.87	-16	43	08.7		9	675
1991	NL1	1991	08	10.29236	21	42	07.11	-16	59	33.7	17.0	9	675
1991	NL1	1991	08	10.32517	21	42	05.52	-16	59	41.1		9	675
1991	NA2	1991	08	06.33281	21	29	58.70	-17	13	25.6	17.2	9	675
1991	NA2	1991	08	06.37153	21	29	56.90	-17	13	43.5		9	675
1991	NA2	1991	08	07.32240	21	29	09.21	-17	21	29.8	17.2	9	675
1991	NA2	1991	08	07.35069	21	29	07.53	-17	21	48.9		9	675
1991	NA2	1991	08	10.29236	21	26	38.99	-17	45	56.4		9	675
1991	NA2	1991	08	10.32517	21	26	37.23	-17	46	10.7		9	675
1991	NR2	1991	09	12.19601	21	14	37.65	+19	24	02.4	16.5	9	675
1991	NR2	1991	09	12.25451	21	14	36.61	+19	24	03.6		9	675
1991	NS2	1991	08	10.34201	21	50	09.73	-03	05	02.0		9	675
1991	OV	1991	08	10.34201	21	43	34.53	-08	33	16.6	17.2	9	675
1991	OV	1991	08	10.37049	21	43	33.19	-08	33	30.5		9	675
1991	OW	1991	08	10.34201	21	35	50.60	-06	33	25.4	17.5	9	675
1991	OW	1991	08	10.37049	21	35	48.81	-06	33	28.1		9	675
1991	OZ	1991	08	10.34201	21	44	10.80	-06	26	38.8	17.5	9	675
1991	OZ	1991	08	10.37049	21	44	09.11	-06	26	47.1		9	675
1991	PE	1991	08	10.29236	21	40	34.32	-15	36	19.4		9	675
1991	PE	1991	08	10.32517	21	40	32.83	-15	36	30.0		9	675
1991	PK	1991	08	10.35599	21	53	51.54	-11	28	12.9		9	675
1991	PK	1991	08	10.39149	21	53	49.81	-11	28	24.0	18.0	9	675
1991	PL	1991	08	10.35599	21	56	53.96	-11	12	04.4		9	675
1991	PL	1991	08	10.39149	21	56	52.02	-11	12	17.4	17.8	9	675
1991	PC1	1991	09	04.33420	22	36	03.57	-14	25	12.5	16.5	2	675
1991	PC1	1991	09	04.35694	22	36	01.06	-14	25	00.0		2	675
1991	PC1	1991	09	05.41545	22	34	15.11	-14	14	42.9		2	675
1991	PD1	1991	09	04.41267	23	17	02.67	+00	16	51.1	15.5	2	675
1991	PD1	1991	09	05.40295	23	15	20.60	+00	30	16.0		2	675
1991	PD1	1991	09	05.42830	23	15	17.85	+00	30	36.5		2	675
1991	PK1	1991	09	05.46042	00	06	05.30	-16	19	31.4	17.0	2	675

1991 PK1	1991 09 05.47691	00 06 04.86	-16 19 46.2		2 675
1991 PK1	1991 09 08.40990	00 04 32.54	-17 02 25.8		2 675
1991 PK1	1991 09 08.43733	00 04 31.48	-17 02 51.2		2 675
1991 PL1	1991 09 04.37396	23 15 57.52	-15 59 15.8	15.5	2 675
1991 PL1	1991 09 04.39531	23 15 56.90	-15 59 48.1		2 675
1991 PS9	1991 08 10.35599	21 52 20.85	-12 35 31.7		9 675
1991 PS9	1991 08 10.39149	21 52 18.78	-12 35 25.7	18.8	9 675
1991 PV9	1991 09 08.18524	19 31 51.96	-09 01 53.4	16.5	2 675
1991 PV9	1991 09 08.20694	19 31 52.37	-09 02 07.4		2 675
1991 PV9	1991 09 09.15243	19 32 12.39	-09 11 43.4		2 675
1991 PV9	1991 09 09.17274	19 32 12.83	-09 11 55.0		2 675
1991 PN10	1991 09 04.37917	23 12 25.93	-02 51 51.7	16.0	2 675
1991 PN10	1991 09 04.40052	23 12 24.92	-02 52 24.2		2 675
1991 PN10	1991 09 07.33785	23 10 01.27	-04 04 25.8		2 675
1991 PN10	1991 09 07.37778	23 09 59.16	-04 05 26.5		2 675
1991 PN10	1991 09 07.40579	23 09 57.71	-04 06 04.7		2 675
1991 PN10	1991 09 08.28872	23 09 14.56	-04 27 50.6		2 675
1991 PN10	1991 09 09.32483	23 08 22.99	-04 53 18.1		2 675
1991 PN10	1991 09 09.34861	23 08 21.75	-04 53 53.5		2 675
1991 PX10	1991 09 07.38333	23 45 07.42	+03 44 01.2	16.0	2 675
1991 PX10	1991 09 07.41111	23 45 06.43	+03 43 40.6		2 675
1991 PX10	1991 09 09.37257	23 44 03.56	+03 18 59.2		2 675
1991 PX10	1991 09 09.39722	23 44 02.67	+03 18 39.5		2 675
1991 PZ10	1991 08 07.45712	23 51 01.22	+02 51 56.0	17.2	9 675
1991 PZ10	1991 08 08.44913	23 50 58.27	+03 01 05.2		9 675
1991 PP12	1991 08 10.35599	22 22 30.36	-09 03 14.0		9 675
1991 PP12	1991 08 10.39149	22 22 28.82	-09 03 16.4	18.5	9 675
1991 PF15	1991 08 10.34201	22 02 57.39	-05 41 00.6	16.0	9 675
1991 PF15	1991 08 10.37049	22 02 55.87	-05 41 05.2		9 675
1991 PN15*	1991 08 06.35503	22 02 48.28	-09 22 18.2	18.0	9 675
1991 PN15	1991 08 06.38698	22 02 46.43	-09 22 17.4		9 675
1991 PN15	1991 08 10.34201	21 59 08.45	-09 19 45.0		9 675
1991 PN15	1991 08 10.35599	21 59 07.55	-09 19 47.3	17.5	9 675
1991 PN15	1991 08 10.37049	21 59 06.67	-09 19 45.5		9 675
1991 PN15	1991 08 10.39149	21 59 05.42	-09 19 48.7		9 675
1991 PO15*	1991 08 06.35503	22 06 03.59	-11 04 59.9	17.5	9 675
1991 PO15	1991 08 06.38698	22 06 01.95	-11 05 00.9		9 675
1991 PO15	1991 08 10.35599	22 02 40.63	-11 05 25.0	18.0	9 675
1991 PO15	1991 08 10.39149	22 02 38.62	-11 05 26.9		9 675
1991 PP15*	1991 08 06.35503	22 06 47.29	-13 26 45.7	17.5	9 675
1991 PP15	1991 08 06.38698	22 06 46.00	-13 26 54.5		9 675
1991 PP15	1991 08 10.35599	22 04 03.29	-13 45 55.6	18.0	9 675
1991 PP15	1991 08 10.39149	22 04 01.75	-13 46 05.6		9 675
1991 PQ15*	1991 08 06.35503	22 07 29.80	-12 17 22.1	17.8	9 675
1991 PQ15	1991 08 06.38698	22 07 28.36	-12 17 29.3		9 675
1991 PQ15	1991 08 10.35599	22 04 32.01	-12 31 55.2	17.8	9 675
1991 PQ15	1991 08 10.39149	22 04 30.41	-12 32 04.2		9 675
1991 PR15*	1991 08 06.35503	22 09 42.35	-11 24 37.5	17.8	9 675
1991 PR15	1991 08 06.38698	22 09 40.82	-11 24 45.4		9 675
1991 PR15	1991 08 10.35599	22 06 35.63	-11 38 43.3		9 675
1991 PR15	1991 08 10.39149	22 06 33.59	-11 38 52.0		9 675
1991 PS15*	1991 08 06.35503	22 10 56.54	-14 50 03.6	17.5	9 675
1991 PS15	1991 08 06.38698	22 10 54.95	-14 50 09.5		9 675
1991 PS15	1991 08 10.35599	22 07 45.17	-15 02 36.1		9 675
1991 PS15	1991 08 10.39149	22 07 43.34	-15 02 40.7	17.5	9 675
1991 PT15*	1991 08 06.35503	22 11 32.68	-14 56 41.5	17.5	9 675
1991 PT15	1991 08 06.38698	22 11 31.62	-14 56 57.5		9 675
1991 PT15	1991 08 10.39149	22 09 29.24	-15 30 02.7	17.8	9 675
1991 PU15*	1991 08 06.35503	22 12 58.13	-10 18 23.2	16.2	9 675

1991	PU15	1991	08	06.38698	22	12	56.74	-10	18	27.4		9	675
1991	PU15	1991	08	10.35599	22	10	08.95	-10	26	54.0	16.8	9	675
1991	PU15	1991	08	10.39149	22	10	07.23	-10	26	59.2		9	675
1991	PV15*	1991	08	06.35503	22	13	49.78	-14	03	17.8	17.2	9	675
1991	PV15	1991	08	06.38698	22	13	48.11	-14	03	18.9		9	675
1991	PV15	1991	08	10.35599	22	10	25.84	-14	03	35.8	17.8	9	675
1991	PV15	1991	08	10.39149	22	10	23.89	-14	03	35.3		9	675
1991	PW15*	1991	08	06.35503	22	14	16.79	-14	06	07.0	17.8	9	675
1991	PW15	1991	08	06.38698	22	14	15.05	-14	06	13.3		9	675
1991	PW15	1991	08	10.35599	22	10	38.39	-14	17	21.2		9	675
1991	PW15	1991	08	10.39149	22	10	36.24	-14	17	27.6	17.8	9	675
1991	PX15*	1991	08	06.35503	22	14	17.54	-10	27	57.2	18.2	9	675
1991	PX15	1991	08	06.38698	22	14	16.07	-10	27	59.8		9	675
1991	PX15	1991	08	10.35599	22	11	16.57	-10	33	13.6	18.5	9	675
1991	PX15	1991	08	10.39149	22	11	14.73	-10	33	14.5		9	675
1991	PY15*	1991	08	06.35503	22	14	34.91	-13	18	20.1	17.5	9	675
1991	PY15	1991	08	06.38698	22	14	33.43	-13	18	28.3		9	675
1991	PY15	1991	08	10.35599	22	11	37.70	-13	33	48.4	17.8	9	675
1991	PY15	1991	08	10.39149	22	11	35.97	-13	33	56.6		9	675
1991	PZ15*	1991	08	06.35503	22	14	54.30	-12	36	56.9	17.5	9	675
1991	PZ15	1991	08	06.38698	22	14	53.08	-12	37	07.2		9	675
1991	PZ15	1991	08	10.35599	22	12	22.69	-12	55	44.9	17.2	9	675
1991	PZ15	1991	08	10.39149	22	12	21.24	-12	55	56.0		9	675
1991	PA16*	1991	08	06.35503	22	17	20.77	-09	55	36.4	18.0	9	675
1991	PA16	1991	08	06.38698	22	17	19.25	-09	55	56.8		9	675
1991	PA16	1991	08	10.35599	22	14	21.42	-10	34	54.1	18.0	9	675
1991	PA16	1991	08	10.39149	22	14	19.75	-10	35	16.3		9	675
1991	PB16*	1991	08	06.35503	22	17	37.75	-12	41	55.7	18.0	9	675
1991	PB16	1991	08	06.38698	22	17	36.53	-12	42	05.3		9	675
1991	PB16	1991	08	10.35599	22	15	04.07	-13	00	40.2	19.0	9	675
1991	PB16	1991	08	10.39149	22	15	02.56	-13	00	52.0		9	675
1991	PC16*	1991	08	06.35503	22	20	16.77	-11	06	47.5	17.2	9	675
1991	PC16	1991	08	06.38698	22	20	15.55	-11	06	54.8		9	675
1991	PC16	1991	08	10.35599	22	17	48.29	-11	21	43.7	18.0	9	675
1991	PC16	1991	08	10.39149	22	17	46.87	-11	21	52.1		9	675
1991	PD16*	1991	08	06.35503	22	20	29.57	-10	44	56.9	18.5	9	675
1991	PD16	1991	08	06.38698	22	20	28.11	-10	45	07.8	17.8	9	675
1991	PD16	1991	08	10.35599	22	17	29.60	-11	08	45.5	18.0	9	675
1991	PD16	1991	08	10.39149	22	17	27.76	-11	08	58.2		9	675
1991	PE16*	1991	08	06.35503	22	22	31.44	-11	35	01.5	17.0	9	675
1991	PE16	1991	08	06.38698	22	22	30.04	-11	35	15.1		9	675
1991	PE16	1991	08	10.35599	22	19	40.59	-12	02	42.9	17.5	9	675
1991	PE16	1991	08	10.39149	22	19	38.92	-12	02	58.3		9	675
1991	PF16*	1991	08	07.45712	00	03	05.35	+01	41	49.5	17.8	9	675
1991	PF16	1991	08	08.44913	00	02	53.46	+01	42	30.4		9	675
1991	PG16*	1991	08	07.45712	00	03	54.23	-03	00	58.2	17.2	9	675
1991	PG16	1991	08	08.44913	00	04	02.33	-03	02	15.3	17.8	9	675
1991	PH16*	1991	08	07.45712	00	04	01.39	+01	19	47.7	17.0	9	675
1991	PH16	1991	08	08.44913	00	03	56.45	+01	24	41.7	17.5	9	675
1991	PJ16*	1991	08	07.45712	00	05	20.54	+01	43	25.4	17.8	9	675
1991	PJ16	1991	08	08.44913	00	05	07.29	+01	43	57.5		9	675
1991	PK16*	1991	08	07.45712	00	05	29.33	-01	43	37.5	18.0	9	675
1991	PK16	1991	08	08.44913	00	05	18.70	-01	46	10.4	18.5	9	675
1991	PL16*	1991	08	07.45712	00	05	36.28	-03	07	53.8	17.8	9	675
1991	PL16	1991	08	08.44913	00	05	20.90	-03	03	25.3		9	675
1991	PM16*	1991	08	07.45712	00	08	41.28	-01	18	35.7	17.5	9	675
1991	PM16	1991	08	08.44913	00	09	04.00	-01	37	00.8	17.2	9	675
1991	PN16*	1991	08	07.45712	00	11	48.11	-01	03	23.6	17.8	9	675
1991	PN16	1991	08	08.44913	00	12	33.16	-01	13	53.3	17.5	9	675

1991	PO16*	1991	08	07.45712	23	42	38.13	-00	57	00.2	17.8	9	675
1991	PO16	1991	08	08.42483	23	42	25.91	-01	04	01.8	17.8	9	675
1991	PO16	1991	08	08.44913	23	42	25.49	-01	04	12.6	17.5	9	675
1991	PO16	1991	08	08.45660	23	42	25.28	-01	04	17.4		9	675
1991	PP16*	1991	08	07.45712	23	47	20.32	-02	20	45.0	16.8	9	675
1991	PP16	1991	08	08.44913	23	47	21.26	-02	24	58.6		9	675
1991	PQ16*	1991	08	07.45712	23	50	44.73	+01	06	58.5	17.5	9	675
1991	PQ16	1991	08	08.44913	23	50	40.37	+01	03	16.1		9	675
1991	PR16*	1991	08	07.45712	23	53	02.40	-01	38	27.8	17.5	9	675
1991	PR16	1991	08	08.44913	23	53	08.09	-01	39	27.8	17.2	9	675
1991	PS16*	1991	08	07.45712	23	54	33.89	-04	27	16.0	17.2	9	675
1991	PS16	1991	08	08.44913	23	54	18.55	-04	32	52.3	17.5	9	675
1991	PT16*	1991	08	07.45712	23	55	28.76	-01	13	27.4	17.5	9	675
1991	PT16	1991	08	08.44913	23	55	16.95	-01	15	48.0	18.0	9	675
1991	PU16*	1991	08	07.45712	23	58	06.32	-04	15	48.4	18.0	9	675
1991	PU16	1991	08	08.44913	23	57	59.21	-04	16	23.6		9	675
1991	PV16*	1991	08	07.45712	23	58	13.83	-04	37	28.1	18.0	9	675
1991	PV16	1991	08	08.44913	23	58	05.84	-04	40	05.7	17.8	9	675
1991	PW16	1991	08	10.35599	21	54	05.20	-13	24	07.4		9	675
1991	PW16	1991	08	10.39149	21	54	03.39	-13	24	21.2	17.5	9	675
1991	PX16	1991	08	10.35599	21	59	19.82	-13	01	28.3		9	675
1991	PX16	1991	08	10.39149	21	59	18.37	-13	01	38.0	17.2	9	675
1991	PC17*	1991	08	07.33698	21	43	34.70	-08	29	41.7	17.8	9	675
1991	PC17	1991	08	07.36840	21	43	32.93	-08	29	40.7		9	675
1991	PC17	1991	08	10.34201	21	40	56.19	-08	28	47.0	18.0	9	675
1991	PC17	1991	08	10.37049	21	40	54.54	-08	28	46.9		9	675
1991	PD17*	1991	08	07.33698	21	53	13.50	-09	23	33.6	17.8	9	675
1991	PD17	1991	08	07.36840	21	53	12.08	-09	23	44.2		9	675
1991	PD17	1991	08	10.34201	21	50	58.63	-09	42	18.3	18.5	9	675
1991	PD17	1991	08	10.37049	21	50	57.21	-09	42	28.3		9	675
1991	PE17*	1991	08	07.33698	21	53	43.46	-04	37	35.6	18.0	9	675
1991	PE17	1991	08	07.36840	21	53	42.17	-04	37	46.3		9	675
1991	PE17	1991	08	10.34201	21	51	39.38	-04	54	12.6	18.2	9	675
1991	PE17	1991	08	10.37049	21	51	38.20	-04	54	23.2		9	675
1991	PF17*	1991	08	07.33698	21	55	44.51	-08	15	24.8	17.5	9	675
1991	PF17	1991	08	07.36840	21	55	43.15	-08	15	35.4		9	675
1991	PF17	1991	08	10.34201	21	53	35.69	-08	31	21.0	17.0	9	675
1991	PF17	1991	08	10.37049	21	53	34.34	-08	31	30.5		9	675
1991	PG17*	1991	08	09.33872	22	01	10.68	-05	14	58.4	17.2	9	675
1991	PG17	1991	08	09.37257	22	01	08.36	-05	14	53.0		9	675
1991	PG17	1991	08	10.34201	22	00	03.48	-05	12	14.4	16.5	9	675
1991	PG17	1991	08	10.37049	22	00	01.53	-05	12	10.2		9	675
1991	PH17*	1991	08	09.33872	22	02	57.53	-05	40	51.9	19.5	9	675
1991	PH17	1991	08	09.37257	22	02	55.88	-05	40	56.9		9	675
1991	PH17	1991	08	10.34201	22	02	08.81	-05	44	15.3	18.2	9	675
1991	PH17	1991	08	10.37049	22	02	07.43	-05	44	22.2		9	675
1991	PJ17*	1991	08	09.33872	22	08	00.13	-07	11	35.8	18.0	9	675
1991	PJ17	1991	08	09.37257	22	07	58.40	-07	11	41.8		9	675
1991	PJ17	1991	08	10.34201	22	07	11.34	-07	14	40.9	17.2	9	675
1991	PJ17	1991	08	10.37049	22	07	09.76	-07	14	46.5		9	675
1991	QG	1991	08	06.39410	22	22	12.94	+02	52	13.6		9	675
1991	QG	1991	08	06.42743	22	22	12.47	+02	52	09.8		9	675
1991	QH	1991	08	06.39410	22	31	29.92	+01	26	20.6		9	675
1991	QH	1991	08	06.42743	22	31	29.04	+01	26	18.8		9	675
1991	RJ	1991	08	07.45712	23	42	29.93	-01	44	48.4	17.0	9	675
1991	RJ	1991	08	08.44913	23	42	02.79	-01	40	03.8		9	675
1991	RL	1991	09	07.33785	23	04	19.18	-03	30	36.4	17.0	2	675
1991	RL	1991	09	07.37778	23	04	15.18	-03	30	13.4		2	675
1991	RL	1991	09	07.40573	23	04	12.26	-03	29	56.0		2	675



1991 RL		1991 09 08.28872	23 02 45.46	-03 21 25.5		2 675
1991 RM		1991 09 07.27865	23 10 57.74	-09 48 08.3	15.5	2 675
1991 RM		1991 09 07.43924	23 10 53.91	-09 51 25.9		2 675
1991 RP		1991 09 07.27309	22 55 02.71	-14 05 19.3	16.0	2 675
1991 RP		1991 09 07.31771	22 55 01.35	-14 06 44.6		2 675
1991 RP		1991 09 09.27760	22 54 12.67	-15 08 34.3		2 675
1991 RP		1991 09 09.30538	22 54 11.80	-15 09 26.2		2 675
1991 RQ	*	1991 09 07.45486	00 20 01.77	-09 05 32.5		2 675
1991 RQ		1991 09 07.48299	00 20 01.27	-09 06 04.0		2 675
1991 RQ		1991 09 08.47778	00 19 47.18	-09 24 49.5		2 675
1991 RQ		1991 09 09.42118	00 19 32.71	-09 42 32.9		2 675
1991 RQ		1991 09 09.45226	00 19 32.10	-09 43 08.7		2 675
1991 RR	*	1991 09 04.32760	22 10 40.79	-06 36 28.0	16.5	2 675
1991 RR		1991 09 04.35156	22 10 39.75	-06 36 37.9		2 675
1991 RR		1991 09 07.26111	22 08 24.82	-06 59 50.6		2 675
1991 RR		1991 09 07.28976	22 08 23.47	-07 00 06.4		2 675
1991 RS	*	1991 09 04.32760	22 12 29.84	-02 46 12.5	16.0	2 675
1991 RS		1991 09 04.35156	22 12 28.94	-02 46 32.0		2 675
1991 RS		1991 09 07.26111	22 10 46.62	-03 29 47.6		2 675
1991 RS		1991 09 07.28976	22 10 45.66	-03 29 15.7		2 675
1991 RT	*	1991 09 04.36858	22 52 40.00	-08 10 11.7	16.0	2 675
1991 RT		1991 09 04.38976	22 52 39.18	-08 10 33.6		2 675
1991 RT		1991 09 08.26701	22 50 36.02	-09 19 32.3		2 675
1991 RT		1991 09 08.29549	22 50 35.10	-09 20 03.7		2 675
1991 RT		1991 09 09.23594	22 50 05.69	-09 36 33.0		2 675
1991 RU	*	1991 09 05.46042	00 06 11.90	-12 23 43.3	16.0	2 675
1991 RU		1991 09 05.47691	00 06 11.25	-12 24 05.6		2 675
1991 RU		1991 09 08.40990	00 04 35.88	-13 36 32.7		2 675
1991 RU		1991 09 08.43733	00 04 34.78	-13 37 12.4		2 675
1991 RV	*	1991 09 07.46215	00 08 43.81	-03 57 35.2	17.0	2 675
1991 RV		1991 09 07.49080	00 08 42.91	-03 57 48.4		2 675
1991 RV		1991 09 09.42674	00 07 39.65	-04 10 54.3		2 675
1991 RV		1991 09 09.45972	00 07 38.31	-04 11 09.5		2 675
1991 RW	*	1991 09 07.46215	00 13 25.44	-04 02 19.6	16.5	2 675
1991 RW		1991 09 07.49080	00 13 24.37	-04 02 57.4		2 675
1991 RW		1991 09 09.42674	00 12 21.93	-04 45 30.3		2 675
1991 RW		1991 09 09.45972	00 12 20.56	-04 46 13.6		2 675
1991 RX	*	1991 09 07.46215	00 32 16.41	-01 42 48.8	17.0	2 675
1991 RX		1991 09 07.49080	00 32 14.66	-01 42 51.7		2 675
1991 RX		1991 09 09.42674	00 30 21.25	-01 44 18.1		2 675
1991 RX		1991 09 09.45972	00 30 19.15	-01 44 20.7		2 675
1991 RC1	*	1991 09 04.28958	21 54 29.88	+02 51 03.9	16.0	2 675
1991 RC1		1991 09 04.31476	21 54 29.02	+02 50 43.7		2 675
1991 RC1		1991 09 08.21597	21 52 27.12	+02 01 13.2		2 675
1991 RC1		1991 09 08.24132	21 52 26.29	+02 00 54.1		2 675
1991 RD1	*	1991 09 04.28958	22 08 17.30	+00 14 53.3	16.5	2 675
1991 RD1		1991 09 04.31476	22 08 15.81	+00 15 04.6		2 675
1991 RD1		1991 09 08.21597	22 04 45.59	+00 44 33.8		2 675
1991 RD1		1991 09 08.24132	22 04 44.08	+00 44 45.9		2 675
1991 RL1	*	1991 09 04.34045	22 29 29.08	+04 04 59.2	16.0	2 675
1991 RL1		1991 09 04.36285	22 29 28.02	+04 04 40.2		2 675
1991 RL1		1991 09 08.23507	22 26 44.44	+03 11 18.9		2 675
1991 RL1		1991 09 08.25938	22 26 43.46	+03 10 58.1		2 675
1991 RV1	*	1991 09 08.50910	00 11 09.48	+17 50 40.9	16.5	2 675
1991 RV1		1991 09 09.38507	00 10 40.81	+17 46 19.0		2 675
1991 RV1		1991 09 09.40885	00 10 40.00	+17 46 12.7		2 675
1991 RY1	*	1991 09 04.41267	23 06 18.94	+02 39 37.8	16.5	2 675
1991 RY1		1991 09 05.40295	23 05 54.50	+02 22 56.7		2 675
1991 RY1		1991 09 05.42830	23 05 53.83	+02 22 30.2		2 675

1991 RZ1		1991 09 07.30122	22 32 12.01	+07 59 05.1		16.5	2 675
1991 RZ1	*	1991 09 07.30868	22 32 11.61	+07 58 56.8		16.5	2 675
1991 RZ1		1991 09 07.34410	22 32 09.92	+07 58 16.3			2 675
1991 RZ1		1991 09 07.35069	22 32 09.50	+07 58 06.2			2 675
1991 RZ1		1991 09 09.22083	22 30 47.98	+07 21 40.9			2 675
1991 RZ1		1991 09 09.24913	22 30 46.66	+07 21 05.8			2 675
1991 RZ1		1991 09 09.27049	22 30 45.75	+07 20 42.1			2 675
1991 RZ1		1991 09 09.29896	22 30 44.06	+07 20 11.0			2 675
1991 RA2	*	1991 09 07.30868	22 50 21.68	+04 12 05.4		16.5	2 675
1991 RA2		1991 09 07.35069	22 50 20.01	+04 11 35.6			2 675
1991 RA2		1991 09 09.27049	22 49 08.62	+03 49 26.4			2 675
1991 RA2		1991 09 09.29896	22 49 07.42	+03 49 07.1			2 675
1991 RJ2	*	1991 09 08.32587	22 53 00.62	-01 46 07.0		16.5	2 675
1991 RJ2		1991 09 08.35729	22 53 02.58	-01 47 02.2			2 675
1991 RJ2		1991 09 09.26198	22 54 17.12	-02 13 43.5			2 675
1991 RL2	*	1991 09 04.32188	22 15 26.88	-14 09 55.2		16.0	2 675
1991 RL2		1991 09 04.34618	22 15 25.21	-14 09 46.1			2 675
1991 RL2		1991 09 08.22882	22 11 16.94	-13 43 01.5			2 675
1991 RL2		1991 09 08.25365	22 11 15.27	-13 42 52.0			2 675
1991 RM2	*	1991 09 07.50660	00 51 49.78	+02 11 27.9		15.5	2 675
1991 RM2		1991 09 08.49028	00 51 39.41	+02 00 08.0			2 675
1991 RM2		1991 09 08.50851	00 51 39.15	+01 59 53.2			2 675
1991 RM2		1991 09 13.33733	00 50 22.90	+01 00 56.5		16.2	9 675
1991 RM2		1991 09 13.37378	00 50 22.03	+01 00 28.9			9 675
1991 RM2		1991 09 16.39935	00 49 13.52	+00 21 17.8		16.0	9 675
1991 RM2		1991 09 16.43946	00 49 12.38	+00 20 45.8			9 675
1991 RH5	*	1991 09 13.33733	00 46 15.44	+02 33 45.3		18.0	9 675
1991 RH5		1991 09 13.37378	00 46 14.23	+02 33 33.8			9 675
1991 RH5		1991 09 16.39935	00 44 32.73	+02 14 57.3		17.2	9 675
1991 RH5		1991 09 16.43946	00 44 31.32	+02 14 42.8			9 675
1991 RJ5	*	1991 09 13.33733	00 41 15.15	-01 16 18.9		17.2	9 675
1991 RJ5		1991 09 13.37378	00 41 13.63	-01 16 30.0			9 675
1991 RJ5		1991 09 16.39935	00 39 12.07	-01 31 36.3		17.0	9 675
1991 RJ5		1991 09 16.43946	00 39 10.35	-01 31 48.1			9 675
1991 RK5	*	1991 09 13.33733	00 46 41.74	+02 03 35.0		17.0	9 675
1991 RK5		1991 09 13.37378	00 46 40.01	+02 03 33.3			9 675
1991 RK5		1991 09 16.39935	00 44 21.10	+02 00 56.3		17.0	9 675
1991 RK5		1991 09 16.43946	00 44 19.11	+02 00 54.3			9 675
1991 RL5	*	1991 09 13.33733	00 39 29.03	-01 44 22.6		17.0	9 675
1991 RL5		1991 09 13.37378	00 39 27.35	-01 44 25.6			9 675
1991 RL5		1991 09 16.39935	00 37 10.25	-01 48 05.5		17.0	9 675
1991 RL5		1991 09 16.43946	00 37 08.32	-01 48 08.9			9 675
1991 RM5	*	1991 09 13.33733	00 38 01.22	-01 12 40.3		17.2	9 675
1991 RM5		1991 09 13.37378	00 37 59.63	-01 12 53.6			9 675
1991 RM5		1991 09 16.39935	00 35 53.57	-01 33 05.9		17.5	9 675
1991 RM5		1991 09 16.43946	00 35 51.69	-01 33 22.8			9 675
1991 RN5	*	1991 09 13.33733	00 45 08.43	+01 19 25.2		17.5	9 675
1991 RN5		1991 09 13.37378	00 45 07.06	+01 19 10.0			9 675
1991 RN5		1991 09 16.39935	00 43 13.28	+00 58 01.9		17.2	9 675
1991 RN5		1991 09 16.43946	00 43 11.62	+00 57 44.5			9 675
1991 RO5	*	1991 09 13.33733	00 40 40.76	-03 14 46.7		18.0	9 675
1991 RO5		1991 09 13.37378	00 40 38.83	-03 14 49.0			9 675
1991 RO5		1991 09 16.39935	00 37 58.37	-03 21 03.5		18.2	9 675
1991 RO5		1991 09 16.43946	00 37 56.07	-03 21 07.9			9 675
1991 RP5	*	1991 09 13.33733	00 37 20.78	+00 07 03.4		17.5	9 675
1991 RP5		1991 09 13.37378	00 37 19.44	+00 06 41.3			9 675
1991 RP5		1991 09 16.39935	00 35 35.33	-00 24 22.2		18.0	9 675
1991 RP5		1991 09 16.43946	00 35 33.90	-00 24 46.4			9 675
1991 RQ5	*	1991 09 13.33733	00 39 52.19	-00 12 23.8		18.5	9 675

1991 RQ5	1991 09 13.37378	00 39 50.30	-00 12 30.5		9 675
1991 RQ5	1991 09 16.39935	00 37 12.41	-00 22 47.8	18.2	9 675
1991 RQ5	1991 09 16.43946	00 37 10.19	-00 22 56.3		9 675
1991 RR5 *	1991 09 13.33733	00 43 41.24	-00 26 09.3	18.0	9 675
1991 RR5	1991 09 13.37378	00 43 39.18	-00 26 18.3		9 675
1991 RR5	1991 09 16.39935	00 40 49.23	-00 38 30.3	17.5	9 675
1991 RR5	1991 09 16.43946	00 40 46.83	-00 38 40.8		9 675
1991 RS5 *	1991 09 13.33733	00 44 16.42	-00 08 25.5	18.2	9 675
1991 RS5	1991 09 13.37378	00 44 14.65	-00 08 25.3		9 675
1991 RS5	1991 09 16.39935	00 41 55.69	-00 09 38.4	18.0	9 675
1991 RS5	1991 09 16.43946	00 41 53.63	-00 09 40.5		9 675
1991 RT5 *	1991 09 13.33733	00 47 38.89	-03 13 54.9	17.0	9 675
1991 RT5	1991 09 13.37378	00 47 37.06	-03 13 57.9		9 675
1991 RT5	1991 09 16.39935	00 45 04.89	-03 19 29.1	17.0	9 675
1991 RT5	1991 09 16.43946	00 45 02.71	-03 19 33.3		9 675
1991 RU5 *	1991 09 13.33733	00 47 13.87	+00 29 17.0	18.0	9 675
1991 RU5	1991 09 13.37378	00 47 12.22	+00 29 09.5		9 675
1991 RU5	1991 09 16.39935	00 44 55.58	+00 18 28.0	17.5	9 675
1991 RU5	1991 09 16.43946	00 44 53.63	+00 18 18.9		9 675
1991 RV5 *	1991 09 13.33733	00 51 30.75	-01 54 53.3	17.5	9 675
1991 RV5	1991 09 13.37378	00 51 29.25	-01 55 08.0		9 675
1991 RV5	1991 09 16.39935	00 49 24.33	-02 18 13.3	18.0	9 675
1991 RV5	1991 09 16.43946	00 49 22.57	-02 18 31.9		9 675
1991 RW5 *	1991 09 13.33733	00 47 32.18	-00 11 06.6	18.5	9 675
1991 RW5	1991 09 13.37378	00 47 30.30	-00 11 08.3		9 675
1991 RW5	1991 09 16.39935	00 44 53.75	-00 14 20.1	18.0	9 675
1991 RW5	1991 09 16.43946	00 44 51.44	-00 14 23.3		9 675
1991 RX5 *	1991 09 13.33733	00 55 37.00	-02 31 12.5	18.0	9 675
1991 RX5	1991 09 13.37378	00 55 35.42	-02 31 18.3		9 675
1991 RX5	1991 09 16.39935	00 53 24.86	-02 39 37.9	17.5	9 675
1991 RX5	1991 09 16.43946	00 53 23.03	-02 39 45.3		9 675
1991 RY5 *	1991 09 13.33733	00 49 06.12	-00 03 06.4	17.2	9 675
1991 RY5	1991 09 13.37378	00 49 04.77	-00 03 18.3		9 675
1991 RY5	1991 09 16.39935	00 47 12.75	-00 20 05.6	17.2	9 675
1991 RY5	1991 09 16.43946	00 47 11.16	-00 20 19.3		9 675
1991 RZ5 *	1991 09 13.33733	00 50 46.43	-04 41 24.4	18.0	9 675
1991 RZ5	1991 09 13.37378	00 50 44.52	-04 41 20.1		9 675
1991 RZ5	1991 09 16.39935	00 48 09.75	-04 38 54.4	18.2	9 675
1991 RZ5	1991 09 16.43946	00 48 07.62	-04 38 52.0		9 675
1991 RA6 *	1991 09 13.33733	00 46 39.69	-04 02 02.6	17.2	9 675
1991 RA6	1991 09 13.37378	00 46 37.78	-04 02 11.4		9 675
1991 RA6	1991 09 16.39935	00 43 56.91	-04 15 38.1	17.0	9 675
1991 RA6	1991 09 16.43946	00 43 54.59	-04 15 48.3		9 675
1991 RB6 *	1991 09 13.33733	00 43 11.29	-03 56 53.0	17.2	9 675
1991 RB6	1991 09 13.37378	00 43 09.44	-03 57 04.6		9 675
1991 RB6	1991 09 16.39935	00 40 33.29	-04 10 09.1	17.2	9 675
1991 RB6	1991 09 16.43946	00 40 31.05	-04 10 19.6		9 675
1991 RC6	1991 09 12.37795	01 06 18.41	-01 36 09.1	17.2	9 675
1991 RC6	1991 09 12.43078	01 06 15.82	-01 35 58.9		9 675
1991 RC6 *	1991 09 13.37378	01 05 31.61	-01 33 10.6	17.5	9 675
1991 RC6	1991 09 14.41973	01 04 40.57	-01 30 01.4	17.2	9 675
1991 RC6	1991 09 14.47101	01 04 37.73	-01 29 51.9		9 675
1991 RC6	1991 09 16.39935	01 02 58.86	-01 24 07.1	17.2	9 675
1991 RC6	1991 09 16.43946	01 02 56.62	-01 24 01.1		9 675
1991 RD6	1991 09 12.37795	01 04 40.79	-01 12 39.8	17.8	9 675
1991 RD6	1991 09 12.43078	01 04 39.15	-01 13 01.7		9 675
1991 RD6 *	1991 09 13.33733	01 04 13.05	-01 19 46.6	17.5	9 675
1991 RD6	1991 09 13.37378	01 04 11.87	-01 20 01.4		9 675
1991 RD6	1991 09 14.41973	01 03 39.80	-01 27 49.5	17.0	9 675

1991 RD6	1991 09 14.47101	01 03 37.86	-01 28 12.1		9 675
1991 RD6	1991 09 16.39935	01 02 34.16	-01 42 54.6	17.5	9 675
1991 RD6	1991 09 16.43946	01 02 32.68	-01 43 12.8		9 675
1991 RE6 *	1991 09 13.33733	00 59 54.77	-01 12 44.1	18.2	9 675
1991 RE6	1991 09 13.37378	00 59 53.25	-01 12 49.7		9 675
1991 RE6	1991 09 16.39935	00 57 44.44	-01 19 41.9	18.0	9 675
1991 RE6	1991 09 16.43946	00 57 42.64	-01 19 48.1		9 675
1991 RF6 *	1991 09 13.33733	00 50 10.61	-01 11 03.0	17.0	9 675
1991 RF6	1991 09 13.37378	00 50 09.46	-01 11 15.8		9 675
1991 RF6	1991 09 16.39935	00 48 34.41	-01 29 31.9	16.5	9 675
1991 RF6	1991 09 16.43946	00 48 32.96	-01 29 49.0		9 675
1991 RG6 *	1991 09 13.33733	00 50 43.04	-01 29 55.4	18.2	9 675
1991 RG6	1991 09 13.37378	00 50 41.33	-01 30 02.4		9 675
1991 RG6	1991 09 16.39935	00 48 21.69	-01 38 59.4	18.0	9 675
1991 RG6	1991 09 16.43946	00 48 19.73	-01 39 07.6		9 675
1991 RH6 *	1991 09 13.33733	00 47 57.75	-01 37 17.7	18.0	9 675
1991 RH6	1991 09 13.37378	00 47 55.99	-01 37 20.2		9 675
1991 RH6	1991 09 16.39935	00 45 29.47	-01 41 20.8	18.5	9 675
1991 RH6	1991 09 16.43946	00 45 27.34	-01 41 23.9		9 675
1991 RJ6 *	1991 09 13.33733	00 36 48.68	-01 55 56.4	17.2	9 675
1991 RJ6	1991 09 13.37378	00 36 47.45	-01 56 14.6		9 675
1991 RJ6	1991 09 16.39935	00 35 07.13	-02 21 52.0	17.0	9 675
1991 RJ6	1991 09 16.43946	00 35 05.70	-02 22 12.7		9 675
1991 RK6 *	1991 09 13.33733	00 58 28.00	-03 34 43.2	18.0	9 675
1991 RK6	1991 09 13.37378	00 58 26.67	-03 34 54.8		9 675
1991 RK6	1991 09 16.39935	00 56 39.41	-03 51 50.0	18.0	9 675
1991 RK6	1991 09 16.43946	00 56 37.92	-03 52 03.5		9 675
1991 RL6 *	1991 09 04.33420	22 49 07.47	-15 30 39.9	17.0	2 675
1991 RL6	1991 09 04.35694	22 49 06.20	-15 30 48.2		2 675
1991 RL6	1991 09 05.41545	22 48 12.86	-15 36 26.7		2 675
1991 RM6 *	1991 09 04.38455	23 39 54.95	-08 12 13.7	16.5	2 675
1991 RM6	1991 09 04.40642	23 39 53.79	-08 12 26.0		2 675
1991 RM6	1991 09 05.43681	23 39 06.21	-08 21 52.8		2 675
1991 RN6 *	1991 09 07.27865	23 11 37.40	-06 44 17.4	16.0	2 675
1991 RN6	1991 09 07.43924	23 11 31.35	-06 46 45.9		2 675
1991 RN6	1991 09 09.33021	23 10 27.19	-07 15 54.2		2 675
1991 RN6	1991 09 09.35417	23 10 26.23	-07 16 15.5		2 675
1991 RT6	1991 08 09.33872	22 25 48.61	-04 29 28.8		9 675
1991 RT6	1991 08 09.37257	22 25 46.87	-04 29 26.1		9 675
1991 RR7 *	1991 09 04.27135	21 46 58.81	-18 27 00.2	17.0	2 675
1991 RR7	1991 09 04.29601	21 46 57.71	-18 26 59.8		2 675
1991 RR7	1991 09 07.21649	21 45 08.65	-18 28 31.2		2 675
1991 RR7	1991 09 07.24670	21 45 07.54	-18 28 31.0		2 675
1991 RS7 *	1991 09 07.45486	00 27 33.79	-10 40 21.8	17.0	2 675
1991 RS7	1991 09 07.48299	00 27 32.52	-10 40 35.6		2 675
1991 RS7	1991 09 09.42118	00 26 15.12	-10 54 47.9		2 675
1991 TJ	1991 09 12.37795	01 20 23.50	-01 49 53.2	18.0	9 675
1991 TJ	1991 09 12.43078	01 20 22.29	-01 50 03.7	17.2	9 675
1991 TJ	1991 09 14.41973	01 19 42.62	-01 57 26.5	17.0	9 675
1991 TJ	1991 09 14.47101	01 19 41.18	-01 57 38.7		9 675
1991 TM	1991 09 12.37795	01 24 54.26	+00 01 38.9	17.2	9 675
1991 TM	1991 09 12.43078	01 24 52.57	+00 01 15.5		9 675
1991 TM	1991 09 14.41973	01 23 50.60	-00 14 00.9	17.0	9 675
1991 TM	1991 09 14.47101	01 23 48.76	-00 14 25.6		9 675
1991 TP	1991 09 12.37795	01 23 56.07	+00 03 18.7	19.0	9 675
1991 TP	1991 09 12.43078	01 23 54.73	+00 02 53.4		9 675
1991 TP	1991 09 14.41973	01 23 04.47	-00 13 51.2	17.8	9 675
1991 TP	1991 09 14.47101	01 23 02.99	-00 14 18.2		9 675
2103 P-L	1978 11 30.31702	03 49 46.44	+18 12 39.0	18.5V	6 675

2103	P-L		1978	12	01.33472	03	48	49.80	+18	09	00.6		6	675
2702	P-L	*	1960	09	24.46184	00	47	19.73	+04	15	56.7	19.7	4	675
2702	P-L		1960	09	26.37988	00	46	00.57	+04	07	52.9		4	675
2702	P-L		1960	09	28.43822	00	44	34.29	+03	59	07.7		4	675
2702	P-L		1960	10	17.31529	00	31	26.34	+02	39	28.1		4	675
2702	P-L		1960	10	22.26809	00	28	18.41	+02	20	44.8		4	675
2702	P-L		1960	10	25.30351	00	26	30.86	+02	10	05.7		4	675
3121	P-L	*	1960	09	24.47431	00	08	22.30	+11	57	37.8	18.7	4	675
3121	P-L		1960	09	25.22986	00	07	36.92	+11	52	57.7		4	675
3121	P-L		1960	09	26.29514	00	06	32.51	+11	46	14.5		4	675
6114	P-L	*	1960	09	24.33613	23	55	22.34	+04	04	49.6	18.9	4	675
6114	P-L		1960	09	25.32502	23	54	26.79	+04	02	24.3		4	675
6114	P-L		1960	09	26.27573	23	53	33.57	+04	00	02.5		4	675
6114	P-L		1960	09	28.32780	23	51	39.36	+03	54	53.6		4	675
6114	P-L		1960	10	17.21390	23	36	15.25	+03	09	47.6		4	675
6114	P-L		1960	10	22.15559	23	33	11.34	+03	00	43.6		4	675
6114	P-L		1960	10	24.18787	23	32	04.66	+02	57	31.5		4	675
6114	P-L		1960	10	26.26113	23	31	02.08	+02	54	39.0		4	675
6372	P-L		1978	11	30.31702	04	06	02.49	+19	00	56.5	18.5V	6	675
6372	P-L		1978	12	01.33472	04	05	04.03	+18	57	28.0		6	675
9521	P-L		1991	09	16.39935	00	54	59.02	+02	26	07.4	17.5	9	675
9521	P-L		1991	09	16.43946	00	54	57.28	+02	25	52.9		9	675
1266	T-2		1973	09	19.18611	00	24	33.46	+04	49	38.1		4	675
1266	T-2		1973	09	19.19948	00	24	32.80	+04	49	34.6		4	675
1266	T-2		1973	09	19.23785	00	24	30.23	+04	49	30.9		4	675
1266	T-2		1973	09	19.25006	00	24	29.79	+04	49	28.4		4	675
1266	T-2		1973	09	20.22847	00	23	31.49	+04	47	10.1		4	675
1266	T-2		1973	09	24.34688	00	19	21.80	+04	36	30.2		4	675
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1266	T-2		1973	09	25.24375	00	18	26.93	+04	33	59.6		4	675
1266	T-2		1973	09	25.30729	00	18	22.97	+04	33	50.4		4	675
1266	T-2	*	1973	09	29.25330	00	14	20.20	+04	22	25.8	17.9	4	675
1266	T-2		1973	09	29.31806	00	14	16.02	+04	22	16.0		4	675
1266	T-2		1973	09	30.21007	00	13	21.55	+04	19	37.7		4	675
1266	T-2		1973	09	30.27431	00	13	17.50	+04	19	26.5		4	675
1266	T-2		1973	10	04.28958	00	09	14.97	+04	07	21.5		4	675
1266	T-2		1973	10	04.35208	00	09	11.11	+04	07	10.8		4	675
1266	T-2		1973	10	05.31684	00	08	14.14	+04	04	17.7		4	675
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1607	T-2		1991	08	07.39306	23	23	36.44	-06	36	27.3		9	675
1607	T-2		1991	08	07.42257	23	23	35.49	-06	36	26.1		9	675
1607	T-2		1991	08	10.40851	23	22	08.27	-06	34	08.7	18.5	9	675
2114	T-2		1991	08	10.35599	22	03	40.51	-08	22	20.1	18.8	9	675
2114	T-2		1991	08	10.39149	22	03	38.59	-08	22	31.5		9	675
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3070	T-2		1973	09	19.26354	00	11	25.65	-04	14	28.8		4	675
3070	T-2		1973	09	20.27795	00	10	29.82	-04	22	12.2		4	675
3070	T-2		1973	09	24.37431	00	06	41.03	-04	53	02.2		4	675
3070	T-2		1973	09	24.44167	00	06	37.20	-04	53	32.3		4	675
3070	T-2		1973	09	25.26875	00	05	51.11	-04	59	39.5		4	675
3070	T-2		1973	09	25.33299	00	05	47.42	-05	00	08.2		4	675
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7	1991 09 09.27049	22 48 14.91	+04 11 27.2		2 675
7	1991 09 09.29896	22 48 13.37	+04 11 21.2		2 675
41	1991 09 12.37795	01 23 57.18	+03 12 04.3		9 675
41	1991 09 12.43078	01 23 55.51	+03 11 40.2		9 675
41	1991 09 14.41973	01 22 52.30	+02 56 47.9	13.0	9 675
41	1991 09 14.47101	01 22 50.59	+02 56 24.4		9 675
44	1989 07 05.21111	15 07 47.48	-12 47 31.6		9 675
44	1989 07 05.29184	15 07 47.25	-12 47 41.0		9 675
44	1989 07 06.21875	15 07 46.52	-12 49 36.4		9 675
44	1989 07 06.25625	15 07 46.57	-12 49 41.4		9 675
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323	1989 07	05.26667	14 56	49.34	+03 33	30.1		9 675
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547	1971 05	13.18941	11 41	53.51	+00 36	52.3		4 675
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1984	1971 05 16.31510	11 59 06.75	+01 07 07.6	4 675
1990	1988 03 17.27636	10 13 04.27	+07 59 50.7	16.5 9 675
1990	1988 03 17.31520	10 13 02.65	+08 00 05.0	9 675
1990	1988 03 21.28315	10 10 24.56	+08 25 09.5	16.2 9 675
1990	1988 03 21.31493	10 10 23.32	+08 25 21.7	9 675
1990	1988 03 22.23594	10 09 50.82	+08 30 49.8	16.0 9 675
1990	1988 03 22.26736	10 09 49.63	+08 31 00.4	9 675
1991	1991 08 07.45712	23 59 34.40	+01 45 03.3	16.2 9 675
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1997	1988 02 17.42309	10 55 52.05	+09 47 52.0	17.2 9 675
1997	1988 02 17.45399	10 55 50.05	+09 48 00.2	9 675
1997	1988 03 17.27636	10 25 45.14	+11 42 55.9	18.0 9 675
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2169	1991 08 10.35599	22 17 07.83	-13 06 23.0	17.0 9 675
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2194	1991 09 13.37378	01 02 43.87	-03 52 13.2	9 675
2194	1991 09 16.39935	01 00 19.51	-04 04 06.4	16.2 9 675

2194	1991 09	16.43946	01 00	17.46	-04 04	15.7		9 675
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2203	1971 05	14.23246	12 12	27.53	-00 01	59.0		4 675
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2208	1978 11	30.31702	03 44	33.86	+17 15	08.2		6 675
2208	1978 12	01.33472	03 43	46.78	+17 14	02.9		6 675
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2268	1990 03	27.45243	14 25	02.31	-10 09	26.4	17.0	9 675
2291	1991 09	13.33733	00 39	58.80	-04 35	19.7	16.2	9 675
2291	1991 09	13.37378	00 39	57.59	-04 35	44.6		9 675
2299	1990 03	27.45243	14 12	52.28	-09 11	27.5	18.5	9 675
2313	1971 05	14.19427	12 07	14.29	-02 11	03.2		4 675
2313	1971 05	14.24549	12 07	13.56	-02 10	55.2		4 675
2313	1971 05	16.27535	12 06	49.70	-02 06	28.9		4 675
2323	1990 04	01.44357	13 32	42.15	-11 32	23.3	16.5	9 675
2323	1990 04	01.48906	13 32	39.95	-11 32	15.6		9 675
2323	1990 05	25.17083	12 58	57.17	-08 58	40.0		9 675
2323	1990 05	25.20920	12 58	56.72	-08 58	38.1		9 675
2330	1991 09	13.33733	00 49	19.01	-03 58	40.0	17.0	9 675
2330	1991 09	13.37378	00 49	17.77	-03 58	54.6		9 675
2330	1991 09	16.39935	00 47	32.59	-04 18	49.6	16.2	9 675
2330	1991 09	16.43946	00 47	31.15	-04 19	04.7		9 675
2338	1991 08	10.35599	22 03	34.68	-14 45	47.0		9 675
2338	1991 08	10.39149	22 03	33.07	-14 45	57.4	16.8	9 675
2341	1971 05	13.17535	11 41	43.51	+06 31	46.3		4 675
2341	1971 05	14.20694	11 41	45.99	+06 28	41.8		4 675
2341	1971 05	16.31510	11 41	56.11	+06 21	55.9		4 675
2369	1990 04	01.44357	13 42	10.79	-08 39	06.3	17.0	9 675
2369	1990 04	01.48906	13 42	08.68	-08 38	56.1		9 675
2369	1990 05	25.17083	13 05	37.42	-05 56	48.5		9 675
2369	1990 05	25.20920	13 05	36.72	-05 56	47.7		9 675
2373	1989 07	05.23110	15 16	50.78	-04 32	27.0		9 675
2373	1989 07	05.27470	15 16	50.28	-04 32	36.3		9 675
2404	1991 09	12.37795	01 09	32.95	+03 23	20.4	17.2	9 675
2404	1991 09	12.43078	01 09	31.16	+03 23	07.2	18.0	9 675
2404	1991 09	14.41973	01 08	24.73	+03 14	46.0	17.5	9 675
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2405	1991 08	10.35599	22 08	32.32	-12 28	19.7	17.5	9 675
2405	1991 08	10.39149	22 08	30.84	-12 28	29.0		9 675
2408	1991 09	13.33733	00 40	31.25	-04 34	34.9	16.5	9 675
2408	1991 09	13.37378	00 40	29.74	-04 35	02.5		9 675
2429	1971 05	13.17535	11 53	02.24	+02 02	45.6		4 675
2429	1971 05	14.20694	11 52	49.46	+01 58	59.4		4 675
2429	1971 05	16.31510	11 52	28.28	+01 50	52.2		4 675
2442	1990 04	01.44357	13 41	42.98	-08 56	05.5	16.8	9 675
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2480	1971 05	14.20694	11 54	23.99	+01 57	32.0		4 675
2480	1971 05	16.31510	11 54	22.15	+01 54	22.4		4 675
2493	1971 05	13.18941	11 51	13.67	-01 47	49.2		4 675
2493	1971 05	14.21962	11 51	06.84	-01 44	20.9		4 675
2493	1990 03	27.45243	14 14	48.10	-13 15	54.1	18.5	9 675
2493	1990 03	27.49114	14 14	46.77	-13 15	42.7		9 675
2493	1990 04	22.36840	13 56	40.85	-10 38	34.6	17.8	9 675
2493	1990 04	22.39826	13 56	39.26	-10 38	23.8		9 675
2496	1971 05	13.20278	12 10	00.54	-00 04	46.7		4 675
2496	1971 05	14.23246	12 09	58.26	-00 04	33.0		4 675
2496	1971 05	16.29774	12 09	59.48	-00 04	43.5		4 675
2502	1991 09	13.33733	00 50	30.57	+01 06	29.2		9 675

2502	1991 09	13.37378	00 50	28.92	+01 06	26.8	17.5	9 675
2502	1991 09	16.39935	00 48	09.01	+01 02	03.2	16.8	9 675
2502	1991 09	16.43946	00 48	07.09	+01 01	59.2		9 675
2525	1990 03	27.45243	14 19	12.57	-10 36	14.9	17.0	9 675
2525	1990 03	27.49114	14 19	11.27	-10 36	08.2		9 675
2525	1990 04	22.36840	14 02	06.97	-09 05	40.3	16.8	9 675
2525	1990 04	22.39826	14 02	05.46	-09 05	32.2		9 675
2535	1989 01	11.31614	07 06	18.95	+16 39	18.1	15.0	9 675
2535	1989 01	11.35173	07 06	16.52	+16 39	24.1		9 675
2539	1990 03	27.45243	14 28	53.57	-13 08	04.0	19.0	9 675
2561	1971 05	13.20278	12 24	14.04	-00 17	41.2		4 675
2561	1971 05	14.23246	12 24	02.01	-00 16	23.6		4 675
2561	1971 05	16.29774	12 23	42.74	-00 14	20.9		4 675
2563	1971 05	13.17535	11 58	53.27	+03 00	43.1		4 675
2563	1971 05	14.20694	11 58	51.82	+03 00	06.9		4 675
2563	1971 05	16.31510	11 58	52.84	+02 58	25.8		4 675
2563	1988 03	17.27636	10 24	03.62	+12 25	06.8	16.5	9 675
2563	1988 03	17.31520	10 24	02.23	+12 25	15.3		9 675
2563	1988 03	21.28315	10 21	45.48	+12 38	36.1	16.2	9 675
2563	1988 03	21.31493	10 21	44.41	+12 38	41.6		9 675
2563	1988 03	22.23594	10 21	15.22	+12 41	29.8	16.5	9 675
2563	1988 03	22.26736	10 21	14.20	+12 41	35.9		9 675
2563	1991 09	12.37795	01 10	54.58	+04 38	37.4	17.8	9 675
2563	1991 09	12.43078	01 10	52.91	+04 38	26.5		9 675
2563	1991 09	14.41973	01 09	51.33	+04 31	01.2	17.5	9 675
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2571	1990 03	27.45243	14 19	19.71	-10 45	58.0	17.5	9 675
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2598	1989 07	09.36927	20 49	01.98	-06 14	30.3		9 675
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2679	1971 05	14.19427	12 12	44.01	-03 15	22.2		4 675
2679	1971 05	14.24549	12 12	44.06	-03 15	07.3		4 675
2682	1989 07	06.21875	15 24	35.44	-11 18	06.4		9 675
2682	1989 07	06.25625	15 24	35.44	-11 18	17.6		9 675
2708	1991 08	10.35599	22 16	24.99	-13 11	38.2	17.2	9 675
2708	1991 08	10.39149	22 16	23.47	-13 11	48.2		9 675
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2716	1989 07	05.21111	14 52	19.78	-12 43	13.9		9 675
2717	1988 03	17.27636	09 54	20.54	+12 04	05.6	16.8	9 675
2717	1988 03	17.31520	09 54	18.93	+12 04	15.7		9 675
2750	1971 05	13.20278	12 06	20.84	+02 53	22.5		4 675
2750	1971 05	14.23246	12 06	19.80	+02 49	18.1		4 675
2750	1971 05	16.29774	12 06	23.75	+02 40	35.3		4 675
2755	1971 05	14.19427	12 22	56.53	-06 00	40.2		4 675
2755	1971 05	14.24549	12 22	55.52	-06 00	28.8		4 675
2755	1989 01	11.31614	07 07	10.63	+16 31	50.7	17.5	9 675
2755	1989 01	11.35173	07 07	08.54	+16 31	52.0		9 675
2806	1991 09	13.33733	00 41	25.12	+00 29	10.4	17.2	9 675
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2806	1991 09	16.43946	00 39	06.01	+00 10	41.5		9 675
2807	1990 04	01.44357	13 36	19.50	-08 02	14.1	17.0	9 675
2807	1990 04	01.48906	13 36	17.08	-08 02	07.8		9 675
2826	1991 09	12.37795	01 28	52.79	+00 39	07.7	17.0	9 675
2826	1991 09	12.43078	01 28	51.01	+00 39	03.4		9 675
2826	1991 09	14.41973	01 27	43.54	+00 36	11.6	16.8	9 675
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2862	1990 03	27.45243	14 21	40.49	-16 35	22.8	16.0	9 675
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2862	1990 04	22.39826	14 00	26.72	-13 54	58.3	15.8	9 675
2873	1989 07	06.21875	15 22	47.95	-14 16	48.1		9 675
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2880	1990 04	01.44357	13 55	41.70	-08 16	45.0	16.2	9 675
2880	1990 04	01.48906	13 55	39.25	-08 16	39.7		9 675
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2883	1991 08	10.35599	22 10	02.02	-13 56	11.2	17.0	9 675
2883	1991 08	10.39149	22 09	59.94	-13 56	22.8		9 675
2907	1988 03	17.27636	10 08	17.72	+07 51	10.3	17.2	9 675
2907	1988 03	21.28315	10 06	09.72	+08 15	19.5	17.5	9 675
2907	1988 03	21.31493	10 06	08.75	+08 15	31.3		9 675
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2911	1991 09	13.33733	00 52	44.07	-03 09	56.9	17.0	9 675
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2944	1990 03	27.45243	14 29	08.23	-10 55	09.0	17.8	9 675
2964	1991 08	10.35599	22 11	59.34	-14 03	09.1	16.5	9 675
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2973	1971 05	14.24549	12 06	06.75	-02 14	14.4		4 675
2973	1971 05	16.27535	12 05	53.68	-02 12	34.1		4 675
2980	1991 08	10.34201	21 43	34.29	-07 21	50.7		9 675
2980	1991 08	10.37049	21 43	32.89	-07 21	59.5		9 675
2981	1978 11	30.31702	03 42	17.33	+18 44	41.1		6 675
2981	1978 12	01.33472	03 41	29.14	+18 42	00.6		6 675
3000	1988 03	17.27636	10 04	19.06	+08 53	19.3	18.5	9 675
3000	1988 03	17.31520	10 04	17.58	+08 53	32.4		9 675
3000	1988 03	22.23594	10 01	07.64	+09 17	47.7	18.8	9 675
3000	1988 03	22.26736	10 01	06.54	+09 17	55.2		9 675
3013	1988 03	17.27636	10 04	05.78	+14 53	48.5	17.5	9 675
3013	1988 03	17.31520	10 04	04.26	+14 53	50.4		9 675
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3029	1971 05	13.18941	11 49	10.42	-04 34	45.1		4 675
3029	1971 05	14.21962	11 49	23.53	-04 34	41.5		4 675
3035	1988 03	17.27636	09 57	59.46	+10 50	57.4	17.0	9 675
3035	1988 03	17.31520	09 57	58.18	+10 51	08.1		9 675
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3035	1988 03	21.31493	09 55	48.26	+11 09	02.6		9 675
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3090	1991 09	16.39935	00 34	43.39	+00 21	20.1	17.8	9 675
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3096	1971 05	14.20694	11 57	28.79	+07 20	35.9		4 675
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3096	1988 03	17.27636	10 08	06.33	+08 24	42.5	18.5	9 675
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3138	1978 11	30.31702	03 42	42.04	+17 20	29.4		6 675
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3198	1989 07	06.21875	15 29	53.45	-13 41	51.9	17.5	9 675
3198	1989 07	06.25625	15 29	52.66	-13 42	09.9		9 675
3209	1989 07	06.21875	15 30	42.18	-12 14	24.5		9 675
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3213	1978 11	30.31702	03 43	14.56	+20 25	40.3		6 675
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3241	1978 11	30.31702	03 43	54.43	+17 18	00.3		6 675
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3250	1990 04	22.36840	13 41	11.23	-09 24	55.6	16.5	9 675
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3321	1991 08	10.35599	22 06	17.12	-07 02	01.1		9 675
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3323	1991 08	10.35599	22 22	30.15	-11 14	22.0	17.2	9 675
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3327	1991 09	14.47101	01 03	08.40	+04 32	43.2		9 675
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3335	1989 07	09.40590	21 18	46.70	-05 01	47.8	16.8	9 675
3341	1988 02	17.42309	11 09	51.76	+10 07	31.1	18.8	9 675
3341	1988 02	17.45399	11 09	50.44	+10 07	43.5		9 675
3386	1990 03	27.45243	14 12	45.04	-11 21	53.3	17.8	9 675
3386	1990 03	27.49114	14 12	43.71	-11 21	44.5		9 675
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3465	1991 09 13.33733	00 56 36.91	-04 25 20.8	17.5	9 675
3465	1991 09 13.37378	00 56 35.27	-04 25 38.1		9 675
3465	1991 09 16.39935	00 54 22.00	-04 48 03.8	17.0	9 675
3465	1991 09 16.43946	00 54 20.09	-04 48 21.6		9 675
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3501	1991 08 10.37049	21 46 14.78	-05 10 25.3		9 675
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3511	1989 07 05.21111	15 13 42.41	-14 46 58.7		9 675
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3515	1991 08 07.45712	23 50 33.96	-00 57 37.6	17.5	9 675
3515	1991 08 08.44913	23 50 16.74	-00 59 01.5		9 675
3516	1991 08 10.35599	22 23 05.78	-09 09 41.2	17.0	9 675
3516	1991 08 10.39149	22 23 04.35	-09 09 51.0		9 675
3525	1991 08 08.44913	23 44 27.61	+01 39 40.9	17.5	9 675
3527	1971 05 14.19427	12 17 58.90	-04 02 50.9		4 675
3527	1971 05 14.24549	12 17 59.05	-04 02 38.6		4 675
3527	1971 05 16.27535	12 18 17.27	-03 55 18.8		4 675
3527	1989 07 09.36927	21 16 29.48	-06 09 16.0		9 675
3527	1989 07 09.40590	21 16 27.96	-06 09 15.4	16.5	9 675
3539	1989 07 05.23110	15 24 50.24	+01 11 50.7		9 675
3539	1989 07 05.27470	15 24 50.24	+01 11 27.0		9 675
3539	1989 07 10.25226	15 25 22.17	+00 23 48.5		9 675
3539	1989 07 10.27830	15 25 22.39	+00 23 33.0		9 675
3565	1989 07 05.21111	15 07 21.96	-12 45 46.3		9 675
3565	1989 07 05.29184	15 07 21.13	-12 45 58.1		9 675
3565	1989 07 06.25625	15 07 12.69	-12 47 34.1		9 675
3569	1988 03 17.27636	10 25 02.32	+10 44 53.4	16.5	9 675
3569	1988 03 17.31520	10 25 01.03	+10 45 16.1		9 675
3569	1988 03 21.28315	10 22 55.13	+11 25 47.0	16.5	9 675
3569	1988 03 21.31493	10 22 54.17	+11 26 05.3		9 675
3569	1988 03 22.23594	10 22 28.14	+11 35 00.8	16.5	9 675
3569	1988 03 22.26736	10 22 27.20	+11 35 19.1		9 675
3589	1971 05 13.17535	11 58 28.15	+06 52 59.3		4 675
3589	1971 05 14.20694	11 58 22.03	+06 51 23.5		4 675
3589	1971 05 16.31510	11 58 14.70	+06 47 34.1		4 675
3597	1988 02 17.42309	11 04 21.92	+09 30 39.7	17.8	9 675
3597	1988 02 17.45399	11 04 20.58	+09 30 48.4		9 675
3597	1991 09 12.37795	01 10 07.30	+03 13 37.9	16.5	9 675
3597	1991 09 12.43078	01 10 05.81	+03 13 27.3		9 675
3597	1991 09 14.41973	01 09 11.18	+03 06 29.0	16.5	9 675
3597	1991 09 14.47101	01 09 09.64	+03 06 18.0		9 675
3608	1989 07 05.21111	14 56 03.39	-12 21 50.2		9 675
3608	1989 07 05.29184	14 56 03.04	-12 22 07.5		9 675
3612	1988 02 17.42309	10 58 14.80	+12 00 32.2	18.8	9 675
3612	1988 02 17.45399	10 58 13.24	+12 00 43.2		9 675
3631	1989 08 02.27483	19 39 53.36	-09 53 27.2		9 675
3631	1989 08 02.30573	19 39 52.02	-09 53 40.2		9 675
3666	1990 03 27.45243	14 10 11.53	-09 26 11.3	17.0	9 675
3666	1990 03 27.49114	14 10 10.29	-09 26 02.6		9 675
3666	1990 04 22.36840	13 52 24.72	-07 39 05.2	16.8	9 675
3666	1990 04 22.39826	13 52 23.18	-07 38 57.9		9 675
3668	1991 08 10.34201	21 56 05.59	-07 56 28.1		9 675
3668	1991 08 10.37049	21 56 03.89	-07 56 38.3		9 675
3685	1990 04 01.44357	13 40 45.66	-10 39 21.2	18.8	9 675
3685	1990 04 01.48906	13 40 43.62	-10 39 01.5		9 675

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3762	1989 07 05.29184	15 03 45.07	-15 04 56.5		9 675
3765	1991 08 10.39149	21 54 32.39	-11 07 33.7	17.5	9 675
3785	1988 03 17.27636	10 14 41.63	+11 13 04.5	19.0	9 675
3785	1988 03 17.31520	10 14 40.31	+11 13 13.5		9 675
3785	1988 03 21.28315	10 12 26.32	+11 27 03.3	18.0	9 675
3785	1988 03 21.31493	10 12 25.26	+11 27 09.4		9 675
3785	1988 03 22.23594	10 11 56.27	+11 30 09.5	18.0	9 675
3785	1988 03 22.26736	10 11 55.23	+11 30 16.8		9 675
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3811	1988 03 21.28315	10 03 03.08	+11 31 40.4	16.5	9 675
3811	1988 03 21.31493	10 03 01.74	+11 31 40.2		9 675
3811	1988 03 22.23594	10 02 25.79	+11 31 36.0	16.8	9 675
3811	1988 03 22.26736	10 02 24.50	+11 31 36.2		9 675
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3823	1991 09 13.37378	00 46 32.12	-02 58 00.1		9 675
3823	1991 09 16.39935	00 44 38.76	-03 14 15.9	17.8	9 675
3823	1991 09 16.43946	00 44 37.07	-03 14 30.6		9 675
3832	1990 04 22.36840	13 35 44.91	-09 57 09.4	19.0	9 675
3832	1990 04 22.39826	13 35 43.63	-09 57 01.8	18.5	9 675
3832	1990 05 25.20920	13 16 44.90	-08 11 21.2	19.0	9 675
3837	1989 08 02.27483	19 40 46.26	-13 20 08.0		9 675
3837	1989 08 02.30573	19 40 44.67	-13 20 09.4		9 675
3844	1971 05 13.17535	11 46 46.28	+05 43 32.7		4 675
3844	1971 05 14.20694	11 46 42.82	+05 43 13.8		4 675
3844	1971 05 16.31510	11 46 39.86	+05 42 07.0		4 675
3845	1989 07 06.21875	15 22 55.90	-12 33 22.3		9 675
3845	1989 07 06.25625	15 22 55.08	-12 33 21.8		9 675
3852	1971 05 13.18941	11 55 31.34	-01 01 13.4		4 675
3852	1971 05 14.21962	11 55 20.56	-00 59 36.2		4 675
3898	1990 04 01.44357	13 43 19.40	-10 23 29.1		9 675
3898	1990 04 01.48906	13 43 17.42	-10 23 21.0	18.8	9 675
3898	1990 05 25.17083	13 10 15.71	-07 03 56.4		9 675
3898	1990 05 25.20920	13 10 14.83	-07 03 50.0		9 675
3923	1991 08 10.39149	21 55 57.84	-11 57 59.3	18.0	9 675
3959	1990 03 27.45243	14 16 16.51	-14 06 54.0	18.8	9 675
3959	1990 03 27.49114	14 16 14.78	-14 06 43.3		9 675
3959	1990 04 22.36840	13 53 24.79	-11 35 54.2	18.0	9 675
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3959	1990 05 25.20920	13 28 02.13	-08 35 11.8		9 675
3969	1990 04 01.44357	13 42 42.44	-08 50 56.0	18.5	9 675
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3969	1991 08 07.45712	23 47 21.40	-00 17 30.8	17.5	9 675
3969	1991 08 08.44913	23 47 19.15	-00 18 50.6		9 675
3975	1989 01 11.31614	06 55 02.81	+20 51 24.3	16.5	9 675
3975	1989 01 11.35173	06 55 00.84	+20 51 27.0		9 675
3996	1991 09 13.33733	00 49 40.39	+01 07 15.2	17.2	9 675
3996	1991 09 13.37378	00 49 38.54	+01 07 02.9		9 675
3996	1991 09 16.39935	00 47 10.23	+00 49 29.6	16.2	9 675
3996	1991 09 16.43946	00 47 08.10	+00 49 14.7		9 675
3998	1991 08 07.45712	00 08 06.20	-03 36 28.3	17.0	9 675
3998	1991 08 08.44913	00 07 59.26	-03 35 55.4	16.8	9 675
4003	1989 01 11.31614	06 54 51.27	+15 59 50.7	16.8	9 675
4003	1989 01 11.35173	06 54 49.58	+15 59 51.6		9 675
4008	1988 03 21.28315	10 23 51.82	+10 27 43.0		9 675
4008	1988 03 21.31493	10 23 51.21	+10 28 27.7	16.0	9 675
4008	1988 03 22.23594	10 23 36.92	+10 49 37.3		9 675

4008	1988 03	22.26736	10 23	36.37	+10 50	21.1		9 675
4025	1989 01	11.31614	06 55	55.76	+19 00	36.8	16.5	9 675
4025	1989 01	11.35173	06 55	53.38	+19 00	43.2		9 675
4027	1989 01	11.31614	06 50	33.28	+19 54	52.1	16.8	9 675
4027	1989 01	11.35173	06 50	30.83	+19 54	54.6		9 675
4047	1971 05	13.17535	11 43	24.57	+03 18	36.5		4 675
4047	1971 05	14.20694	11 43	16.37	+03 18	20.1		4 675
4084	1990 03	27.45243	14 29	13.89	-10 30	24.7	17.5	9 675
4088	1990 03	27.45243	14 25	19.64	-12 26	15.7	16.8	9 675
4088	1990 03	27.49114	14 25	18.14	-12 26	14.7		9 675
4088	1990 04	22.36840	14 02	57.06	-11 50	50.2		9 675
4088	1990 04	22.39826	14 02	55.07	-11 50	45.3	16.2	9 675
4095	1978 11	30.31702	03 58	00.36	+21 27	06.3		6 675
4095	1978 12	01.33472	03 56	50.75	+21 21	53.8		6 675
4096	1971 05	13.18941	12 01	53.07	+00 37	03.8		4 675
4096	1971 05	13.20278	12 01	52.64	+00 37	01.4		4 675
4096	1971 05	14.21962	12 01	37.42	+00 36	01.2		4 675
4099	1989 07	05.23110	15 16	37.98	+02 16	04.9	18.2	9 675
4099	1989 07	05.27470	15 16	37.55	+02 15	44.9		9 675
4099	1989 07	10.25226	15 16	20.74	+01 38	02.1		9 675
4099	1989 07	10.27830	15 16	20.70	+01 37	50.6		9 675
4107	1989 07	10.25226	15 21	21.33	+04 32	23.8		9 675
4107	1989 07	10.27830	15 21	21.22	+04 32	13.5		9 675
4110	1988 03	17.27636	10 14	05.54	+09 07	47.3	17.0	9 675
4110	1988 03	17.31520	10 14	04.24	+09 07	56.2		9 675
4110	1988 03	21.28315	10 11	41.29	+09 24	21.8	17.0	9 675
4110	1988 03	21.31493	10 11	40.16	+09 24	30.1		9 675
4110	1988 03	22.23594	10 11	09.30	+09 28	07.3	17.0	9 675
4110	1988 03	22.26736	10 11	08.20	+09 28	14.4		9 675
4120	1991 09	12.37795	01 20	57.66	+02 39	47.0	19.0	9 675
4120	1991 09	12.43078	01 20	56.03	+02 39	31.9		9 675
4120	1991 09	14.41973	01 19	59.43	+02 29	17.8	18.5	9 675
4120	1991 09	14.47101	01 19	57.87	+02 29	03.4		9 675
4135	1989 08	02.27483	19 28	39.21	-08 53	05.6		9 675
4135	1989 08	02.30573	19 28	37.71	-08 53	12.7		9 675
4145	1991 08	10.34201	22 02	14.07	-06 10	55.6		9 675
4145	1991 08	10.37049	22 02	12.60	-06 10	52.9		9 675
4158	1971 05	14.19427	12 24	11.26	-04 42	06.0		4 675
4158	1971 05	14.24549	12 24	10.40	-04 42	03.5		4 675
4158	1971 05	16.27535	12 23	39.45	-04 40	34.0		4 675
4158	1990 04	01.44357	13 31	32.73	-12 16	42.4	17.0	9 675
4158	1990 04	01.48906	13 31	30.64	-12 16	36.2	17.5	9 675
4158	1990 05	25.17083	12 59	02.25	-10 05	23.8		9 675
4158	1990 05	25.20920	12 59	01.64	-10 05	21.8		9 675
4170	1991 09	13.33733	00 36	08.31	+00 45	57.6	17.0	9 675
4170	1991 09	13.37378	00 36	06.91	+00 45	41.3		9 675
4170	1991 09	16.39935	00 34	15.52	+00 22	17.9	16.2	9 675
4170	1991 09	16.43946	00 34	13.93	+00 21	58.6		9 675
4171	1989 07	05.21111	14 50	16.19	-10 38	29.7		9 675
4171	1989 07	05.29184	14 50	18.01	-10 38	47.6		9 675
4176	1971 05	13.20278	12 15	23.75	+02 03	22.1		4 675
4176	1971 05	14.23246	12 15	14.30	+02 03	26.0		4 675
4193	1990 04	01.44357	13 44	50.55	-08 11	40.2	18.5	9 675
4193	1990 04	01.48906	13 44	48.83	-08 11	29.5		9 675
4196	1971 05	14.19427	12 20	11.68	-01 20	47.2		4 675
4196	1971 05	14.24549	12 20	10.96	-01 20	42.9		4 675
4219	1988 03	17.27636	10 25	42.97	+12 08	27.5	17.0	9 675
4219	1988 03	17.31520	10 25	41.33	+12 08	39.8		9 675
4219	1988 03	21.28315	10 23	00.53	+12 28	48.3	16.8	9 675

4219	1988 03	21.31493	10 22	59.28	+12 28	56.7		9 675
4219	1988 03	22.23594	10 22	25.39	+12 33	12.6	16.8	9 675
4219	1988 03	22.26736	10 22	24.17	+12 33	21.5		9 675
4221	1971 05	13.20278	12 12	48.06	+05 03	05.2		4 675
4221	1971 05	14.23246	12 12	53.74	+05 08	40.4		4 675
4228	1989 07	09.36927	21 01	58.97	-06 49	48.5		9 675
4228	1989 07	09.40590	21 01	57.60	-06 49	44.4	17.2	9 675
4229	1991 08	07.45712	23 56	46.28	-00 43	23.6	18.0	9 675
4229	1991 08	08.44913	23 56	32.52	-00 46	46.6	17.8	9 675
4252	1988 03	17.27636	10 02	11.90	+10 22	24.0	17.0	9 675
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4252	1988 03	21.31493	10 00	09.10	+11 00	36.4		9 675
4252	1988 03	22.23594	09 59	44.57	+11 08	56.9	17.0	9 675
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4260	1978 11	30.31702	03 47	35.21	+17 24	12.0		6 675
4260	1978 12	01.33472	03 46	40.07	+17 22	38.0		6 675
4287	1988 02	17.42309	11 05	18.24	+15 09	59.6	17.2	9 675
4287	1988 02	17.45399	11 05	16.42	+15 10	11.6		9 675
4326	1971 05	13.17535	11 53	49.79	+06 55	27.7		4 675
4326	1971 05	14.20694	11 53	47.89	+06 55	51.0		4 675
4326	1971 05	16.31510	11 53	48.69	+06 50	02.4		4 675
4346	1989 07	05.29184	15 11	16.97	-12 34	34.5		9 675
4346	1989 07	06.21875	15 11	17.41	-12 33	18.0		9 675
4346	1989 07	06.25625	15 11	17.48	-12 33	15.6		9 675
4348	1971 05	14.19427	12 15	45.98	-06 07	55.2		4 675
4348	1971 05	14.24549	12 15	45.44	-06 07	47.7		4 675
4348	1971 05	16.27535	12 15	23.67	-06 02	55.8		4 675
4348	1989 11	22.25399	01 43	40.27	+11 39	45.8	16.6	3 675
4348	1989 11	22.28889	01 43	39.53	+11 39	38.8		3 675
4394	1971 05	13.17535	11 55	11.14	+01 52	49.0		4 675
4394	1971 05	14.20694	11 55	03.37	+01 53	49.8		4 675
4419	1978 11	30.31702	03 57	59.55	+20 26	59.7		6 675
4419	1978 12	01.33472	03 57	04.32	+20 24	13.1		6 675
4422	1971 05	13.20278	12 08	39.82	+04 31	36.5		4 675
4422	1971 05	14.23246	12 08	27.05	+04 32	15.7		4 675
4422	1971 05	16.29774	12 08	06.25	+04 32	58.2		4 675
4465	1971 05	13.17535	11 54	39.46	+03 26	54.2		4 675
4465	1971 05	14.20694	11 54	43.71	+03 24	02.2		4 675
4465	1971 05	16.31510	11 54	57.96	+03 17	41.6		4 675
4502	1989 07	05.22240	14 52	38.66	+00 49	10.8		9 675
4502	1989 07	05.26667	14 52	38.98	+00 48	56.4		9 675
4507	1978 11	30.31702	03 56	54.46	+21 35	53.9		6 675
4507	1978 12	01.33472	03 55	57.56	+21 33	56.5		6 675
4508	1991 09	12.37795	01 23	40.75	+05 16	33.6	17.5	9 675
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4508	1991 09	14.41973	01 22	24.81	+05 07	18.5	17.8	9 675
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4517	1971 05	13.17535	11 59	29.75	+01 29	05.6		4 675
4517	1971 05	14.20694	11 59	18.15	+01 27	47.5		4 675
4517	1971 05	16.31510	11 59	00.54	+01 24	30.1		4 675
4523	1990 03	27.45243	14 29	01.63	-15 49	24.0	16.8	9 675
4528	1991 08	10.35599	22 08	36.34	-07 43	33.6	17.2	9 675
4528	1991 08	10.39149	22 08	34.69	-07 43	48.1		9 675
4532	1990 04	01.44357	13 37	34.67	-09 47	13.2	17.5	9 675
4532	1990 04	01.48906	13 37	32.81	-09 46	53.1		9 675
4550	1971 05	13.17535	11 46	10.65	+01 31	56.8		4 675
4550	1971 05	14.20694	11 46	01.61	+01 32	51.1		4 675
4550	1971 05	16.31510	11 45	47.01	+01 34	18.2		4 675

4571	1988	03	21.28315	10	02	47.79	+11	37	11.6	18.5	9	675
4612	1989	07	05.21111	15	19	39.34	-09	54	34.4			9 675
4612	1989	07	05.29184	15	19	38.87	-09	54	58.7			9 675
4612	1989	07	06.21875	15	19	35.34	-09	59	57.5	17.8	9	675
4612	1989	07	06.25625	15	19	35.22	-10	00	10.5			9 675
4627	1989	07	05.21111	14	55	13.81	-13	37	08.4			9 675
4627	1989	07	05.29184	14	55	13.76	-13	37	16.4			9 675
4636	1989	07	05.22240	14	57	54.48	-00	15	40.1			9 675
4636	1989	07	05.26667	14	57	54.30	-00	15	47.5			9 675
4657	1971	05	14.19427	12	26	05.23	-02	56	46.8			4 675
4657	1971	05	14.24549	12	26	04.14	-02	56	40.2			4 675
4657	1971	05	16.27535	12	25	30.17	-02	53	04.5			4 675
4664	1988	03	17.27636	10	06	10.14	+11	34	11.1	18.0	9	675
4664	1988	03	17.31520	10	06	08.71	+11	34	19.3			9 675
4664	1988	03	22.23594	10	03	13.39	+11	48	20.0	18.5	9	675
4664	1988	03	22.26736	10	03	12.35	+11	48	26.3			9 675
4667	1971	05	13.18941	12	03	16.04	-03	42	59.4			4 675
4667	1971	05	14.19427	12	03	00.77	-03	43	34.3			4 675
4667	1971	05	14.21962	12	03	00.49	-03	43	36.1			4 675
4667	1971	05	14.24549	12	03	00.81	-03	43	35.6			4 675
4694	1988	03	21.28315	10	03	19.10	+11	00	35.6	18.2	9	675
4694	1988	03	21.31493	10	03	17.80	+11	00	38.6			9 675
4694	1988	03	22.23594	10	02	42.68	+11	02	43.2	18.2	9	675
4694	1988	03	22.26736	10	02	41.39	+11	02	47.7			9 675
4722	1978	11	30.31702	03	55	47.36	+19	57	31.7			6 675
4722	1978	12	01.33472	03	55	11.01	+19	56	56.1			6 675
4745	1989	08	02.27483	19	51	05.11	-08	50	04.1			9 675
4745	1989	08	02.30573	19	51	03.62	-08	50	07.4			9 675
4755	1988	02	17.42309	10	45	01.35	+12	08	38.2	18.5	9	675
4755	1988	02	17.45399	10	44	59.57	+12	08	51.5			9 675
4755	1988	03	17.27636	10	17	16.69	+14	57	47.3	19.0	9	675
4755	1988	03	17.31520	10	17	14.78	+14	57	56.3			9 675
4755	1988	03	21.28315	10	14	17.29	+15	12	36.2	18.5	9	675
4755	1988	03	21.31493	10	14	15.91	+15	12	41.6			9 675
4755	1988	03	22.23594	10	13	38.02	+15	15	43.4	18.8	9	675
4755	1988	03	22.26736	10	13	36.67	+15	15	48.3			9 675
4787	1988	03	17.27636	10	02	35.85	+13	31	37.3	18.8	9	675
4787	1988	03	17.31520	10	02	34.11	+13	31	42.9			9 675
4787	1988	03	21.28315	09	59	39.74	+13	37	42.8	18.5	9	675
4787	1988	03	21.31493	09	59	38.51	+13	37	43.6			9 675
4812	1988	02	17.42309	11	10	36.84	+09	18	24.0	17.5	9	675
4812	1988	02	17.45399	11	10	34.95	+09	18	30.7			9 675
4815	1988	02	17.42309	10	55	06.13	+13	45	07.2	18.5	9	675
4815	1988	02	17.45399	10	55	04.37	+13	45	14.8			9 675
4815	1988	03	22.23594	10	21	50.24	+15	21	19.0	18.0	9	675
4815	1988	03	22.26736	10	21	48.65	+15	21	22.1			9 675
4849	1991	08	10.34201	21	50	04.43	-08	29	06.0	16.5	9	675
4849	1991	08	10.37049	21	50	02.88	-08	29	14.3			9 675
4902	1991	03	09.35208	12	56	57.87	-02	05	48.8	17.9	3	675
4902	1991	03	09.38751	12	56	57.15	-02	05	42.2			3 675
4903	1978	11	30.31702	03	50	54.99	+18	14	55.3			6 675
4903	1978	12	01.33472	03	50	03.50	+18	13	05.7			6 675
4910	1989	01	11.31614	07	13	58.88	+15	04	11.5	18.0	9	675
4910	1989	01	11.35173	07	13	56.48	+15	04	17.1			9 675
4911	1990	04	01.44357	13	45	44.00	-13	08	28.4			9 675
4911	1990	04	01.48906	13	45	42.00	-13	08	08.6	18.0	9	675
4911	1990	05	25.17083	13	10	10.40	-06	33	37.5			9 675
4911	1990	05	25.20920	13	10	09.63	-06	33	25.6			9 675
4912	1990	03	27.45243	14	00	12.14	-11	07	42.6	17.5	9	675

4912	1990 03	27.49114	14 00	10.63	-11 07	32.5		9 675
4912	1990 04	01.44357	13 56	24.44	-10 39	07.1		9 675
4912	1990 04	01.48906	13 56	22.20	-10 38	52.3	17.8	9 675
4912	1990 04	22.36840	13 37	25.92	-08 21	19.9	17.2	9 675
4912	1990 05	25.17083	13 14	53.46	-05 38	02.9		9 675
4912	1990 05	25.20920	13 14	52.67	-05 37	56.5		9 675
4912	1991 08	09.33872	22 07	47.66	-06 13	33.2	17.5	9 675
4912	1991 08	09.37257	22 07	46.00	-06 13	43.7		9 675
4912	1991 08	10.34201	22 06	59.85	-06 18	40.2	16.5	9 675
4912	1991 08	10.37049	22 06	58.44	-06 18	48.8		9 675
4916	1991 08	07.32240	21 07	45.94	-12 40	39.3	16.5	9 675
4916	1991 08	07.35069	21 07	44.56	-12 40	50.8		9 675
4917	1991 08	10.40851	22 52	48.49	-04 08	22.9		9 675
4923	1991 08	06.39410	22 05	25.48	+00 09	55.5	17.2	9 675
4923	1991 08	06.42743	22 05	24.26	+00 09	40.7		9 675
4923	1991 09	04.27743	21 45	58.57	-04 37	01.2	15.5	2 675
4923	1991 09	04.30226	21 45	57.69	-04 37	18.8		2 675
4923	1991 09	07.25451	21 44	28.27	-05 10	26.4		2 675
4923	1991 09	07.28403	21 44	27.25	-05 10	47.2		2 675
4926	1990 03	27.45243	14 18	30.66	-15 28	21.8	17.8	9 675
4926	1990 03	27.49114	14 18	29.27	-15 28	17.1		9 675
4926	1990 04	22.39826	13 59	35.10	-14 02	56.1	17.5	9 675
4945	1991 08	07.33698	22 00	03.41	-02 50	05.0	15.0	9 675
4945	1991 08	07.36840	22 00	02.53	-02 50	12.1		9 675
4945	1991 08	10.34201	21 58	46.52	-03 02	56.8	15.5	9 675
4945	1991 08	10.37049	21 58	45.66	-03 03	05.0		9 675
4952	1989 01	11.35173	06 53	28.04	+15 51	24.1	16.8	9 675
4959	1991 08	07.39306	23 23	46.36	-10 27	47.2	16.8	9 675
4959	1991 08	07.42257	23 23	45.69	-10 27	57.1		9 675

## 690 Lowell Observatory

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

Observer C. W. Tombaugh

Measurer C. M. Olmstead

0.33-m photographic telescope

1931 BK	1931 01	19.23194	07 27	39.83	+08 37	20.0		P 690
156	1931 01	16.27222	07 27	00.32	+10 14	00.2		690
983	1931 01	16.27222	07 35	37.42	+07 00	21.5		690
1490	1931 01	16.27222	07 39	01.52	+10 46	29.9		690
1743	1931 01	16.27222	07 28	50.72	+10 59	50.7		690
2459	1931 01	16.27222	07 41	39.57	+06 46	29.7		690

## 691 Kitt Peak, Steward Observatory

T. Gehrels, Space Sciences Building, University of Arizona,  
Tucson, AZ 85721, U.S.A.

Observers T. Gehrels, D. Rabinowitz, J. V. Scotti

0.91-m SPACEWATCH telescope

SAOC 1984

See also MPC 9198, MPC 10373 and Astron. J. 91, 1242, 1986

1991 JX	1991 09	17.22086	23 54	53.88	+04 19	51.6		691
1991 JX	1991 09	17.23026	23 54	53.28	+04 19	44.4		691
1991 RC	1991 09	17.19326	21 49	19.90	-12 28	05.2		691
1991 RC	1991 09	17.20201	21 49	18.81	-12 28	15.2		691
1991 RC	1991 09	17.21062	21 49	17.70	-12 28	25.0		691
1991 RJ2	1991 10	02.15573	23 22	29.74	-10 40	45.5	18.4V	E 691
1991 RJ2	1991 10	02.17117	23 22	30.72	-10 40	58.9		E 691
1991 RJ2	1991 10	02.18467	23 22	31.54	-10 41	09.7		E 691
1991 RJ2	1991 10	03.17131	23 23	40.18	-10 54	04.6	18.7V	691

1991 RJ2	1991 10 03.17995	23 23 40.71	-10 54 11.4	691
1991 RJ2	1991 10 03.19597	23 23 41.71	-10 54 23.6	691
1991 RJ2	1991 10 03.35686	23 23 51.66	-10 56 25.1	691
1991 RJ2	1991 10 03.36783	23 23 52.34	-10 56 33.3	691
1991 RJ2	1991 10 03.37720	23 23 52.93	-10 56 40.1	691
3288	1991 09 14.12846	22 35 15.73	-00 08 55.3	19.2V 691
3288	1991 09 14.14913	22 35 14.36	-00 09 06.9	19.0V 691
3288	1991 09 14.16928	22 35 13.08	-00 09 17.7	19.0V 691

## 760 Goethe Link

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

Observers H. S. Charlip, M. L. Connelly, P. R. Davis, A. M. Heiser  
Measurer C. M. Olmstead

0.25-m refractor

PDS scanning microdensitometer

AGK3 and Perth 70 secondary nets, global solutions

1950 QK	1950 08 17.23995	22 20 41.57	-09 16 34.8	760
1950 QK	1950 08 17.28927	22 20 38.50	-09 16 39.9	760
1950 QL	1950 08 17.23995	22 16 35.30	-07 32 29.8	E 760
1950 QL	1950 08 17.28927	22 16 32.63	-07 32 33.9	E 760
25	1954 10 20.18689	00 33 03.33	+15 15 21.2	11.0 G 760
25	1954 10 20.23549	00 33 01.68	+15 14 22.3	G 760
114	1950 08 17.23995	22 31 26.63	-07 39 02.3	760
114	1950 08 17.28927	22 31 24.37	-07 39 19.4	13.5 760
117	1954 10 20.18689	00 31 16.27	+15 11 24.1	14.0 G 760
117	1954 10 20.23549	00 31 13.66	+15 11 19.5	G 760
159	1957 11 27.23334	02 58 05.73	+07 34 14.0	13.2 760
159	1957 11 27.27709	02 58 03.84	+07 34 09.5	760
283	1950 08 17.23995	22 27 06.31	-03 22 44.1	760
283	1950 08 17.28927	22 27 03.89	-03 22 47.5	13.2 760
656	1950 08 17.23995	22 30 15.72	-09 00 53.1	760
656	1950 08 17.28927	22 30 13.56	-09 01 06.8	16.2 760
1113	1950 08 17.23995	22 30 03.55	-06 46 26.6	760
1113	1950 08 17.28927	22 30 01.16	-06 46 29.9	14.7 760
1991	1954 10 20.18689	00 46 43.82	+15 08 05.7	G 760
1991	1954 10 20.23549	00 46 40.83	+15 07 51.5	G 760

## 801 Oak Ridge

R. E. McCrosky, Harvard-Smithsonian Center for Astrophysics,  
60 Garden Street, Cambridge, MA 02138, U.S.A.

Observers R. E. McCrosky, C.-Y. Shao

1.5-m reflector + CCD

1933 UM1	1991 09 08.35183	03 20 38.37	+19 48 53.9	w 801
1933 UM1	1991 09 08.38329	03 20 39.09	+19 48 58.0	w 801
1936 NB	1991 09 06.29137	00 57 38.92	+33 15 47.2	801
1936 NB	1991 09 06.30285	00 57 38.46	+33 15 50.2	S 801
1936 NB	1991 09 10.26328	00 55 01.16	+33 31 03.7	801
1936 NB	1991 09 10.27494	00 55 00.64	+33 31 05.9	801
1951 WH	1991 09 08.37225	03 41 29.04	+16 36 14.2	801
1951 WH	1991 09 08.38675	03 41 29.97	+16 36 19.2	801
1964 VT1	1991 09 13.24403	00 36 18.13	-00 30 10.3	801
1964 VT1	1991 09 13.25983	00 36 17.43	-00 30 14.2	801
1969 TA	1991 09 10.21418	01 08 53.07	+17 31 09.2	801
1969 TA	1991 09 10.23475	01 08 52.51	+17 31 05.7	801
1969 TA	1991 09 10.28569	01 08 51.11	+17 30 57.3	801
1969 TA	1991 09 12.33074	01 07 54.80	+17 24 35.9	801
1969 TA	1991 09 12.36080	01 07 53.86	+17 24 29.4	801



1970 WD	1991 09 12.21323	00 06 05.42	+15 27 32.2	801
1970 WD	1991 09 12.23256	00 06 04.44	+15 27 28.8	801
1970 WD	1991 09 13.13461	00 05 22.40	+15 24 26.4	801
1970 WD	1991 09 13.15488	00 05 21.41	+15 24 22.1	801
1972 RF	1991 09 09.35043	03 15 26.57	+00 55 53.4	801
1972 RF	1991 09 09.35980	03 15 26.89	+00 55 44.1	801
1972 RF	1991 09 13.33331	03 17 30.91	-00 11 39.6	801
1972 RF	1991 09 13.34612	03 17 31.24	-00 11 53.2	801
1972 RY3	1991 09 12.31818	00 53 48.40	-00 54 45.2	801
1972 RY3	1991 09 12.34867	00 53 47.28	-00 54 49.5	801
1974 MG	1991 09 13.28841	01 03 15.72	+14 08 32.5	801
1974 MG	1991 09 13.30096	01 03 15.12	+14 08 32.7	801
1974 ST	1991 09 09.29157	00 45 37.24	+01 04 54.1	801
1974 ST	1991 09 09.30620	00 45 36.71	+01 04 50.1	801
1975 VP	1991 09 13.28162	00 59 02.72	+02 00 39.2	801
1975 VP	1991 09 13.29657	00 59 02.16	+02 00 33.5	801
1975 YD	1991 09 13.32200	02 35 11.52	+21 38 05.1	801
1975 YD	1991 09 13.34965	02 35 12.30	+21 38 00.9	801
1976 EB	1991 09 07.25307	23 37 03.20	-01 32 59.1	801
1976 EB	1991 09 07.26713	23 37 02.32	-01 33 01.5	801
1976 EB	1991 09 09.20135	23 35 05.72	-01 38 32.2	801
1976 EB	1991 09 09.21200	23 35 05.03	-01 38 34.1	801
1977 DR1	1991 09 07.25610	23 38 13.35	+04 46 18.4	801
1977 DR1	1991 09 07.26932	23 38 12.53	+04 46 18.0	801
1977 DR1	1991 09 09.20319	23 36 15.51	+04 45 12.6	801
1977 DR1	1991 09 09.21412	23 36 14.83	+04 45 12.5	801
1977 DR1	1991 09 13.08399	23 32 17.27	+04 41 41.1	801
1977 DR1	1991 09 13.10792	23 32 15.74	+04 41 39.4	801
1977 DY8	1991 09 09.27144	00 27 51.69	-00 58 40.4	801
1977 DY8	1991 09 09.28583	00 27 50.95	-00 58 44.0	801
1977 DY8	1991 09 13.20444	00 24 32.85	-01 14 31.2	801
1977 DY8	1991 09 13.22424	00 24 31.75	-01 14 36.2	801
1977 PE1	1991 09 07.20234	23 08 36.94	+02 31 45.4	801
1977 PE1	1991 09 07.21969	23 08 36.12	+02 31 39.6	801
1977 PE1	1991 09 08.24988	23 07 49.77	+02 25 48.0	801
1977 PE1	1991 09 08.26228	23 07 49.18	+02 25 43.7	801
1977 PE1	1991 09 08.26497	23 07 49.06	+02 25 42.8	801
1977 QD2	1991 09 13.20674	00 27 16.57	+04 51 05.9	801
1977 QD2	1991 09 13.22999	00 27 15.34	+04 51 06.9	801
1977 RD7	1991 09 08.31780	23 59 09.85	+02 32 26.1	801
1977 RD7	1991 09 08.32883	23 59 09.26	+02 32 23.0	801
1977 RD7	1991 09 09.22846	23 58 22.56	+02 28 12.0	801
1977 RD7	1991 09 09.24166	23 58 21.86	+02 28 08.3	801
1977 RD7	1991 09 12.19251	23 55 43.90	+02 13 46.9	801
1977 RD7	1991 09 12.20844	23 55 42.98	+02 13 41.9	801
1978 NQ1	1991 09 07.26453	23 54 52.43	+07 20 24.9	801
1978 NQ1	1991 09 07.28260	23 54 51.32	+07 20 20.0	801
1978 NQ1	1991 09 09.22339	23 52 54.52	+07 10 56.8	801
1978 NQ1	1991 09 09.23514	23 52 53.76	+07 10 53.7	801
1978 NQ1	1991 09 12.18458	23 49 51.67	+06 55 13.2	801
1978 NQ1	1991 09 12.19938	23 49 50.71	+06 55 08.0	801
1978 VL5	1991 09 10.21657	01 02 13.94	+16 00 39.7	801
1978 VL5	1991 09 10.23080	01 02 13.47	+16 00 38.8	801
1978 VL5	1991 09 13.28410	01 00 28.21	+15 56 07.6	801
1978 VL5	1991 09 13.29861	01 00 27.63	+15 56 05.9	801
1978 VU10	1991 09 09.02509	20 30 17.10	-15 06 03.6	801
1978 VU10	1991 09 09.10998	20 30 17.19	-15 06 07.1	801
1978 VU10	1991 09 12.03066	20 30 40.41	-15 07 33.0	801
1978 VU10	1991 09 12.08948	20 30 41.07	-15 07 33.8	801

1979 MS6	1991 09 12.32481	01 01 17.26	+14 13 57.2	801
1979 MS6	1991 09 12.35780	01 01 16.00	+14 13 50.8	801
1979 MS6	1991 09 13.28630	01 00 41.52	+14 10 51.0	801
1979 MS6	1991 09 13.30352	01 00 40.83	+14 10 47.6	801
1979 SL7	1991 09 06.17301	21 59 45.19	-04 05 35.8	801
1979 SL7	1991 09 06.18743	21 59 44.46	-04 05 41.2	801
1979 SL7	1991 09 08.19038	21 58 06.18	-04 18 25.0	801
1979 SL7	1991 09 08.20694	21 58 05.34	-04 18 31.1	801
1980 FH12	1991 09 06.15520	21 32 16.92	-10 16 38.0	801
1980 FH12	1991 09 06.17808	21 32 15.70	-10 16 39.9	801
1980 FH12	1991 09 09.07628	21 29 53.57	-10 20 17.1	801
1980 FH12	1991 09 09.09090	21 29 52.85	-10 20 18.1	801
1980 PB2	1991 09 06.09656	20 42 26.61	-06 23 06.7	801
1980 PB2	1991 09 06.11856	20 42 26.10	-06 23 15.0	801
1980 PB2	1991 09 08.08972	20 41 44.81	-06 35 50.7	801
1980 PB2	1991 09 08.14487	20 41 43.62	-06 36 11.6	801
1980 PB2	1991 09 08.15326	20 41 43.48	-06 36 14.8	801
1980 PB2	1991 09 13.05590	20 40 22.78	-07 06 45.6	801
1980 PB2	1991 09 13.07609	20 40 22.49	-07 06 53.0	801
1980 TB12	1991 09 13.25354	00 43 17.78	+12 59 41.3	801
1980 TB12	1991 09 13.27106	00 43 17.16	+12 59 36.5	801
1981 DQ	1991 09 10.24080	00 25 56.48	+17 46 02.9	801
1981 DQ	1991 09 10.25389	00 25 55.99	+17 45 58.7	801
1981 DQ	1991 09 13.20242	00 24 04.84	+17 28 27.3	801
1981 DQ	1991 09 13.22648	00 24 03.84	+17 28 18.2	801
1981 DX1	1991 09 09.19902	23 34 30.13	+11 47 59.5	801
1981 DX1	1991 09 09.20975	23 34 29.47	+11 48 01.0	801
1981 DX1	1991 09 12.15501	23 31 31.41	+11 53 44.1	801
1981 DX1	1991 09 12.17140	23 31 30.46	+11 53 44.5	801
1981 DC2	1991 09 09.30264	00 50 50.85	+19 38 56.8	801
1981 DC2	1991 09 09.31874	00 50 50.39	+19 38 52.1	801
1981 DC2	1991 09 10.26017	00 50 25.06	+19 34 20.8	801
1981 DC2	1991 09 10.27215	00 50 24.71	+19 34 17.3	801
1981 EH11	1991 09 09.17449	23 09 26.96	-04 19 01.1	801
1981 EH11	1991 09 09.18630	23 09 26.11	-04 18 59.3	801
1981 EO34	1991 09 06.04674	20 12 20.24	-10 00 35.0	801
1981 EO34	1991 09 06.07222	20 12 19.98	-10 00 48.2	801
1981 EO34	1991 09 08.08007	20 12 06.61	-10 17 34.8	801
1981 EO34	1991 09 08.09564	20 12 06.47	-10 17 42.6	801
1981 RR3	1991 09 13.24213	00 35 01.90	+01 42 29.1	801
1981 RR3	1991 09 13.25796	00 35 01.41	+01 42 19.3	801
1981 UT	1991 09 08.34791	03 16 03.15	+20 30 44.5	801
1981 UT	1991 09 08.36073	03 16 03.69	+20 30 48.6	801
1981 WR	1991 09 13.19294	00 06 27.80	-06 50 17.8	801
1981 WR	1991 09 13.20869	00 06 26.96	-06 50 24.8	801
1982 DQ6	1991 09 09.34098	02 55 30.22	+17 35 28.9	801
1982 DQ6	1991 09 09.36707	02 55 30.67	+17 35 36.2	801
1982 TK3	1991 09 06.20791	23 00 04.98	+00 29 28.7	801
1982 TK3	1991 09 06.23189	23 00 03.61	+00 29 26.3	801
1982 TK3	1991 09 08.21578	22 58 14.44	+00 26 13.1	801
1982 TK3	1991 09 08.22666	22 58 13.84	+00 26 11.9	801
1982 TK3	1991 09 12.07306	22 54 42.63	+00 19 07.0	801
1982 TK3	1991 09 12.08608	22 54 42.05	+00 19 05.2	801
1982 UT6	1991 09 06.22758	23 02 12.13	-06 54 20.5	801
1982 UT6	1991 09 06.24523	23 02 11.30	-06 54 24.3	801
1982 UT6	1991 09 09.14863	22 59 49.23	-07 06 57.2	801
1982 UT6	1991 09 09.15986	22 59 48.67	-07 06 59.9	801
1983 CF1	1991 09 06.16109	21 55 57.72	-23 59 13.3	801
1983 CF1	1991 09 06.18316	21 55 56.84	-23 59 22.1	801

1983	CF1	1991	09	08.16731	21	54	40.82	-24	11	58.7	801
1983	CF1	1991	09	08.17770	21	54	40.37	-24	12	02.3	801
1983	GR	1991	09	06.16356	21	58	25.96	-23	34	51.4	801
1983	GR	1991	09	06.18505	21	58	24.81	-23	34	52.8	801
1983	GR	1991	09	08.16941	21	56	38.12	-23	36	44.2	801
1983	GR	1991	09	08.17948	21	56	37.49	-23	36	44.0	S 801
1983	NL	1991	09	08.37590	03	42	03.28	+01	25	44.6	801
1983	NL	1991	09	08.38921	03	42	03.90	+01	25	38.1	801
1984	QR	1991	09	06.10466	21	24	18.24	-07	30	30.3	801
1984	QR	1991	09	06.11559	21	24	17.33	-07	30	25.3	801
1984	SM	1991	09	09.28391	00	46	42.29	+16	40	23.1	801
1984	SM	1991	09	09.29966	00	46	41.66	+16	40	22.5	801
1984	SM	1991	09	10.25745	00	46	05.76	+16	39	22.4	801
1984	SM	1991	09	10.26656	00	46	05.40	+16	39	21.8	801
1984	SX5	1991	09	09.17664	23	24	47.08	-04	59	36.2	801
1984	SX5	1991	09	09.18858	23	24	46.45	-04	59	43.0	801
1984	SX5	1991	09	12.12691	23	22	19.21	-05	27	47.5	801
1984	SX5	1991	09	12.14030	23	22	18.50	-05	27	54.9	801
1985	VP	1991	09	09.32392	01	57	12.30	+21	52	41.2	801
1985	VP	1991	09	09.34416	01	57	11.88	+21	52	46.0	801
1986	EJ	1991	09	09.25777	00	20	46.98	+18	48	26.3	801
1986	EJ	1991	09	09.26824	00	20	46.31	+18	48	28.2	801
1986	EJ	1991	09	13.15112	00	16	34.57	+18	58	44.1	801
1986	EJ	1991	09	13.16738	00	16	33.46	+18	58	46.4	801
1986	ET	1991	09	06.21475	22	50	11.06	-08	33	55.7	801
1986	ET	1991	09	06.23645	22	50	09.70	-08	34	00.7	801
1986	ET	1991	09	08.20990	22	48	10.39	-08	41	37.5	801
1986	ET	1991	09	08.22066	22	48	09.74	-08	41	40.3	801
1986	EZ1	1991	09	07.12929	21	22	13.71	-13	51	35.7	801
1986	EZ1	1991	09	07.15140	21	22	12.62	-13	51	40.5	801
1986	EZ1	1991	09	09.06308	21	20	46.84	-13	58	01.5	801
1986	EZ1	1991	09	09.08266	21	20	46.01	-13	58	05.2	801
1986	QY	1991	09	13.31284	02	26	10.22	+15	26	54.6	801
1986	QY	1991	09	13.36797	02	26	09.93	+15	27	02.0	801
1986	QB1	1991	09	09.20726	23	43	46.65	-06	50	04.8	w 801
1986	QB1	1991	09	09.21848	23	43	46.11	-06	50	08.0	w 801
1986	QB1	1991	09	12.17920	23	41	26.28	-07	04	22.8	801
1986	QB1	1991	09	12.19588	23	41	25.46	-07	04	27.5	801
1986	QS3	1991	09	07.16565	21	29	06.23	-17	05	21.5	801
1986	QS3	1991	09	07.18126	21	29	05.70	-17	05	27.1	801
1986	QS3	1991	09	09.07266	21	28	04.57	-17	16	48.8	801
1986	QS3	1991	09	09.09395	21	28	03.84	-17	16	56.1	801
1986	TM	1991	09	06.30696	02	00	12.57	+13	48	23.3	801
1986	TM	1991	09	06.31846	02	00	12.23	+13	48	32.9	801
1986	TM	1991	09	07.31731	01	59	44.91	+14	05	15.2	801
1986	TM	1991	09	07.32983	01	59	44.53	+14	05	27.9	801
1986	TU	1991	09	12.37472	04	50	08.74	-00	03	33.0	801
1986	TU	1991	09	12.38307	04	50	09.66	-00	03	43.8	801
1986	TU	1991	09	13.37750	04	52	01.05	-00	24	45.5	801
1986	TU	1991	09	13.38457	04	52	01.83	-00	24	54.6	801
1986	VG	1991	09	12.33421	01	08	04.88	+12	01	05.0	801
1986	VG	1991	09	12.36425	01	08	03.78	+12	01	05.5	801
1986	VF5	1991	09	09.28172	00	39	47.16	+04	03	59.2	801
1986	VF5	1991	09	09.29756	00	39	46.48	+04	03	58.6	801
1986	VF5	1991	09	13.25096	00	36	58.74	+04	00	52.4	801
1986	VF5	1991	09	13.26616	00	36	58.05	+04	00	51.7	801
1987	OC	1991	09	13.22113	03	09	39.81	+48	12	52.2	801
1987	OC	1991	09	13.23779	03	09	40.20	+48	12	59.4	801
1987	QL1	1991	09	13.34362	03	35	52.28	+25	32	31.6	801

1987 QL1	1991 09 13.36487	03 35 52.92	+25 32 37.0	801
1987 QN7	1991 09 07.25861	23 38 01.44	-06 31 04.6	801
1987 QN7	1991 09 07.27374	23 38 00.87	-06 31 13.7	801
1987 QN7	1991 09 09.20514	23 36 53.10	-06 50 50.4	801
1987 QN7	1991 09 09.21626	23 36 52.68	-06 50 57.2	801
1987 RO3	1991 09 07.19947	23 07 01.57	+02 43 38.1	801
1987 RO3	1991 09 07.21767	23 07 00.79	+02 43 30.3	801
1987 RO3	1991 09 09.15454	23 05 43.79	+02 29 25.7	801
1987 RO3	1991 09 09.16770	23 05 43.23	+02 29 19.8	801
1987 SG2	1991 09 09.17865	23 30 22.78	-03 46 11.8	801
1987 SG2	1991 09 09.19303	23 30 22.06	-03 46 18.7	801
1987 SG2	1991 09 12.13163	23 28 01.06	-04 10 45.4	801
1987 SG2	1991 09 12.14868	23 28 00.22	-04 10 54.0	801
1987 UJ	1991 09 13.29035	00 50 35.10	+07 37 19.3	801
1987 UJ	1991 09 13.31534	00 50 34.08	+07 37 16.3	801
1987 UW	1991 09 06.26802	23 16 31.64	+30 29 44.0	801
1987 UW	1991 09 06.27661	23 16 31.30	+30 29 36.9	801
1987 UW	1991 09 07.22843	23 15 54.44	+30 16 04.6	801
1987 UW	1991 09 07.24124	23 15 53.86	+30 15 53.7	801
1987 UW	1991 09 12.09417	23 12 42.41	+28 59 20.9	801
1987 UW	1991 09 12.10860	23 12 41.83	+28 59 06.3	801
1988 AG	1991 09 07.30993	01 30 19.68	+16 53 51.5	801
1988 AG	1991 09 07.33457	01 30 19.07	+16 53 54.8	801
1988 BK4	1991 09 09.17159	22 57 52.36	-16 13 57.4	801
1988 BK4	1991 09 09.18388	22 57 51.87	-16 14 04.3	801
1988 BK4	1991 09 12.10500	22 55 51.61	-16 41 07.8	801
1988 BK4	1991 09 12.12297	22 55 50.86	-16 41 18.5	801
1988 BK5	1991 09 08.24119	23 09 35.69	+15 35 02.2	801
1988 BK5	1991 09 08.25601	23 09 34.92	+15 35 01.5	801
1988 DJ	1991 09 13.30726	01 59 18.92	+20 13 40.1	801
1988 DJ	1991 09 13.35519	01 59 18.11	+20 13 36.6	801
1988 RD3	1991 09 06.15814	21 50 28.40	-10 29 41.9	801
1988 RD3	1991 09 06.18038	21 50 27.33	-10 29 49.9	801
1988 RD3	1991 09 08.16145	21 49 01.70	-10 41 19.1	801
1988 RD3	1991 09 08.17273	21 49 01.22	-10 41 22.4	801
1988 TJ2	1991 09 08.21308	22 55 29.75	-11 20 07.1	801
1988 TJ2	1991 09 08.22301	22 55 29.07	-11 20 08.9	801
1988 TJ2	1991 09 09.13100	22 54 30.43	-11 22 50.6	801
1988 TJ2	1991 09 09.14574	22 54 29.42	-11 22 52.9	801
1988 TJ2	1991 09 09.15752	22 54 28.62	-11 22 55.0	801
1988 TJ2	1991 09 09.16550	22 54 28.10	-11 22 56.4	801
1988 UB	1991 09 07.11611	20 45 12.65	-17 55 39.1	801
1988 UB	1991 09 07.14853	20 45 11.41	-17 55 44.6	801
1988 UB	1991 09 09.04096	20 44 04.25	-17 58 52.8	801
1988 UB	1991 09 09.05747	20 44 03.66	-17 58 55.1	801
1988 VO2	1991 09 09.02987	19 39 50.84	-17 43 37.2	801
1988 VO2	1991 09 09.06958	19 39 50.46	-17 43 35.1	801
1988 VO2	1991 09 13.03238	19 39 33.26	-17 39 24.6	801
1988 VO2	1991 09 13.07978	19 39 33.11	-17 39 23.0	801
1988 VM3	1991 09 09.25354	00 13 36.76	+01 08 56.7	801
1988 VM3	1991 09 09.26598	00 13 36.13	+01 08 54.7	801
1988 VM3	1991 09 13.14223	00 10 25.34	+00 57 28.9	801
1988 VM3	1991 09 13.16087	00 10 24.32	+00 57 25.1	801
1988 VK4	1991 09 12.32130	00 58 56.13	+00 13 31.6	801
1988 VK4	1991 09 12.33743	00 58 55.28	+00 13 29.6	801
1988 WB	1991 09 09.27674	00 34 49.89	+06 42 01.2	801
1988 WB	1991 09 09.28806	00 34 49.36	+06 41 58.6	801
1988 WB	1991 09 13.23228	00 31 45.78	+06 26 10.7	801
1988 WB	1991 09 13.24888	00 31 44.90	+06 26 06.6	801

1988	XE1	1991	09	06.17568	22	06	11.99	-00	53	43.4	801
1988	XE1	1991	09	06.18983	22	06	11.23	-00	53	48.2	801
1988	XE1	1991	09	12.06488	22	01	19.69	-01	28	55.4	801
1988	XE1	1991	09	12.08282	22	01	18.84	-01	29	00.7	801
1989	AL1	1991	09	07.32330	02	16	54.26	+01	54	59.5	801
1989	AL1	1991	09	07.36090	02	16	54.19	+01	54	50.5	801
1989	AL1	1991	09	13.31804	02	16	22.61	+01	29	53.6	801
1989	AL1	1991	09	13.35248	02	16	22.17	+01	29	44.4	801
1989	AX1	1991	09	12.38014	04	04	07.05	+26	00	05.1	801
1989	AX1	1991	09	12.39041	04	04	07.76	+26	00	10.7	801
1989	BY	1991	09	07.26150	23	46	44.89	-06	56	04.8	801
1989	BY	1991	09	07.27594	23	46	44.09	-06	56	10.6	801
1989	BY	1991	09	09.22063	23	45	04.65	-07	09	31.0	801
1989	BY	1991	09	09.23346	23	45	03.96	-07	09	36.3	801
1989	BS1	1991	09	09.31433	01	49	44.57	+13	59	17.4	801
1989	BS1	1991	09	09.35707	01	49	44.23	+13	59	21.9	801
1989	CZ	1991	09	07.36520	02	56	14.25	+16	43	09.2	801
1989	CZ	1991	09	07.37903	02	56	14.84	+16	43	13.7	801
1989	CN1	1991	09	13.19939	00	12	55.03	-01	35	46.7	801
1989	CN1	1991	09	13.21406	00	12	54.26	-01	35	50.6	801
1989	CU8	1991	09	07.17316	22	15	50.93	-13	05	43.1	801
1989	CU8	1991	09	07.19500	22	15	49.88	-13	05	48.0	801
1989	CU8	1991	09	09.10112	22	14	22.45	-13	12	29.5	801
1989	CU8	1991	09	09.11649	22	14	21.73	-13	12	33.0	801
1989	FJ	1991	09	13.25611	00	47	16.45	-01	15	52.9	801
1989	FJ	1991	09	13.26823	00	47	15.92	-01	15	55.6	801
1989	GB1	1991	09	07.16895	22	14	22.27	-03	15	36.7	801
1989	GB1	1991	09	07.18363	22	14	21.71	-03	15	41.0	801
1989	GB1	1991	09	09.09832	22	13	04.16	-03	25	10.5	801
1989	GB1	1991	09	09.11319	22	13	03.55	-03	25	14.7	801
1989	GB4	1991	09	13.31047	02	25	57.65	+15	54	07.8	801
1989	GB4	1991	09	13.37244	02	25	57.09	+15	54	08.6	801
1990	DX	1991	09	09.15178	23	00	55.33	-01	04	58.8	801
1990	DX	1991	09	09.16288	23	00	54.69	-01	05	01.9	801
1990	DX	1991	09	12.09802	22	58	12.20	-01	18	49.6	801
1990	DX	1991	09	12.11223	22	58	11.45	-01	18	53.8	801
1990	DM3	1991	09	09.26144	00	22	32.88	+02	15	37.2	801
1990	DM3	1991	09	09.27375	00	22	32.16	+02	15	35.1	801
1990	DM3	1991	09	13.14612	00	18	52.22	+02	04	46.5	801
1990	DM3	1991	09	13.16389	00	18	51.13	+02	04	43.5	801
1990	FP1	1991	09	09.11954	21	45	16.54	-18	42	16.6	801
1990	FP1	1991	09	09.13715	21	45	15.67	-18	42	17.4	801
1990	FP1	1991	09	12.06127	21	42	59.61	-18	43	52.1	801
1990	FP1	1991	09	12.07972	21	42	58.76	-18	43	52.2	801
1990	HF1	1991	09	06.03998	20	06	48.86	-21	41	30.4	801
1990	HF1	1991	09	06.06941	20	06	48.31	-21	41	41.1	801
1990	HF1	1991	09	08.07617	20	06	16.40	-21	53	39.2	801
1990	HF1	1991	09	08.09928	20	06	15.96	-21	53	47.4	801
1990	LA	1991	09	08.25943	23	31	26.18	-00	44	58.3	801
1990	LA	1991	09	08.26840	23	31	25.77	-00	45	03.6	801
1990	LA	1991	09	09.18111	23	30	44.62	-00	53	39.3	801
1990	LA	1991	09	09.19603	23	30	43.92	-00	53	47.9	801
1990	LA	1991	09	12.13641	23	28	29.61	-01	21	48.1	801
1990	LA	1991	09	12.15150	23	28	28.94	-01	21	56.4	801
1990	QJ	1991	09	10.21083	01	56	17.48	+47	01	02.0	801
1990	QJ	1991	09	10.22162	01	56	17.18	+47	01	06.4	801
1990	QJ	1991	09	13.21806	01	54	52.49	+47	21	37.4	801
1990	QJ	1991	09	13.23524	01	54	51.91	+47	21	46.1	801
1991	DG	1991	09	06.27272	23	37	55.19	+08	02	30.3	801

1991 DG	1991 09 06.27994	23 37 54.45	+08 02 11.4	801
1991 DG	1991 09 08.30626	23 34 43.64	+06 38 16.4	801
1991 DG	1991 09 08.31318	23 34 42.96	+06 38 00.0	801
1991 DG	1991 09 12.16054	23 28 57.64	+04 04 24.1	801
1991 DG	1991 09 12.16748	23 28 57.08	+04 04 08.0	801
1991 EE	1991 09 07.03613	18 01 29.63	+02 17 47.3	801
1991 EE	1991 09 07.03703	18 01 31.68	+02 17 36.7	801
1991 EE	1991 09 07.04079	18 01 40.08	+02 16 52.0	801
1991 EE	1991 09 08.04690	18 40 05.96	-01 01 47.4	801
1991 EE	1991 09 08.04768	18 40 07.72	-01 01 56.8	801
1991 EE	1991 09 09.01351	19 15 54.21	-04 04 39.0	801
1991 EE	1991 09 09.01521	19 15 57.82	-04 04 57.5	801
1991 EE	1991 09 13.03824	21 09 40.02	-12 31 55.4	801
1991 EE	1991 09 13.03946	21 09 41.47	-12 32 01.0	801
1991 JX	1991 09 06.28369	00 08 03.06	+07 10 26.1	801
1991 JX	1991 09 06.29487	00 08 02.12	+07 10 15.0	801
1991 JX	1991 09 07.29086	00 06 45.58	+06 53 50.4	801
1991 JX	1991 09 07.29955	00 06 44.86	+06 53 41.9	801
1991 NA	1991 09 06.02858	19 02 05.59	-07 08 27.6	801
1991 NA	1991 09 08.06894	19 04 19.05	-06 58 21.1	801
1991 NA	1991 09 08.08279	19 04 19.87	-06 58 17.2	801
1991 OA	1991 09 06.10882	21 33 24.83	-04 27 59.1	801
1991 OA	1991 09 06.13895	21 33 25.20	-04 27 55.5	801
1991 OA	1991 09 08.16435	21 34 07.64	-04 23 31.0	801
1991 OA	1991 09 08.18270	21 34 07.95	-04 23 29.0	801
1991 RU7 *	1991 09 08.25943	23 31 33.01	-00 41 14.7	801
1991 RU7	1991 09 08.26840	23 31 32.59	-00 41 21.2	801
1991 RU7	1991 09 09.18111	23 30 53.70	-00 50 41.4	801
1991 RU7	1991 09 09.19603	23 30 53.01	-00 50 50.7	801
1991 RU7	1991 09 12.13641	23 28 43.57	-01 21 46.7	801
1991 RU7	1991 09 12.15150	23 28 42.83	-01 21 56.5	801
2018 P-L	1991 09 07.17583	22 22 08.57	-12 34 36.6	801
2018 P-L	1991 09 07.19103	22 22 07.62	-12 34 37.9	801
2018 P-L	1991 09 09.12461	22 20 15.01	-12 36 50.0	801
2018 P-L	1991 09 09.14243	22 20 13.95	-12 36 51.1	801
2562 P-L	1991 09 07.10848	20 40 37.99	-20 40 10.2	801
2562 P-L	1991 09 07.13734	20 40 36.99	-20 40 11.8	801
2562 P-L	1991 09 09.03275	20 39 42.73	-20 42 06.0	801
2562 P-L	1991 09 09.05188	20 39 42.07	-20 42 07.0	801
6552 P-L	1991 09 09.33370	02 08 04.99	+07 28 32.2	801
6552 P-L	1991 09 09.36271	02 08 05.04	+07 28 23.0	801
9521 P-L	1991 09 13.27831	00 56 56.96	+02 43 12.8	801
9521 P-L	1991 09 13.29385	00 56 56.37	+02 43 07.7	801
243	1991 09 09.37697	05 26 48.65	+24 22 59.4	801
243	1991 09 09.38312	05 26 49.04	+24 22 59.9	801
243	1991 09 13.38206	05 31 04.54	+24 27 23.3	801
243	1991 09 13.38726	05 31 04.85	+24 27 23.6	801
1865	1991 09 06.20395	22 32 00.19	+25 39 48.6	801
1865	1991 09 06.21097	22 31 59.17	+25 39 37.2	801
1865	1991 09 08.19884	22 27 18.28	+24 43 47.8	801
1865	1991 09 08.20178	22 27 17.85	+24 43 42.4	801
1865	1991 09 13.09622	22 16 26.90	+22 15 24.5	801
1865	1991 09 13.09966	22 16 26.37	+22 15 18.2	801
2100	1991 09 09.37115	04 36 25.55	+09 28 46.0	801
2100	1991 09 09.37395	04 36 26.20	+09 28 41.3	801
2431	1991 09 08.31780	23 59 01.66	+02 27 46.7	801
2431	1991 09 08.32883	23 59 01.11	+02 27 44.8	801
2431	1991 09 09.22846	23 58 17.40	+02 25 10.2	801
2431	1991 09 09.24166	23 58 16.71	+02 25 07.9	801

17.5

2431	1991 09 12.19251	23 55 48.41	+02 16 01.0	801
2431	1991 09 12.20844	23 55 47.55	+02 15 57.9	801
2516	1991 08 12.13639	21 47 17.15	-14 00 26.7	801
2516	1991 08 12.14669	21 47 16.53	-14 00 30.1	801
4229	1991 08 12.25876	23 55 26.19	-01 01 25.0	801
4229	1991 08 12.29063	23 55 25.50	-01 01 32.9	801
4596	1991 09 06.03179	19 43 59.95	-06 19 32.7	801
4596	1991 09 06.03476	19 43 59.81	-06 19 41.8	801
4596	1991 09 06.05318	19 43 58.64	-06 20 47.6	801
4596	1991 09 07.08632	19 43 02.22	-07 21 24.7	801
4596	1991 09 07.09067	19 43 02.02	-07 21 38.8	801
4916	1991 08 06.21323	21 08 35.52	-12 33 38.7	801
4916	1991 08 06.22696	21 08 34.88	-12 33 43.8	801
4916	1991 08 11.17569	21 04 52.52	-13 05 15.4	801
4916	1991 08 11.18755	21 04 51.96	-13 05 20.0	801
4926	1991 08 06.23642	21 30 21.68	-15 21 36.0	801
4926	1991 08 06.25159	21 30 20.91	-15 21 39.2	801
4926	1991 08 07.21043	21 29 33.00	-15 25 02.3	801
4926	1991 08 07.22561	21 29 32.21	-15 25 05.5	801
4960	1991 07 12.29557	21 32 32.34	-14 50 38.9	801
4960	1991 07 12.31519	21 32 31.76	-14 50 41.9	801

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Measurers H. Debehogne, E. W. Elst, J. P. Olivier

1-m Schmidt, GPO 0.4-m astrograph

SAOC

1981 EV19	1990 11 16.32431	04 52 34.39	+16 49 08.8	18.7	4	809
1981 YO1	1991 06 06.20972	16 49 57.19	-12 31 22.2	18.0	4	809
1981 YO1	1991 06 06.22292	16 49 55.95	-12 31 32.3		4	809
1981 YO1	1991 06 06.23611	16 49 54.73	-12 31 40.6		4	809
1981 YO1	1991 06 08.18611	16 46 57.65	-12 55 24.3		4	809
1981 YO1	1991 06 08.19931	16 46 56.46	-12 55 34.0		4	809
1981 YO1	1991 06 08.21250	16 46 55.12	-12 55 44.0		4	809
1982 VK12	1991 05 18.13819	16 45 53.67	-20 30 19.7	18.8	4	809
1982 VK12	1991 05 18.15139	16 45 53.04	-20 30 19.9		4	809
1982 VK12	1991 05 18.16458	16 45 52.46	-20 30 19.0		4	809
1983 RM2	1991 05 18.13819	16 40 37.96	-18 52 23.4	18.6	4	809
1983 RM2	1991 05 18.15139	16 40 37.20	-18 52 23.3		4	809
1983 RM2	1991 05 18.16458	16 40 36.47	-18 52 22.4		4	809
1986 PS4	1991 08 02.11806	20 57 20.28	-19 02 16.4		4	809
1986 PS4	1991 08 02.14444	20 57 18.68	-19 02 16.7		4	809
1987 EQ	1991 08 02.11806	20 57 45.92	-18 34 20.7		4	809
1987 EQ	1991 08 02.14444	20 57 44.10	-18 34 25.4		4	809
1987 EQ	1991 08 14.16181	20 44 48.11	-19 08 31.1	18.5	4	809
1987 EQ	1991 08 14.17500	20 44 47.24	-19 08 33.2		4	809
1987 EQ	1991 08 14.18819	20 44 46.41	-19 08 34.6		4	809
1987 RD1	1991 08 02.11806	20 50 28.74	-20 19 44.1		4	809
1987 RD1	1991 08 02.14444	20 50 27.11	-20 19 49.2		4	809
1987 RD1	1991 08 14.16181	20 39 26.18	-20 57 20.8	18.8	4	809
1987 RD1	1991 08 14.17500	20 39 25.40	-20 57 22.3		4	809
1987 RD1	1991 08 14.18819	20 39 24.65	-20 57 23.6		4	809
1987 RT3	1991 08 02.11806	20 50 45.10	-19 30 15.5		4	809
1987 RT3	1991 08 02.14444	20 50 43.53	-19 30 17.6		4	809
1987 RT3	1991 08 14.17500	20 39 51.72	-19 44 12.1		4	809

1987	RT3	1991	08	14.18819	20	39	50.92	-19	44	13.2		4	809
1988	RR3	1991	08	02.11806	21	07	43.80	-22	12	53.8		4	809
1988	RR3	1991	08	02.14444	21	07	42.03	-22	12	59.8		4	809
1988	RF9	1991	05	18.13819	16	53	24.05	-19	40	32.8	18.5	4	809
1988	RF9	1991	05	18.15139	16	53	23.39	-19	40	33.4		4	809
1988	RF9	1991	05	18.16458	16	53	22.75	-19	40	33.3		4	809
1990	QH8	1990	08	26.16042	22	45	46.29	-10	23	07.3	18.8	4	809
1990	QH8	1990	08	26.17361	22	45	45.58	-10	23	12.5		4	809
1990	QH8	1990	08	26.18681	22	45	44.83	-10	23	17.6		4	809
1990	QA9	1990	08	26.16042	22	55	23.29	-11	03	41.4	18.5	4	809
1990	QA9	1990	08	26.17361	22	55	22.73	-11	03	44.0		4	809
1990	QA9	1990	08	26.18681	22	55	22.13	-11	03	48.4		4	809
1990	QH9	1990	08	26.16042	22	57	16.93	-11	19	59.7	18.6	4	809
1990	QH9	1990	08	26.17361	22	57	16.35	-11	20	05.3		4	809
1990	QH9	1990	08	26.18681	22	57	15.69	-11	20	10.7		4	809
1990	QY10*	1990	08	16.27222	23	32	29.29	-03	01	57.7	18.7	4	809
1990	QY10	1990	08	16.28542	23	32	28.81	-03	02	00.6		4	809
1990	QY10	1990	08	16.29861	23	32	28.31	-03	02	03.3		4	809
1990	QY10	1990	08	20.23194	23	30	19.98	-03	13	43.3	18.7	4	809
1990	QY10	1990	08	20.24514	23	30	19.50	-03	13	46.3		4	809
1990	QY10	1990	08	20.25833	23	30	19.04	-03	13	47.9		4	809
1990	QZ10*	1990	08	16.27222	23	37	30.82	-03	32	03.1	19.3	4	809
1990	QZ10	1990	08	16.28542	23	37	30.45	-03	32	07.4		4	809
1990	QZ10	1990	08	16.29861	23	37	30.16	-03	32	11.3		4	809
1990	QZ10	1990	08	20.23194	23	35	51.04	-03	54	51.3	19.0	4	809
1990	QZ10	1990	08	20.24514	23	35	50.64	-03	54	57.7		4	809
1990	QZ10	1990	08	20.25833	23	35	50.30	-03	55	02.2		4	809
1990	QA11*	1990	08	16.27222	23	30	41.95	-03	18	04.6	19.0	4	809
1990	QA11	1990	08	16.28542	23	30	41.64	-03	18	07.2		4	809
1990	QA11	1990	08	16.29861	23	30	41.27	-03	18	11.4		4	809
1990	QA11	1990	08	20.23194	23	28	50.92	-03	32	41.0	19.3	4	809
1990	QA11	1990	08	20.24514	23	28	50.47	-03	32	44.2		4	809
1990	QA11	1990	08	20.25833	23	28	50.08	-03	32	47.3		4	809
1990	QB11*	1990	08	16.27222	23	34	59.10	-07	00	55.5	18.7	4	809
1990	QB11	1990	08	16.28542	23	34	58.72	-07	01	01.3		4	809
1990	QB11	1990	08	16.29861	23	34	58.25	-07	01	06.3		4	809
1990	QB11	1990	08	20.23194	23	32	55.56	-07	24	56.3	18.8	4	809
1990	QB11	1990	08	20.24514	23	32	55.09	-07	25	02.7		4	809
1990	QB11	1990	08	20.25833	23	32	54.53	-07	25	07.7		4	809
1990	QC11*	1990	08	16.27222	23	37	33.09	-06	37	41.5	19.4	4	809
1990	QC11	1990	08	16.28542	23	37	32.68	-06	37	45.8		4	809
1990	QC11	1990	08	16.29861	23	37	32.17	-06	37	51.7		4	809
1990	QC11	1990	08	20.23194	23	35	23.42	-07	00	49.1	19.0	4	809
1990	QC11	1990	08	20.24514	23	35	22.88	-07	00	55.0		4	809
1990	QC11	1990	08	20.25833	23	35	22.34	-07	01	00.3		4	809
1990	RG	1990	08	26.20347	23	26	32.54	-08	13	25.4	19.3	4	809
1990	RG	1990	08	26.21667	23	26	31.88	-08	13	25.5		4	809
1990	RG	1990	08	26.22986	23	26	31.14	-08	13	25.1		4	809
1990	RW6	1990	08	26.20347	23	08	26.96	-06	27	19.9	18.6	4	809
1990	RW6	1990	08	26.21667	23	08	26.34	-06	27	23.4		4	809
1990	RW6	1990	08	26.22986	23	08	25.73	-06	27	27.2		4	809
1990	RZ6	1990	08	26.20347	23	09	10.64	-05	24	22.5	18.7	4	809
1990	RZ6	1990	08	26.21667	23	09	10.08	-05	24	25.6		4	809
1990	RZ6	1990	08	26.22986	23	09	09.60	-05	24	29.6		4	809
1990	RE7	1990	08	26.20347	23	18	24.08	-09	25	25.4	18.7	4	809
1990	RE7	1990	08	26.21667	23	18	23.40	-09	25	26.1		4	809
1990	RE7	1990	08	26.22986	23	18	22.70	-09	25	28.6		4	809
1990	RC8	1990	08	26.20347	23	15	46.04	-09	07	22.1	19.4	4	809
1990	RC8	1990	08	26.21667	23	15	45.35	-09	07	30.0		4	809



1990 RC8	1990 08 26.22986	23 15 44.57	-09 07 38.0		4 809
1990 RN8	1990 08 16.27222	23 28 14.18	-02 45 15.5	18.7	4 809
1990 RN8	1990 08 16.28542	23 28 13.76	-02 45 19.0		4 809
1990 RN8	1990 08 16.29861	23 28 13.31	-02 45 24.0		4 809
1990 RN8	1990 08 20.23194	23 26 08.97	-03 03 38.5	18.8	4 809
1990 RN8	1990 08 20.24514	23 26 08.53	-03 03 41.9		4 809
1990 RN8	1990 08 20.25833	23 26 07.99	-03 03 45.7		4 809
1990 RZ12*	1990 09 14.18611	00 07 03.39	-05 17 35.6	19.0	4 809
1990 RZ12	1990 09 14.19931	00 07 02.61	-05 17 42.3		4 809
1990 RZ12	1990 09 14.21250	00 07 01.91	-05 17 48.9		4 809
1990 RZ12	1990 09 25.17778	23 57 02.03	-06 41 34.3	19.2	4 809
1990 RZ12	1990 09 25.19097	23 57 01.18	-06 41 40.1		4 809
1990 RZ12	1990 09 25.20417	23 57 00.47	-06 41 45.7		4 809
1990 RB13*	1990 09 14.18611	00 07 41.45	-04 46 38.6	19.6	4 809
1990 RB13	1990 09 14.19931	00 07 40.92	-04 46 44.3		4 809
1990 RB13	1990 09 14.21250	00 07 40.33	-04 46 49.9		4 809
1990 RB13	1990 09 22.12500	00 02 12.40	-05 44 08.6	18.8	4 809
1990 RB13	1990 09 22.13819	00 02 11.77	-05 44 13.5		4 809
1990 RB13	1990 09 22.15139	00 02 11.14	-05 44 20.1		4 809
1990 RE13*	1990 09 14.18611	00 08 42.50	-03 23 17.1	18.6	4 809
1990 RE13	1990 09 14.19931	00 08 41.83	-03 23 19.3		4 809
1990 RE13	1990 09 14.21250	00 08 41.18	-03 23 22.5		4 809
1990 RE13	1990 09 22.12500	00 01 53.79	-03 50 17.0	18.5	4 809
1990 RE13	1990 09 22.13819	00 01 53.04	-03 50 19.6		4 809
1990 RE13	1990 09 22.15139	00 01 52.35	-03 50 22.5		4 809
1990 RF13*	1990 09 14.18611	00 08 47.41	-06 05 38.0	20.0	4 809
1990 RF13	1990 09 14.19931	00 08 46.72	-06 05 43.1		4 809
1990 RF13	1990 09 14.21250	00 08 46.00	-06 05 48.5		4 809
1990 RF13	1990 09 25.17778	23 59 08.84	-07 23 32.5	19.5	4 809
1990 RF13	1990 09 25.19097	23 59 07.98	-07 23 37.8		4 809
1990 RF13	1990 09 25.20417	23 59 07.27	-07 23 42.7		4 809
1990 RG13*	1990 09 14.18611	00 09 11.82	-04 05 54.9	18.2	4 809
1990 RG13	1990 09 14.19931	00 09 10.95	-04 05 54.5		4 809
1990 RG13	1990 09 14.21250	00 09 09.98	-04 05 54.2		4 809
1990 RH13*	1990 09 14.18611	00 09 54.13	-03 16 11.5	19.0	4 809
1990 RH13	1990 09 14.19931	00 09 53.38	-03 16 15.4		4 809
1990 RH13	1990 09 14.21250	00 09 52.71	-03 16 18.0		4 809
1990 RH13	1990 09 22.12500	00 02 57.38	-03 44 43.2	18.9	4 809
1990 RH13	1990 09 22.13819	00 02 56.55	-03 44 46.0		4 809
1990 RH13	1990 09 22.15139	00 02 55.81	-03 44 48.7		4 809
1990 RK13*	1990 09 14.18611	00 12 36.33	-03 00 01.1	18.7	4 809
1990 RK13	1990 09 14.19931	00 12 35.77	-03 00 04.8		4 809
1990 RK13	1990 09 14.21250	00 12 35.24	-03 00 09.7		4 809
1990 RK13	1990 09 22.12500	00 07 01.65	-03 39 01.9	19.2	4 809
1990 RK13	1990 09 22.13819	00 07 01.10	-03 39 06.2		4 809
1990 RK13	1990 09 22.15139	00 07 00.48	-03 39 09.9		4 809
1990 RM13*	1990 09 14.18611	00 13 29.91	-02 42 43.9	18.8	4 809
1990 RM13	1990 09 14.19931	00 13 29.45	-02 42 48.7		4 809
1990 RM13	1990 09 14.21250	00 13 28.85	-02 42 54.3		4 809
1990 RM13	1990 09 22.12500	00 08 33.19	-03 34 15.4	18.5	4 809
1990 RM13	1990 09 22.13819	00 08 32.63	-03 34 21.6		4 809
1990 RM13	1990 09 22.15139	00 08 32.12	-03 34 26.8		4 809
1990 RT13*	1990 09 14.18611	00 14 55.86	-02 46 50.0	18.7	4 809
1990 RT13	1990 09 14.19931	00 14 55.17	-02 46 54.7		4 809
1990 RT13	1990 09 14.21250	00 14 54.46	-02 46 59.7		4 809
1990 RT13	1990 09 22.12500	00 08 02.43	-03 37 44.2	19.3	4 809
1990 RT13	1990 09 22.13819	00 08 01.76	-03 37 49.6		4 809
1990 RT13	1990 09 22.15139	00 08 00.94	-03 37 54.9		4 809
1990 RU13*	1990 09 14.18611	00 16 34.05	-06 19 56.7	19.6	4 809

1990	RU13	1990	09	14.19931	00	16	33.33	-06	20	00.6		4	809
1990	RU13	1990	09	14.21250	00	16	32.68	-06	20	04.3		4	809
1990	RU13	1990	09	25.17778	00	07	12.55	-07	01	18.2	20.0	4	809
1990	RU13	1990	09	25.19097	00	07	11.78	-07	01	22.0		4	809
1990	RU13	1990	09	25.20417	00	07	11.13	-07	01	24.7		4	809
1990	RY13*	1990	09	14.18611	00	18	02.77	-05	56	03.3	19.3	4	809
1990	RY13	1990	09	14.19931	00	18	02.05	-05	56	10.9		4	809
1990	RY13	1990	09	14.21250	00	18	01.37	-05	56	18.6		4	809
1990	RY13	1990	09	25.17778	00	08	22.06	-07	43	04.6	19.3	4	809
1990	RY13	1990	09	25.19097	00	08	21.22	-07	43	12.5		4	809
1990	RY13	1990	09	25.20417	00	08	20.44	-07	43	19.5		4	809
1990	RA14*	1990	09	14.18611	00	18	36.19	-06	41	10.6	19.7	4	809
1990	RA14	1990	09	14.19931	00	18	35.43	-06	41	15.9		4	809
1990	RA14	1990	09	14.21250	00	18	34.68	-06	41	20.7		4	809
1990	RA14	1990	09	25.17778	00	08	02.76	-07	49	21.5	18.7	4	809
1990	RA14	1990	09	25.19097	00	08	02.06	-07	49	26.8		4	809
1990	RA14	1990	09	25.20417	00	08	01.20	-07	49	33.1		4	809
1990	RB14*	1990	09	14.18611	00	18	46.83	-04	42	13.7	18.7	4	809
1990	RB14	1990	09	14.19931	00	18	46.17	-04	42	14.7		4	809
1990	RB14	1990	09	14.21250	00	18	45.56	-04	42	16.8		4	809
1990	RB14	1990	09	22.12500	00	12	22.88	-04	56	45.4	18.5	4	809
1990	RB14	1990	09	22.13819	00	12	22.26	-04	56	46.5		4	809
1990	RB14	1990	09	22.15139	00	12	21.57	-04	56	47.8		4	809
1990	RC14*	1990	09	14.18611	00	18	48.96	-05	25	43.6	19.0	4	809
1990	RC14	1990	09	14.19931	00	18	48.42	-05	25	52.7		4	809
1990	RC14	1990	09	14.21250	00	18	47.89	-05	26	00.8		4	809
1990	RC14	1990	09	22.12500	00	13	27.14	-06	48	15.5	19.5	4	809
1990	RC14	1990	09	22.13819	00	13	26.46	-06	48	22.5		4	809
1990	RC14	1990	09	22.15139	00	13	25.90	-06	48	31.0		4	809
1990	RD14*	1990	09	14.18611	00	18	58.90	-02	59	09.0	18.7	4	809
1990	RD14	1990	09	14.19931	00	18	58.30	-02	59	13.5		4	809
1990	RD14	1990	09	14.21250	00	18	57.75	-02	59	17.3		4	809
1990	RD14	1990	09	22.12500	00	13	10.69	-03	38	32.2	18.8	4	809
1990	RD14	1990	09	22.13819	00	13	10.10	-03	38	35.9		4	809
1990	RD14	1990	09	22.15139	00	13	09.46	-03	38	39.2		4	809
1990	RE14*	1990	09	14.18611	00	19	10.31	-03	54	16.3	19.5	4	809
1990	RE14	1990	09	14.19931	00	19	09.47	-03	54	21.9		4	809
1990	RE14	1990	09	14.21250	00	19	08.76	-03	54	26.9		4	809
1990	RE14	1990	09	25.17778	00	08	26.46	-04	54	20.8	18.7	4	809
1990	RE14	1990	09	25.19097	00	08	25.62	-04	54	24.4		4	809
1990	RE14	1990	09	25.20417	00	08	24.90	-04	54	28.1		4	809
1990	RM14*	1990	09	14.18611	00	21	31.27	-02	49	19.6	19.3	4	809
1990	RM14	1990	09	14.19931	00	21	30.76	-02	49	24.6		4	809
1990	RM14	1990	09	14.21250	00	21	30.09	-02	49	28.9		4	809
1990	RM14	1990	09	22.12500	00	15	29.79	-03	32	28.7	19.2	4	809
1990	RM14	1990	09	22.13819	00	15	29.14	-03	32	34.1		4	809
1990	RM14	1990	09	22.15139	00	15	28.60	-03	32	36.8		4	809
1990	RQ14*	1990	09	14.18611	00	23	03.15	-04	44	22.7	18.6	4	809
1990	RQ14	1990	09	14.19931	00	23	02.75	-04	44	32.8		4	809
1990	RQ14	1990	09	14.21250	00	23	02.38	-04	44	41.4		4	809
1990	RQ14	1990	09	22.12500	00	19	00.69	-06	23	01.1	18.8	4	809
1990	RQ14	1990	09	22.13819	00	19	00.21	-06	23	11.0		4	809
1990	RQ14	1990	09	22.15139	00	18	59.68	-06	23	20.9		4	809
1990	RS14*	1990	09	14.18611	00	23	22.47	-03	29	07.0	19.0	4	809
1990	RS14	1990	09	14.19931	00	23	21.80	-03	29	08.5		4	809
1990	RS14	1990	09	14.21250	00	23	21.05	-03	29	09.3		4	809
1990	RS14	1990	09	22.12500	00	16	30.14	-03	41	29.2	18.9	4	809
1990	RS14	1990	09	22.13819	00	16	29.46	-03	41	29.9		4	809
1990	RS14	1990	09	22.15139	00	16	28.65	-03	41	30.9		4	809

1990	RU14*	1990	09	14.18611	00	23	47.71	-02	50	33.6	18.2	4	809
1990	RU14	1990	09	14.19931	00	23	46.97	-02	50	39.9			4 809
1990	RU14	1990	09	14.21250	00	23	46.29	-02	50	46.4			4 809
1990	RU14	1990	09	22.12500	00	16	47.06	-03	50	49.1	18.3	4	809
1990	RU14	1990	09	22.13819	00	16	46.35	-03	50	55.4			4 809
1990	RU14	1990	09	22.15139	00	16	45.60	-03	51	00.8			4 809
1990	RW14*	1990	09	14.18611	00	25	56.75	-05	08	11.7	18.7	4	809
1990	RW14	1990	09	14.19931	00	25	56.26	-05	08	18.1			4 809
1990	RW14	1990	09	14.21250	00	25	55.73	-05	08	24.0			4 809
1990	RW14	1990	09	22.12500	00	21	00.87	-06	10	35.1	19.0	4	809
1990	RW14	1990	09	22.13819	00	21	00.34	-06	10	41.0			4 809
1990	RW14	1990	09	22.15139	00	20	59.79	-06	10	47.0			4 809
1990	RC15*	1990	09	14.18611	00	28	06.50	-05	10	11.0	18.8	4	809
1990	RC15	1990	09	14.19931	00	28	05.84	-05	10	11.8			4 809
1990	RC15	1990	09	14.21250	00	28	05.03	-05	10	12.7			4 809
1990	RC15	1990	09	22.12500	00	20	28.86	-05	21	24.6	18.7	4	809
1990	RC15	1990	09	22.13819	00	20	28.04	-05	21	25.5			4 809
1990	RC15	1990	09	22.15139	00	20	27.23	-05	21	27.3			4 809
1990	RH15*	1990	09	15.18333	00	33	40.29	+00	26	08.6	18.8	4	809
1990	RH15	1990	09	15.19653	00	33	39.73	+00	26	05.1			4 809
1990	RH15	1990	09	15.20972	00	33	39.15	+00	26	01.0			4 809
1990	RH15	1990	09	22.17153	00	29	01.55	-00	06	34.6	19.1	4	809
1990	RH15	1990	09	22.18472	00	29	00.96	-00	06	38.0			4 809
1990	RH15	1990	09	22.19792	00	29	00.37	-00	06	40.9			4 809
1990	RH15	1990	09	25.22153	00	26	54.79	-00	21	03.3	18.7	4	809
1990	RH15	1990	09	25.23472	00	26	54.07	-00	21	07.4			4 809
1990	RH15	1990	09	25.24792	00	26	53.47	-00	21	11.7			4 809
1990	RS15*	1990	09	15.18333	00	40	00.65	-00	12	11.1	19.3	4	809
1990	RS15	1990	09	15.19653	00	39	59.98	-00	12	17.3			4 809
1990	RS15	1990	09	15.20972	00	39	59.12	-00	12	24.9			4 809
1990	RS15	1990	09	25.22153	00	31	06.60	-01	26	46.5	19.0	4	809
1990	RS15	1990	09	25.23472	00	31	05.86	-01	26	52.2			4 809
1990	RS15	1990	09	25.24792	00	31	05.05	-01	26	58.7			4 809
1990	RB16*	1990	09	15.18333	00	45	50.54	+00	05	10.0	19.5	4	809
1990	RB16	1990	09	15.19653	00	45	49.97	+00	05	05.2			4 809
1990	RB16	1990	09	15.20972	00	45	49.38	+00	05	00.4			4 809
1990	RB16	1990	09	25.22153	00	38	40.31	-00	51	46.5	19.3	4	809
1990	RB16	1990	09	25.23472	00	38	39.65	-00	51	50.8			4 809
1990	RB16	1990	09	25.24792	00	38	38.99	-00	51	56.4			4 809
1990	RF16*	1990	09	15.18333	00	47	45.76	+00	49	47.8	18.8	4	809
1990	RF16	1990	09	15.19653	00	47	45.20	+00	49	44.2			4 809
1990	RF16	1990	09	15.20972	00	47	44.66	+00	49	39.9			4 809
1990	RF16	1990	09	22.17153	00	42	44.19	+00	14	14.0	19.0	4	809
1990	RF16	1990	09	22.18472	00	42	43.56	+00	14	09.3			4 809
1990	RF16	1990	09	22.19792	00	42	42.99	+00	14	05.2			4 809
1990	RG16*	1990	09	15.18333	00	48	07.11	+00	42	20.1	18.6	4	809
1990	RG16	1990	09	15.19653	00	48	06.55	+00	42	16.4			4 809
1990	RG16	1990	09	15.20972	00	48	06.08	+00	42	12.6			4 809
1990	RG16	1990	09	22.17153	00	43	23.27	+00	04	56.7	18.7	4	809
1990	RG16	1990	09	22.18472	00	43	22.68	+00	04	51.9			4 809
1990	RG16	1990	09	22.19792	00	43	22.15	+00	04	47.3			4 809
1990	RK16*	1990	09	15.18333	00	49	09.05	-01	46	27.2	19.8	4	809
1990	RK16	1990	09	15.19653	00	49	08.61	-01	46	34.8			4 809
1990	RK16	1990	09	15.20972	00	49	08.00	-01	46	43.7			4 809
1990	RK16	1990	09	22.17153	00	44	47.05	-02	59	08.5	19.3	4	809
1990	RK16	1990	09	22.18472	00	44	46.51	-02	59	17.8			4 809
1990	RK16	1990	09	22.19792	00	44	45.93	-02	59	26.8			4 809
1990	SX13	1990	08	16.27222	23	37	20.63	-04	41	58.4	18.7	4	809
1990	SX13	1990	08	16.28542	23	37	20.10	-04	42	03.5			4 809

1990 SX13	1990 08	16.29861	23 37	19.67	-04 42	07.1		4 809
1990 SX13	1990 08	20.23194	23 34	53.27	-05 03	46.4	18.9	4 809
1990 SX13	1990 08	20.24514	23 34	52.74	-05 03	51.4		4 809
1990 SX13	1990 08	20.25833	23 34	52.13	-05 03	55.2		4 809
1990 SK17*	1990 09	22.12500	00 03	33.17	-08 34	23.4	19.5	4 809
1990 SK17	1990 09	22.13819	00 03	32.40	-08 34	24.1		4 809
1990 SK17	1990 09	22.15139	00 03	31.67	-08 34	25.7		4 809
1990 SK17	1990 09	25.17778	00 00	52.57	-08 37	19.9	18.8	4 809
1990 SK17	1990 09	25.19097	00 00	51.77	-08 37	21.1		4 809
1990 SK17	1990 09	25.20417	00 00	51.03	-08 37	21.1		4 809
1990 UX5 *	1990 10	16.23750	02 54	28.69	+09 41	55.3		4 809
1990 UX5	1990 10	16.25069	02 54	28.18	+09 41	49.4		4 809
1990 UX5	1990 10	16.26389	02 54	27.59	+09 41	43.9		4 809
1990 UX5	1990 10	24.25417	02 47	37.46	+08 41	55.0	18.9	4 809
1990 UX5	1990 10	24.26736	02 47	36.74	+08 41	48.7		4 809
1990 UX5	1990 10	24.28056	02 47	36.02	+08 41	42.5		4 809
1990 UY5 *	1990 10	19.23819	02 47	47.21	+08 05	25.5		4 809
1990 UY5	1990 10	19.26458	02 47	45.82	+08 05	21.9		4 809
1990 UY5	1990 10	24.25417	02 43	43.92	+07 56	18.8	19.3	4 809
1990 UY5	1990 10	24.26736	02 43	43.17	+07 56	15.4		4 809
1990 UY5	1990 10	24.28056	02 43	42.55	+07 56	14.1		4 809
1990 UZ5 *	1990 10	19.23819	02 54	11.85	+05 57	53.8		4 809
1990 UZ5	1990 10	19.25139	02 54	11.15	+05 57	51.4	18.8	4 809
1990 UZ5	1990 10	19.26458	02 54	10.56	+05 57	51.2		4 809
1990 UZ5	1990 10	24.25417	02 50	17.73	+05 48	23.5	18.8	4 809
1990 UZ5	1990 10	24.26736	02 50	17.10	+05 48	22.6		4 809
1990 UZ5	1990 10	24.28056	02 50	16.42	+05 48	20.3		4 809
1990 VV5	1990 11	21.14167	04 14	42.86	+10 16	34.9	19.2	4 809
1990 VV5	1990 11	21.15486	04 14	42.16	+10 16	29.3		4 809
1990 VV5	1990 11	21.16806	04 14	41.33	+10 16	25.9		4 809
1990 VN10*	1990 11	11.21944	03 41	27.24	+08 27	05.2	19.3	4 809
1990 VN10	1990 11	11.23264	03 41	26.58	+08 27	03.6		4 809
1990 VN10	1990 11	11.24583	03 41	25.80	+08 27	01.8		4 809
1990 VN10	1990 11	18.19306	03 35	30.05	+08 18	41.0		4 809
1990 VN10	1990 11	18.20625	03 35	29.33	+08 18	39.5	19.4	4 809
1990 VN10	1990 11	18.21944	03 35	28.52	+08 18	39.7		4 809
1990 VT10*	1990 11	11.21944	03 45	10.16	+08 11	02.7	19.3	4 809
1990 VT10	1990 11	11.23264	03 45	09.42	+08 11	05.1		4 809
1990 VT10	1990 11	11.24583	03 45	08.64	+08 11	06.3		4 809
1990 VT10	1990 11	20.11944	03 36	29.95	+08 35	20.8		4 809
1990 VT10	1990 11	20.13264	03 36	29.17	+08 35	22.3		4 809
1990 VT10	1990 11	20.14583	03 36	28.50	+08 35	25.3		4 809
1990 WB1	1990 11	18.19306	03 39	39.03	+07 09	11.8		4 809
1990 WB1	1990 11	18.21944	03 39	37.48	+07 09	02.7		4 809
1990 WB1	1990 11	20.11944	03 36	58.47	+07 11	01.8		4 809
1990 WB1	1990 11	20.14583	03 36	57.20	+07 10	54.6		4 809
1990 WY4	1990 11	22.17014	04 41	17.43	+16 22	05.6	18.6	4 809
1990 WY4	1990 11	22.18611	04 41	16.43	+16 22	03.8		4 809
1990 WY4	1990 11	22.19896	04 41	15.62	+16 22	02.5		4 809
1991 JS1	1991 06	06.20972	16 52	08.42	-15 32	20.3	18.2	4 809
1991 JS1	1991 06	06.22292	16 52	07.57	-15 32	21.0		4 809
1991 JS1	1991 06	06.23611	16 52	06.66	-15 32	20.6		4 809
1991 JS1	1991 06	08.18611	16 50	09.45	-15 33	51.4		4 809
1991 JS1	1991 06	08.19931	16 50	08.61	-15 33	53.1		4 809
1991 JS1	1991 06	08.21250	16 50	07.77	-15 33	53.5		4 809
1991 LV	1991 05	18.13819	16 44	33.60	-19 22	22.1	18.3	4 809
1991 LV	1991 05	18.15139	16 44	32.67	-19 22	10.6		4 809
1991 LV	1991 05	18.16458	16 44	31.74	-19 21	59.1		4 809
1991 LH1	1991 05	18.13819	16 36	17.49	-18 59	29.2	18.6	4 809

1991 LH1	1991 05	18.15139	16 36	16.70	-18 59	28.2		4 809
1991 LH1	1991 05	18.16458	16 36	15.98	-18 59	26.7		4 809
1991 LO1	1991 05	18.13819	16 41	33.40	-17 49	03.1	18.6	4 809
1991 LO1	1991 05	18.15139	16 41	32.76	-17 49	04.7		4 809
1991 LO1	1991 05	18.16458	16 41	31.97	-17 49	05.7		4 809
1991 LU1	1991 05	18.13819	16 39	19.96	-18 37	13.4	19.0	4 809
1991 LU1	1991 05	18.15139	16 39	19.32	-18 37	10.7		4 809
1991 LU1	1991 05	18.16458	16 39	18.59	-18 37	07.8		4 809
1991 LW1	1991 05	18.13819	16 39	30.39	-19 58	38.7	18.5	4 809
1991 LW1	1991 05	18.15139	16 39	29.80	-19 58	38.1		4 809
1991 LW1	1991 05	18.16458	16 39	29.21	-19 58	37.1		4 809
1991 LY1	1991 05	18.13819	16 40	47.44	-21 08	20.1	19.0	4 809
1991 LY1	1991 05	18.15139	16 40	46.79	-21 08	18.3		4 809
1991 LY1	1991 05	18.16458	16 40	46.14	-21 08	18.3		4 809
1991 LD2	1991 05	18.13819	16 42	45.13	-19 51	33.3	18.7	4 809
1991 LD2	1991 05	18.15139	16 42	44.38	-19 51	33.0		4 809
1991 LD2	1991 05	18.16458	16 42	43.76	-19 51	33.0		4 809
1991 LE2	1991 05	18.13819	16 46	00.75	-17 27	06.8	18.5	4 809
1991 LE2	1991 05	18.15139	16 45	59.94	-17 27	06.0		4 809
1991 LE2	1991 05	18.16458	16 45	59.22	-17 27	07.7		4 809
1991 LJ2	1991 05	18.13819	16 44	21.52	-18 11	44.0	18.5	4 809
1991 LJ2	1991 05	18.15139	16 44	20.82	-18 11	44.6		4 809
1991 LJ2	1991 05	18.16458	16 44	20.27	-18 11	44.3		4 809
1991 LK2	1991 05	18.13819	16 45	33.57	-21 33	44.0	18.6	4 809
1991 LK2	1991 05	18.15139	16 45	32.91	-21 33	44.5		4 809
1991 LK2	1991 05	18.16458	16 45	32.29	-21 33	44.7		4 809
1991 LL2	1991 05	18.13819	16 45	36.04	-20 42	33.5	18.7	4 809
1991 LL2	1991 05	18.15139	16 45	35.37	-20 42	32.3		4 809
1991 LL2	1991 05	18.16458	16 45	34.74	-20 42	29.9		4 809
1991 LP2	1991 05	18.13819	16 51	50.38	-20 23	03.2	18.4	4 809
1991 LP2	1991 05	18.15139	16 51	49.71	-20 23	01.7		4 809
1991 LP2	1991 05	18.16458	16 51	49.06	-20 23	01.3		4 809
1991 LV2	1991 05	18.13819	16 53	37.63	-19 03	25.6	18.5	4 809
1991 LV2	1991 05	18.15139	16 53	36.97	-19 03	25.7		4 809
1991 LV2	1991 05	18.16458	16 53	36.15	-19 03	25.4		4 809
1991 LJ3	1991 05	18.13819	16 35	38.73	-18 06	15.8	18.6	4 809
1991 LJ3	1991 05	18.15139	16 35	38.02	-18 06	13.1		4 809
1991 LJ3	1991 05	18.16458	16 35	37.32	-18 06	09.4		4 809
1991 LM3	1991 05	18.13819	16 33	56.52	-19 31	20.8	18.5	4 809
1991 LM3	1991 05	18.15139	16 33	55.99	-19 31	15.3		4 809
1991 LM3	1991 05	18.16458	16 33	55.42	-19 31	08.0		4 809
1991 LB4	1991 05	18.13819	16 43	07.44	-19 20	08.7	18.5	4 809
1991 LB4	1991 05	18.15139	16 43	06.80	-19 20	04.4		4 809
1991 LB4	1991 05	18.16458	16 43	06.13	-19 19	59.3		4 809
1991 LP4	1991 06	06.20972	16 33	21.53	-15 08	11.4	19.4	4 809
1991 LP4	1991 06	06.22292	16 33	20.81	-15 08	08.2		4 809
1991 LP4	1991 06	06.23611	16 33	19.94	-15 08	03.5		4 809
1991 LP4	1991 06	08.18611	16 31	36.83	-14 58	51.4		4 809
1991 LP4	1991 06	08.19931	16 31	36.11	-14 58	47.6		4 809
1991 LP4	1991 06	08.21250	16 31	35.38	-14 58	44.4		4 809
1991 LQ4	1991 06	06.20972	16 33	31.30	-16 25	15.6	19.2	4 809
1991 LQ4	1991 06	06.22292	16 33	30.66	-16 25	11.9		4 809
1991 LQ4	1991 06	06.23611	16 33	29.97	-16 25	08.1		4 809
1991 LQ4	1991 06	08.18611	16 31	58.59	-16 15	26.0		4 809
1991 LQ4	1991 06	08.19931	16 31	57.98	-16 15	22.6		4 809
1991 LQ4	1991 06	08.21250	16 31	57.28	-16 15	19.4		4 809
1991 LS4	1991 06	06.20972	16 34	37.64	-16 16	23.0	19.4	4 809
1991 LS4	1991 06	06.22292	16 34	36.86	-16 16	24.4		4 809
1991 LS4	1991 06	06.23611	16 34	36.17	-16 16	24.8		4 809

1991	LS4	1991	06	08.18611	16	32	50.84	-16	17	29.6		4	809	
1991	LS4	1991	06	08.19931	16	32	50.10	-16	17	29.1		4	809	
1991	LS4	1991	06	08.21250	16	32	49.35	-16	17	30.2		4	809	
1991	LT4	1991	06	06.20972	16	36	22.91	-15	19	46.2	19.2	4	809	
1991	LT4	1991	06	06.22292	16	36	22.02	-15	19	45.3		4	809	
1991	LT4	1991	06	06.23611	16	36	21.18	-15	19	45.0		4	809	
1991	LT4	1991	06	08.18611	16	34	16.23	-15	17	36.3		4	809	
1991	LT4	1991	06	08.19931	16	34	15.39	-15	17	35.9		4	809	
1991	LT4	1991	06	08.21250	16	34	14.56	-15	17	35.0		4	809	
1991	LU4	1991	06	06.20972	16	37	10.34	-16	46	23.6	18.6	4	809	
1991	LU4	1991	06	06.22292	16	37	09.57	-16	46	21.3		4	809	
1991	LU4	1991	06	06.23611	16	37	08.80	-16	46	18.4		4	809	
1991	LU4	1991	06	08.18611	16	35	24.57	-16	39	11.8		4	809	
1991	LU4	1991	06	08.19931	16	35	23.78	-16	39	09.9		4	809	
1991	LU4	1991	06	08.21250	16	35	23.07	-16	39	06.7		4	809	
1991	LV4	1991	06	06.20972	16	38	15.23	-15	11	28.0	19.0	4	809	
1991	LV4	1991	06	06.22292	16	38	14.36	-15	11	26.6		4	809	
1991	LV4	1991	06	06.23611	16	38	13.53	-15	11	24.2		4	809	
1991	LV4	1991	06	08.18611	16	36	10.88	-15	05	48.1		4	809	
1991	LV4	1991	06	08.19931	16	36	10.15	-15	05	46.0		4	809	
1991	LV4	1991	06	08.21250	16	36	09.30	-15	05	44.5		4	809	
1991	LW4	*	1991	06	06.20972	16	43	07.69	-12	32	21.9	19.0	4	809
1991	LW4		1991	06	06.22292	16	43	06.98	-12	32	20.9		4	809
1991	LW4		1991	06	06.23611	16	43	06.25	-12	32	20.3		4	809
1991	LW4		1991	06	08.18611	16	41	15.81	-12	30	53.3		4	809
1991	LW4		1991	06	08.19931	16	41	14.99	-12	30	53.3		4	809
1991	LW4		1991	06	08.21250	16	41	14.14	-12	30	52.7		4	809
1991	LX4	*	1991	06	06.20972	16	49	26.69	-12	54	20.7	18.6	4	809
1991	LX4		1991	06	06.22292	16	49	25.95	-12	54	22.1		4	809
1991	LX4		1991	06	06.23611	16	49	25.12	-12	54	22.2		4	809
1991	LX4		1991	06	08.18611	16	47	29.28	-12	55	13.3		4	809
1991	LX4		1991	06	08.19931	16	47	28.44	-12	55	14.2		4	809
1991	LX4		1991	06	08.21250	16	47	27.64	-12	55	14.5		4	809
1991	LY4	*	1991	06	06.20972	16	51	43.37	-12	45	35.1	19.3	4	809
1991	LY4		1991	06	06.22292	16	51	42.50	-12	45	35.7		4	809
1991	LY4		1991	06	06.23611	16	51	41.69	-12	45	36.1		4	809
1991	LY4		1991	06	08.18611	16	49	36.82	-12	47	00.5		4	809
1991	LY4		1991	06	08.19931	16	49	35.90	-12	47	01.4		4	809
1991	LY4		1991	06	08.21250	16	49	35.05	-12	47	02.3		4	809
1991	LZ4	*	1991	06	06.20972	16	52	18.85	-13	17	42.3	18.8	4	809
1991	LZ4		1991	06	06.22292	16	52	18.00	-13	17	41.9		4	809
1991	LZ4		1991	06	06.23611	16	52	17.08	-13	17	41.6		4	809
1991	LZ4		1991	06	08.18611	16	50	15.98	-13	16	27.8		4	809
1991	LZ4		1991	06	08.19931	16	50	15.14	-13	16	28.1		4	809
1991	LZ4		1991	06	08.21250	16	50	14.25	-13	16	27.3		4	809
1991	LA5	*	1991	06	06.20972	16	51	34.87	-13	56	30.0	18.4	4	809
1991	LA5		1991	06	06.22292	16	51	34.01	-13	56	26.9		4	809
1991	LA5		1991	06	06.23611	16	51	33.25	-13	56	24.1		4	809
1991	LA5		1991	06	08.18611	16	49	42.13	-13	47	54.7		4	809
1991	LA5		1991	06	08.19931	16	49	41.29	-13	47	51.7		4	809
1991	LA5		1991	06	08.21250	16	49	40.51	-13	47	48.1		4	809
1991	LB5	*	1991	06	06.20972	16	40	05.15	-13	59	12.7	18.6	4	809
1991	LB5		1991	06	06.22292	16	40	04.40	-13	59	09.1		4	809
1991	LB5		1991	06	06.23611	16	40	03.60	-13	59	06.2		4	809
1991	LB5		1991	06	08.18611	16	38	19.84	-13	50	55.1		4	809
1991	LB5		1991	06	08.19931	16	38	18.98	-13	50	52.3		4	809
1991	LB5		1991	06	08.21250	16	38	18.30	-13	50	48.2		4	809
1991	LC5	*	1991	06	06.20972	16	44	58.52	-14	07	29.6	18.5	4	809
1991	LC5		1991	06	06.22292	16	44	57.80	-14	07	30.1		4	809

1991 LC5	1991 06 06.23611	16 44 57.05	-14 07 30.6		4 809
1991 LC5	1991 06 08.18611	16 43 19.80	-14 10 20.4		4 809
1991 LC5	1991 06 08.19931	16 43 19.03	-14 10 21.5		4 809
1991 LC5	1991 06 08.21250	16 43 18.36	-14 10 22.4		4 809
1991 LD5 *	1991 06 06.20972	16 46 36.97	-14 21 13.3	18.7	4 809
1991 LD5	1991 06 06.22292	16 46 36.13	-14 21 19.4		4 809
1991 LD5	1991 06 06.23611	16 46 35.24	-14 21 24.8		4 809
1991 LD5	1991 06 08.18611	16 44 34.47	-14 34 51.2		4 809
1991 LD5	1991 06 08.19931	16 44 33.58	-14 34 57.1		4 809
1991 LD5	1991 06 08.21250	16 44 32.73	-14 35 02.9		4 809
1991 LE5 *	1991 06 06.20972	16 46 58.66	-14 51 41.7	18.6	4 809
1991 LE5	1991 06 06.22292	16 46 57.84	-14 51 37.6		4 809
1991 LE5	1991 06 06.23611	16 46 57.00	-14 51 34.4		4 809
1991 LE5	1991 06 08.18611	16 44 55.89	-14 41 20.7		4 809
1991 LE5	1991 06 08.19931	16 44 55.01	-14 41 17.4		4 809
1991 LE5	1991 06 08.21250	16 44 54.17	-14 41 12.7		4 809
1991 LF5 *	1991 06 06.20972	16 51 53.65	-14 32 47.2	18.7	4 809
1991 LF5	1991 06 06.22292	16 51 52.80	-14 32 51.8		4 809
1991 LF5	1991 06 06.23611	16 51 51.86	-14 32 56.4		4 809
1991 LF5	1991 06 08.18611	16 49 49.53	-14 44 23.7		4 809
1991 LF5	1991 06 08.19931	16 49 48.65	-14 44 28.8		4 809
1991 LF5	1991 06 08.21250	16 49 47.73	-14 44 33.7		4 809
1991 LG5 *	1991 06 06.20972	16 43 35.00	-15 39 19.4	18.6	4 809
1991 LG5	1991 06 06.22292	16 43 34.36	-15 39 20.5		4 809
1991 LG5	1991 06 06.23611	16 43 33.63	-15 39 21.0		4 809
1991 LG5	1991 06 08.18611	16 41 54.83	-15 41 43.8		4 809
1991 LG5	1991 06 08.19931	16 41 54.13	-15 41 45.5		4 809
1991 LG5	1991 06 08.21250	16 41 53.42	-15 41 45.9		4 809
1991 LH5 *	1991 06 06.20972	16 44 35.37	-15 35 45.3	19.5	4 809
1991 LH5	1991 06 06.22292	16 44 34.67	-15 35 47.2		4 809
1991 LH5	1991 06 06.23611	16 44 33.95	-15 35 48.4		4 809
1991 LH5	1991 06 08.18611	16 42 47.32	-15 39 57.6		4 809
1991 LH5	1991 06 08.19931	16 42 46.57	-15 39 59.9		4 809
1991 LH5	1991 06 08.21250	16 42 45.69	-15 40 02.2		4 809
1991 LJ5 *	1991 06 06.20972	16 46 13.77	-15 45 07.4	18.6	4 809
1991 LJ5	1991 06 06.22292	16 46 12.94	-15 45 02.8		4 809
1991 LJ5	1991 06 06.23611	16 46 12.08	-15 44 56.4		4 809
1991 LJ5	1991 06 08.18611	16 44 03.57	-15 34 13.3		4 809
1991 LJ5	1991 06 08.19931	16 44 02.69	-15 34 10.0		4 809
1991 LJ5	1991 06 08.21250	16 44 01.70	-15 34 05.5		4 809
1991 LK5 *	1991 06 06.20972	16 46 19.20	-15 31 49.8	18.5	4 809
1991 LK5	1991 06 06.22292	16 46 18.42	-15 31 50.9		4 809
1991 LK5	1991 06 06.23611	16 46 17.62	-15 31 50.7		4 809
1991 LK5	1991 06 08.18611	16 44 26.56	-15 34 01.5		4 809
1991 LK5	1991 06 08.19931	16 44 25.75	-15 34 01.6		4 809
1991 LK5	1991 06 08.21250	16 44 24.95	-15 34 02.6		4 809
1991 LL5 *	1991 06 06.20972	16 47 27.92	-15 17 30.1	19.0	4 809
1991 LL5	1991 06 06.22292	16 47 27.07	-15 17 28.5		4 809
1991 LL5	1991 06 06.23611	16 47 26.26	-15 17 26.1		4 809
1991 LL5	1991 06 08.18611	16 45 35.92	-15 12 19.6		4 809
1991 LL5	1991 06 08.19931	16 45 35.14	-15 12 17.7		4 809
1991 LL5	1991 06 08.21250	16 45 34.42	-15 12 16.6		4 809
1991 LM5 *	1991 06 06.20972	16 49 06.95	-15 12 22.8	18.6	4 809
1991 LM5	1991 06 06.22292	16 49 06.12	-15 12 25.3		4 809
1991 LM5	1991 06 06.23611	16 49 05.29	-15 12 26.5		4 809
1991 LM5	1991 06 08.18611	16 47 14.44	-15 16 59.9		4 809
1991 LM5	1991 06 08.19931	16 47 13.58	-15 17 02.5		4 809
1991 LM5	1991 06 08.21250	16 47 12.77	-15 17 04.7		4 809
1991 LN5 *	1991 06 06.20972	16 50 08.20	-15 20 42.9	18.7	4 809

1991 LN5	1991 06 06.22292	16 50 07.37	-15 20 46.4	4 809
1991 LN5	1991 06 06.23611	16 50 06.43	-15 20 47.5	4 809
1991 LN5	1991 06 08.18611	16 48 12.43	-15 26 51.5	4 809
1991 LN5	1991 06 08.19931	16 48 11.61	-15 26 54.7	4 809
1991 LN5	1991 06 08.21250	16 48 10.81	-15 26 58.5	4 809
1991 LO5 *	1991 06 06.20972	16 53 55.36	-15 34 18.8	18.7 4 809
1991 LO5	1991 06 06.22292	16 53 54.39	-15 34 18.1	4 809
1991 LO5	1991 06 06.23611	16 53 53.62	-15 34 17.4	4 809
1991 LO5	1991 06 08.18611	16 51 45.65	-15 31 32.3	4 809
1991 LO5	1991 06 08.19931	16 51 44.67	-15 31 31.9	4 809
1991 LO5	1991 06 08.21250	16 51 43.79	-15 31 31.4	4 809
1991 LP5 *	1991 06 06.20972	16 46 23.83	-16 07 34.8	18.7 4 809
1991 LP5	1991 06 06.22292	16 46 22.96	-16 07 33.0	4 809
1991 LP5	1991 06 06.23611	16 46 22.15	-16 07 30.5	4 809
1991 LP5	1991 06 08.18611	16 44 26.69	-16 01 52.6	4 809
1991 LP5	1991 06 08.19931	16 44 25.86	-16 01 51.2	4 809
1991 LP5	1991 06 08.21250	16 44 25.01	-16 01 48.0	4 809
1991 LQ5 *	1991 06 06.20972	16 46 16.35	-16 15 56.7	19.4 4 809
1991 LQ5	1991 06 06.22292	16 46 15.42	-16 15 53.6	4 809
1991 LQ5	1991 06 06.23611	16 46 14.66	-16 15 51.2	4 809
1991 LQ5	1991 06 08.18611	16 44 14.95	-16 10 23.8	4 809
1991 LQ5	1991 06 08.19931	16 44 14.10	-16 10 21.5	4 809
1991 LQ5	1991 06 08.21250	16 44 13.33	-16 10 19.2	4 809
1991 LR5 *	1991 06 06.20972	16 39 49.70	-16 17 59.3	18.8 4 809
1991 LR5	1991 06 06.22292	16 39 48.89	-16 18 01.0	4 809
1991 LR5	1991 06 06.23611	16 39 48.10	-16 18 01.5	4 809
1991 LR5	1991 06 08.18611	16 38 00.51	-16 20 47.6	4 809
1991 LR5	1991 06 08.19931	16 37 59.63	-16 20 49.1	4 809
1991 LR5	1991 06 08.21250	16 37 58.94	-16 20 49.1	4 809
1991 LS5 *	1991 06 06.20972	16 41 56.17	-16 49 35.3	19.4 4 809
1991 LS5	1991 06 06.22292	16 41 55.17	-16 49 35.9	4 809
1991 LS5	1991 06 06.23611	16 41 54.43	-16 49 34.9	4 809
1991 LS5	1991 06 08.18611	16 40 00.68	-16 48 20.3	4 809
1991 LS5	1991 06 08.19931	16 39 59.83	-16 48 20.3	4 809
1991 LS5	1991 06 08.21250	16 39 58.95	-16 48 19.3	4 809
1991 LT5 *	1991 06 06.20972	16 53 32.06	-15 10 10.5	18.8 4 809
1991 LT5	1991 06 06.22292	16 53 31.31	-15 10 08.7	4 809
1991 LT5	1991 06 06.23611	16 53 30.43	-15 10 08.4	4 809
1991 LT5	1991 06 08.18611	16 51 44.07	-15 07 17.9	18.7 4 809
1991 LT5	1991 06 08.19931	16 51 43.20	-15 07 16.7	4 809
1991 LT5	1991 06 08.21250	16 51 42.48	-15 07 16.1	4 809
1991 LU5 *	1991 06 06.20972	16 44 55.84	-16 34 12.8	19.6 4 809
1991 LU5	1991 06 06.22292	16 44 55.02	-16 34 12.9	4 809
1991 LU5	1991 06 06.23611	16 44 54.25	-16 34 14.4	4 809
1991 LU5	1991 06 08.18611	16 43 06.87	-16 35 06.9	19.2 4 809
1991 LU5	1991 06 08.19931	16 43 06.07	-16 35 09.4	4 809
1991 LU5	1991 06 08.21250	16 43 05.22	-16 35 13.0	4 809
1991 LV5 *	1991 06 06.20972	16 43 37.78	-16 25 28.1	18.7 4 809
1991 LV5	1991 06 06.22292	16 43 36.85	-16 25 31.1	4 809
1991 LV5	1991 06 06.23611	16 43 35.85	-16 25 34.1	4 809
1991 LV5	1991 06 08.18611	16 41 30.79	-16 32 02.8	18.7 4 809
1991 LV5	1991 06 08.19931	16 41 29.83	-16 32 04.8	4 809
1991 LV5	1991 06 08.21250	16 41 28.97	-16 32 07.9	4 809
1991 NH1	1991 08 16.32569	21 34 18.63	-15 53 13.1	17.4 4 809
1991 NH1	1991 08 16.33611	21 34 18.02	-15 53 14.6	4 809
1991 NH1	1991 08 16.34722	21 34 17.58	-15 53 17.2	4 809
1991 NO2	1991 08 14.16181	20 52 28.22	-21 53 53.1	17.7 4 809
1991 NO2	1991 08 14.17500	20 52 27.43	-21 53 57.4	4 809
1991 NO2	1991 08 14.18819	20 52 26.76	-21 54 00.5	4 809



1991	PY1	1991	08	02.11806	20	48	05.89	-20	28	54.4		4	809
1991	PY1	1991	08	02.14444	20	48	04.32	-20	29	07.7		4	809
1991	PY1	1991	08	14.16181	20	37	54.90	-22	03	38.3	18.8	4	809
1991	PY1	1991	08	14.17500	20	37	54.25	-22	03	44.3		4	809
1991	PY1	1991	08	14.18819	20	37	53.53	-22	03	49.3		4	809
1991	PZ1	1991	08	02.11806	20	48	46.56	-20	30	46.8		4	809
1991	PZ1	1991	08	02.14444	20	48	44.85	-20	30	54.6		4	809
1991	PZ1	1991	08	14.16181	20	37	28.74	-21	18	01.5	19.3	4	809
1991	PZ1	1991	08	14.17500	20	37	27.95	-21	18	04.1		4	809
1991	PZ1	1991	08	14.18819	20	37	27.31	-21	18	06.7		4	809
1991	PA2	1991	08	02.11806	20	49	49.35	-20	00	16.8		4	809
1991	PA2	1991	08	02.14444	20	49	47.95	-20	00	22.8		4	809
1991	PA2	1991	08	14.16181	20	40	19.69	-20	42	21.7	19.7	4	809
1991	PA2	1991	08	14.17500	20	40	19.02	-20	42	24.6		4	809
1991	PA2	1991	08	14.18819	20	40	18.35	-20	42	26.8		4	809
1991	PB2	1991	08	02.11806	20	50	14.00	-21	02	58.2		4	809
1991	PB2	1991	08	02.14444	20	50	12.36	-21	03	08.4		4	809
1991	PB2	1991	08	14.16181	20	39	32.79	-22	13	12.8	18.7	4	809
1991	PB2	1991	08	14.17500	20	39	32.10	-22	13	17.0		4	809
1991	PB2	1991	08	14.18819	20	39	31.56	-22	13	21.2		4	809
1991	PD2	1991	08	02.11806	20	50	55.12	-20	58	24.0		4	809
1991	PD2	1991	08	02.14444	20	50	53.67	-20	58	36.0		4	809
1991	PE2	1991	08	02.11806	20	51	09.47	-21	42	40.2		4	809
1991	PE2	1991	08	02.14444	20	51	07.89	-21	42	45.0		4	809
1991	PE2	1991	08	14.16181	20	40	36.01	-22	09	31.0	18.6	4	809
1991	PE2	1991	08	14.17500	20	40	35.31	-22	09	32.2		4	809
1991	PE2	1991	08	14.18819	20	40	34.59	-22	09	33.7		4	809
1991	PF2	1991	08	02.11806	20	51	09.71	-18	32	49.9		4	809
1991	PF2	1991	08	02.14444	20	51	08.29	-18	32	59.9		4	809
1991	PG2	1991	08	02.11806	20	51	14.89	-21	05	14.0		4	809
1991	PG2	1991	08	02.14444	20	51	13.27	-21	05	20.9		4	809
1991	PH2	1991	08	02.11806	20	51	38.14	-19	26	05.3		4	809
1991	PH2	1991	08	02.14444	20	51	36.59	-19	26	12.3		4	809
1991	PH2	1991	08	14.16181	20	40	46.86	-20	12	25.9	18.7	4	809
1991	PH2	1991	08	14.17500	20	40	46.12	-20	12	29.0		4	809
1991	PH2	1991	08	14.18819	20	40	45.40	-20	12	32.4		4	809
1991	PJ2	1991	08	02.11806	20	52	08.65	-22	00	50.0		4	809
1991	PJ2	1991	08	02.14444	20	52	06.91	-22	00	59.2		4	809
1991	PK2	1991	08	02.11806	20	52	31.09	-22	03	58.3		4	809
1991	PK2	1991	08	02.14444	20	52	29.57	-22	04	03.7		4	809
1991	PL2	1991	08	02.11806	20	52	35.60	-21	46	38.3		4	809
1991	PL2	1991	08	02.14444	20	52	33.90	-21	46	39.8		4	809
1991	PL2	1991	08	14.16181	20	41	26.41	-21	48	19.4	18.6	4	809
1991	PL2	1991	08	14.17500	20	41	25.74	-21	48	19.1		4	809
1991	PL2	1991	08	14.18819	20	41	24.92	-21	48	18.8		4	809
1991	PM2	1991	08	02.11806	20	52	39.19	-19	48	21.8		4	809
1991	PM2	1991	08	02.14444	20	52	37.82	-19	48	28.0		4	809
1991	PN2	1991	08	02.11806	20	52	47.20	-21	49	31.1		4	809
1991	PN2	1991	08	02.14444	20	52	45.62	-21	49	40.9		4	809
1991	PO2	1991	08	02.11806	20	53	11.95	-20	01	56.4		4	809
1991	PO2	1991	08	02.14444	20	53	10.52	-20	02	01.9		4	809
1991	PO2	1991	08	14.16181	20	43	44.53	-20	41	55.6	19.0	4	809
1991	PO2	1991	08	14.17500	20	43	43.84	-20	41	58.1		4	809
1991	PO2	1991	08	14.18819	20	43	43.19	-20	42	00.5		4	809
1991	PP2	1991	08	02.11806	20	53	18.87	-19	55	11.0		4	809
1991	PP2	1991	08	02.14444	20	53	17.21	-19	55	15.7		4	809
1991	PQ2	1991	08	02.11806	20	53	32.57	-21	05	41.8		4	809
1991	PQ2	1991	08	02.14444	20	53	30.87	-21	05	45.8		4	809
1991	PR2	1991	08	02.11806	20	53	58.46	-19	58	33.4		4	809

1991 PR2	1991 08 02.14444	20 53 56.61	-19 58 28.5		4 809
1991 PR2	1991 08 14.16181	20 40 54.52	-19 20 31.0	18.6	4 809
1991 PR2	1991 08 14.17500	20 40 53.71	-19 20 27.9		4 809
1991 PR2	1991 08 14.18819	20 40 52.89	-19 20 25.5		4 809
1991 PS2	1991 08 02.11806	20 54 18.62	-20 46 51.1		4 809
1991 PS2	1991 08 02.14444	20 54 17.28	-20 47 09.6		4 809
1991 PT2	1991 08 02.11806	20 56 11.80	-20 15 25.1		4 809
1991 PT2	1991 08 02.14444	20 56 10.43	-20 15 36.8		4 809
1991 PT2	1991 08 14.16181	20 47 19.09	-21 36 17.9	18.6	4 809
1991 PT2	1991 08 14.17500	20 47 18.38	-21 36 23.4		4 809
1991 PT2	1991 08 14.18819	20 47 17.77	-21 36 27.1		4 809
1991 PU2	1991 08 14.16181	20 44 20.61	-22 22 46.7	18.8	4 809
1991 PU2	1991 08 14.17500	20 44 19.79	-22 22 45.6		4 809
1991 PU2	1991 08 14.18819	20 44 18.95	-22 22 43.9		4 809
1991 PX2	1991 08 02.11806	20 57 55.62	-20 09 05.0		4 809
1991 PX2	1991 08 02.14444	20 57 54.00	-20 09 07.7		4 809
1991 PX2	1991 08 14.16181	20 46 51.27	-20 23 58.7	18.8	4 809
1991 PX2	1991 08 14.17500	20 46 50.61	-20 23 59.8		4 809
1991 PX2	1991 08 14.18819	20 46 49.78	-20 24 00.0		4 809
1991 PY2	1991 08 02.11806	20 58 09.51	-20 51 56.8		4 809
1991 PY2	1991 08 02.14444	20 58 07.79	-20 51 58.5		4 809
1991 PY2	1991 08 14.16181	20 45 14.91	-21 00 53.6	18.7	4 809
1991 PY2	1991 08 14.17500	20 45 14.05	-21 00 54.0		4 809
1991 PY2	1991 08 14.18819	20 45 13.17	-21 00 54.2		4 809
1991 PZ2	1991 08 02.11806	20 59 00.94	-19 17 09.8		4 809
1991 PZ2	1991 08 02.14444	20 58 59.16	-19 17 19.8		4 809
1991 PA3	1991 08 02.11806	21 00 04.16	-18 53 45.9		4 809
1991 PA3	1991 08 02.14444	21 00 01.97	-18 53 40.9		4 809
1991 PB3	1991 08 02.11806	21 00 35.46	-21 58 04.2		4 809
1991 PB3	1991 08 02.14444	21 00 33.70	-21 58 00.3		4 809
1991 PB3	1991 08 14.16181	20 48 15.33	-21 23 17.9	18.7	4 809
1991 PB3	1991 08 14.17500	20 48 14.52	-21 23 15.1		4 809
1991 PB3	1991 08 14.18819	20 48 13.70	-21 23 12.0		4 809
1991 PC3	1991 08 02.11806	21 01 39.70	-18 01 42.7		4 809
1991 PC3	1991 08 02.14444	21 01 38.40	-18 01 54.9		4 809
1991 PC3	1991 08 14.16181	20 52 39.93	-19 37 44.3	18.9	4 809
1991 PC3	1991 08 14.17500	20 52 39.40	-19 37 50.5		4 809
1991 PC3	1991 08 14.18819	20 52 38.76	-19 37 57.5		4 809
1991 PE3	1991 08 02.11806	21 02 28.48	-18 59 39.8		4 809
1991 PE3	1991 08 02.14444	21 02 26.81	-18 59 48.6		4 809
1991 PE3	1991 08 14.16181	20 50 34.91	-20 07 53.1	18.5	4 809
1991 PE3	1991 08 14.17500	20 50 34.12	-20 07 57.4		4 809
1991 PE3	1991 08 14.18819	20 50 33.29	-20 08 02.4		4 809
1991 PF3	1991 08 02.11806	21 02 41.00	-19 15 50.1		4 809
1991 PF3	1991 08 02.14444	21 02 39.56	-19 16 03.9		4 809
1991 PF3	1991 08 14.16181	20 52 32.02	-20 59 59.2	19.2	4 809
1991 PF3	1991 08 14.17500	20 52 31.36	-21 00 05.9		4 809
1991 PF3	1991 08 14.18819	20 52 30.69	-21 00 12.4		4 809
1991 PG3	1991 08 02.11806	21 03 10.81	-19 41 21.7		4 809
1991 PG3	1991 08 02.14444	21 03 09.47	-19 41 27.6		4 809
1991 PG3	1991 08 14.16181	20 53 23.28	-20 28 09.3	19.0	4 809
1991 PG3	1991 08 14.17500	20 53 22.55	-20 28 12.2		4 809
1991 PG3	1991 08 14.18819	20 53 21.89	-20 28 14.6		4 809
1991 PH3	1991 08 02.11806	21 03 12.39	-20 48 29.7		4 809
1991 PH3	1991 08 02.14444	21 03 10.83	-20 48 39.4		4 809
1991 PJ3	1991 08 02.11806	21 04 10.07	-21 59 46.1		4 809
1991 PJ3	1991 08 02.14444	21 04 08.20	-21 59 51.1		4 809
1991 PJ3	1991 08 14.16181	20 51 14.19	-22 29 41.8	18.7	4 809
1991 PJ3	1991 08 14.17500	20 51 13.31	-22 29 43.5		4 809

1991 PJ3	1991 08	14.18819	20 51	12.43	-22 29	45.4		4 809
1991 PK3	1991 08	02.11806	21 04	38.87	-20 59	14.2		4 809
1991 PK3	1991 08	02.14444	21 04	37.24	-20 59	21.5		4 809
1991 PK3	1991 08	14.16181	20 53	32.01	-21 47	26.6	18.6	4 809
1991 PK3	1991 08	14.17500	20 53	31.22	-21 47	29.8		4 809
1991 PK3	1991 08	14.18819	20 53	30.45	-21 47	31.3		4 809
1991 PM3	1991 08	02.11806	21 05	26.58	-20 09	03.9		4 809
1991 PM3	1991 08	02.14444	21 05	24.97	-20 09	18.2		4 809
1991 PM3	1991 08	14.16181	20 54	29.70	-21 51	46.6	18.8	4 809
1991 PM3	1991 08	14.17500	20 54	28.82	-21 51	53.4		4 809
1991 PM3	1991 08	14.18819	20 54	28.16	-21 51	58.9		4 809
1991 PN3	1991 08	02.11806	21 05	52.64	-21 14	47.7		4 809
1991 PN3	1991 08	02.14444	21 05	50.99	-21 14	58.0		4 809
1991 PO3	1991 08	02.11806	21 06	12.27	-19 14	34.7		4 809
1991 PO3	1991 08	02.14444	21 06	10.71	-19 14	38.2		4 809
1991 PO3	1991 08	14.16181	20 55	18.96	-19 35	32.8	18.7	4 809
1991 PO3	1991 08	14.17500	20 55	18.24	-19 35	34.4		4 809
1991 PO3	1991 08	14.18819	20 55	17.43	-19 35	35.5		4 809
1991 PP3	1991 08	02.11806	21 07	02.03	-20 27	52.5		4 809
1991 PP3	1991 08	02.14444	21 07	00.55	-20 27	59.5		4 809
1991 PQ3	1991 08	02.11806	21 07	53.44	-20 21	45.2		4 809
1991 PQ3	1991 08	02.14444	21 07	51.88	-20 21	49.6		4 809
1991 PQ3	1991 08	14.16181	20 57	07.80	-20 53	03.5	18.7	4 809
1991 PQ3	1991 08	14.17500	20 57	07.06	-20 53	06.0		4 809
1991 PQ3	1991 08	14.18819	20 57	06.36	-20 53	06.6		4 809
1991 PE8	1991 08	14.16181	20 53	52.58	-18 27	00.5	18.7	4 809
1991 PE8	1991 08	14.17500	20 53	51.92	-18 27	04.4		4 809
1991 PE8	1991 08	14.18819	20 53	51.17	-18 27	08.8		4 809
1991 PP15	1991 08	06.24444	22 06	51.58	-13 26	10.9	18.6	4 809
1991 PP15	1991 08	06.25764	22 06	51.04	-13 26	14.3		4 809
1991 PP15	1991 08	06.27083	22 06	50.46	-13 26	17.6		4 809
1991 PW16*	1991 08	06.24444	21 57	20.84	-12 56	37.8	18.5	4 809
1991 PW16	1991 08	06.25764	21 57	20.20	-12 56	42.3		4 809
1991 PW16	1991 08	06.27083	21 57	19.53	-12 56	47.4		4 809
1991 PX16*	1991 08	06.24444	22 02	02.95	-12 41	49.8	18.3	4 809
1991 PX16	1991 08	06.25764	22 02	02.40	-12 41	53.8		4 809
1991 PX16	1991 08	06.27083	22 02	01.89	-12 41	57.3		4 809
1991 PY16*	1991 08	07.09792	21 02	33.68	-18 31	55.1	19.4	4 809
1991 PY16	1991 08	07.11111	21 02	33.00	-18 31	59.8		4 809
1991 PY16	1991 08	07.12431	21 02	32.34	-18 32	07.0		4 809
1991 PY16	1991 08	14.16181	20 56	43.01	-19 18	15.6	19.3	4 809
1991 PY16	1991 08	14.17500	20 56	42.38	-19 18	19.9		4 809
1991 PY16	1991 08	14.18819	20 56	41.71	-19 18	26.1		4 809
1991 PZ16	1991 08	02.11806	20 57	57.26	-20 09	01.5		4 809
1991 PZ16	1991 08	02.14444	20 57	55.44	-20 08	56.4		4 809
1991 PZ16*	1991 08	07.09792	20 52	23.81	-19 53	59.8	19.5	4 809
1991 PZ16	1991 08	07.11111	20 52	22.94	-19 53	57.5		4 809
1991 PZ16	1991 08	07.12431	20 52	22.00	-19 53	55.5		4 809
1991 PZ16	1991 08	14.16181	20 44	55.93	-19 31	05.5	18.7	4 809
1991 PZ16	1991 08	14.17500	20 44	55.04	-19 31	02.9		4 809
1991 PZ16	1991 08	14.18819	20 44	54.25	-19 31	00.5		4 809
1991 PA17*	1991 08	07.09792	20 47	55.33	-18 05	22.7	18.2	4 809
1991 PA17	1991 08	07.11111	20 47	54.52	-18 05	29.1		4 809
1991 PA17	1991 08	07.12431	20 47	53.75	-18 05	35.9		4 809
1991 PA17	1991 08	14.16181	20 41	37.64	-19 02	18.5	18.0	4 809
1991 PA17	1991 08	14.17500	20 41	36.91	-19 02	24.3		4 809
1991 PA17	1991 08	14.18819	20 41	36.24	-19 02	30.2		4 809
1991 PB17*	1991 08	07.09792	21 04	40.08	-20 35	45.9	19.2	4 809
1991 PB17	1991 08	07.11111	21 04	39.28	-20 35	48.5		4 809

1991	PB17	1991	08	07.12431	21	04	38.43	-20	35	51.4		4	809
1991	PB17	1991	08	14.16181	20	58	15.59	-20	50	48.5	19.5	4	809
1991	PB17	1991	08	14.17500	20	58	14.81	-20	50	49.8		4	809
1991	PB17	1991	08	14.18819	20	58	14.10	-20	50	50.8		4	809
5192	T-3	1991	05	18.13819	16	36	04.31	-21	20	46.8	18.5	4	809
5192	T-3	1991	05	18.15139	16	36	03.59	-21	20	48.3		4	809
5192	T-3	1991	05	18.16458	16	36	02.85	-21	20	49.7		4	809
62		1991	05	18.13819	16	44	01.62	-19	41	20.8	15.0	4	809
62		1991	05	18.15139	16	44	00.97	-19	41	20.0		4	809
62		1991	05	18.16458	16	44	00.31	-19	41	18.4		4	809
74		1991	06	06.20972	16	44	28.23	-17	08	43.0	14.5	4	809
74		1991	06	06.22292	16	44	27.34	-17	08	41.1		4	809
74		1991	06	06.23611	16	44	26.57	-17	08	39.4		4	809
74		1991	06	08.18611	16	42	39.21	-17	03	57.0	14.0	4	809
74		1991	06	08.19931	16	42	38.35	-17	03	54.9		4	809
74		1991	06	08.21250	16	42	37.54	-17	03	53.1		4	809
101		1991	03	10.11771	10	39	16.11	+08	54	50.3		3	809
101		1991	03	10.12813	10	39	15.54	+08	54	51.7		3	809
101		1991	03	10.13854	10	39	14.95	+08	54	53.2		3	809
101		1991	03	11.12396	10	38	19.00	+08	57	19.2		3	809
101		1991	03	11.13438	10	38	18.38	+08	57	21.1		3	809
101		1991	03	11.14479	10	38	17.78	+08	57	22.4		3	809
101		1991	03	12.13368	10	37	22.34	+08	59	48.8		3	809
101		1991	03	12.14410	10	37	21.75	+08	59	50.3		3	809
101		1991	03	12.15451	10	37	21.14	+08	59	51.9		3	809
101		1991	03	15.18854	10	34	34.21	+09	06	50.2		3	809
101		1991	03	15.19896	10	34	33.66	+09	06	51.4		3	809
101		1991	03	15.20937	10	34	33.14	+09	06	52.4		3	809
113		1990	11	11.21944	03	54	13.20	+12	32	41.0	14.0	4	809
113		1990	11	11.23264	03	54	12.33	+12	32	39.2		4	809
113		1990	11	11.24583	03	54	11.46	+12	32	36.9		4	809
122		1991	03	12.13368	10	43	09.24	+07	26	39.0		3	809
122		1991	03	12.14410	10	43	08.85	+07	26	41.8		3	809
122		1991	03	12.15451	10	43	08.45	+07	26	44.6		3	809
122		1991	03	15.22118	10	41	00.32	+07	41	16.2		3	809
122		1991	03	15.23160	10	40	59.89	+07	41	18.9		3	809
122		1991	03	15.24201	10	40	59.50	+07	41	21.6		3	809
122		1991	03	17.20555	10	39	40.36	+07	50	22.5		3	809
122		1991	03	17.21806	10	39	39.88	+07	50	26.0		3	809
122		1991	03	17.23056	10	39	39.41	+07	50	29.0		3	809
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150		1991	03	14.20035	10	46	53.58	+05	31	54.3		3	809
150		1991	03	14.21076	10	46	53.11	+05	31	57.5		3	809
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153		1991	05	18.15139	16	47	32.53	-18	34	09.5		4	809
153		1991	05	18.16458	16	47	32.02	-18	34	06.9		4	809
175		1991	03	17.35902	13	17	48.58	-07	42	01.5		3	809
175		1991	03	17.37153	13	17	48.13	-07	41	59.3		3	809
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175		1991	03	19.35902	13	16	37.47	-07	35	56.3		3	809
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175		1991	03	19.38403	13	16	36.55	-07	35	51.8		3	809
175		1991	03	23.34618	13	14	07.62	-07	22	55.4		3	809
175		1991	03	23.35660	13	14	07.22	-07	22	53.4		3	809
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195	1991 03	22.09688	11 24	59.68	+06 29	46.9	3 809
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195	1991 03	23.26424	11 24	00.69	+06 32	46.6	3 809
195	1991 03	24.25521	11 23	11.34	+06 35	13.7	3 809
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195	1991 03	24.27326	11 23	10.43	+06 35	16.7	3 809
253	1991 03	10.15660	11 39	06.05	+01 06	18.1	3 809
253	1991 03	10.16702	11 39	05.54	+01 06	22.2	3 809
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300	1991 03	20.19688	11 27	49.73	+04 20	51.0	3 809
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309	1991 03	10.20486	12 40	44.61	-05 10	07.1	3 809
309	1991 03	10.21736	12 40	44.08	-05 10	04.9	3 809
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358	1991 03	23.28021	12 54	37.90	-04 04	54.7	3 809
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358	1991 03	24.29930	12 53	52.75	-03 59	03.0	3 809
358	1991 03	24.30903	12 53	52.31	-03 59	00.0	3 809
358	1991 03	25.26320	12 53	09.73	-03 53	29.5	3 809
358	1991 03	25.27014	12 53	09.38	-03 53	26.9	3 809
358	1991 03	25.27708	12 53	09.07	-03 53	24.9	3 809
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399	1991 03	15.18854	10 37	27.40	+09 59	15.1	3 809
399	1991 03	15.19896	10 37	26.91	+09 59	15.0	3 809
399	1991 03	15.20937	10 37	26.42	+09 59	14.9	3 809
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586	1991 03	14.26840	10 22	34.66	+07 43	30.7	3 809
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723	1991 03	15.18854	10 36	46.30	+08 42	27.3	3 809
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819	1991 03	14.26840	10 23	15.87	+08 35	00.0	3 809
819	1991 03	14.27882	10 23	15.20	+08 35	02.1	3 809
819	1991 03	15.15521	10 22	22.72	+08 38	03.1	3 809
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981	1991 03	18.21840	10 46	07.35	+10 28	47.4	3 809
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2039	1991 03	13.02812	09 18	34.55	+18 48	44.9		3 809
2039	1991 03	13.04271	09 18	34.14	+18 48	46.9		3 809
2039	1991 03	15.01354	09 17	47.01	+18 51	56.4		3 809
2039	1991 03	15.02812	09 17	46.58	+18 51	58.3		3 809
2039	1991 03	15.04271	09 17	46.15	+18 52	00.1		3 809
2067	1991 03	17.24548	11 07	23.73	+07 02	21.9		3 809
2067	1991 03	17.25591	11 07	23.38	+07 02	24.4		3 809
2067	1991 03	17.26632	11 07	23.02	+07 02	27.0		3 809
2067	1991 03	19.25174	11 06	11.27	+07 11	00.9		3 809
2067	1991 03	19.26215	11 06	10.93	+07 11	03.5		3 809
2067	1991 03	19.27257	11 06	10.57	+07 11	06.0		3 809
2067	1991 03	20.12952	11 05	40.38	+07 14	43.4		3 809
2067	1991 03	20.13993	11 05	40.02	+07 14	46.0		3 809
2067	1991 03	20.15034	11 05	39.66	+07 14	48.6		3 809
2067	1991 03	21.11771	11 05	05.64	+07 18	49.2		3 809
2067	1991 03	21.12813	11 05	05.28	+07 18	52.1		3 809
2067	1991 03	21.13854	11 05	04.92	+07 18	55.0		3 809
2068	1991 06	06.20972	16 42	02.13	-14 20	08.2	18.0	4 809
2068	1991 06	06.22292	16 42	01.33	-14 20	09.5		4 809
2068	1991 06	06.23611	16 42	00.54	-14 20	10.2		4 809
2068	1991 06	08.18611	16 40	12.54	-14 23	25.1		4 809
2068	1991 06	08.19931	16 40	11.72	-14 23	27.5		4 809
2068	1991 06	08.21250	16 40	10.95	-14 23	28.7		4 809
2125	1991 03	25.28611	12 54	30.60	-08 05	54.2		3 809
2125	1991 03	25.29306	12 54	30.26	-08 05	52.4		3 809
2125	1991 03	25.30000	12 54	29.91	-08 05	50.5		3 809
2125	1991 03	26.33403	12 53	41.15	-08 01	19.3		3 809
2125	1991 03	26.34653	12 53	40.53	-08 01	15.9		3 809
2125	1991 03	26.35902	12 53	39.92	-08 01	12.4		3 809
2158	1991 02	25.34375	12 11	39.92	-01 44	44.1		3 809
2158	1991 02	25.35625	12 11	39.48	-01 44	41.3		3 809
2158	1991 02	25.36875	12 11	39.06	-01 44	38.4		3 809
2158	1991 02	26.33715	12 11	07.71	-01 40	56.0		3 809
2158	1991 02	26.34757	12 11	07.36	-01 40	53.8		3 809
2158	1991 02	26.35799	12 11	07.00	-01 40	51.7		3 809
2158	1991 03	13.30243	12 01	27.11	-00 32	43.8		3 809
2158	1991 03	13.31285	12 01	26.66	-00 32	40.8		3 809
2158	1991 03	13.32326	12 01	26.22	-00 32	37.7		3 809
2197	1991 08	02.11806	21 05	00.84	-20 15	52.8		4 809
2197	1991 08	02.14444	21 04	59.53	-20 15	58.5		4 809
2197	1991 08	14.16181	20 55	41.95	-20 55	07.3	18.3	4 809
2197	1991 08	14.17500	20 55	41.24	-20 55	09.0		4 809
2197	1991 08	14.18819	20 55	40.62	-20 55	11.8		4 809
2228	1991 03	14.06632	09 27	44.13	+15 29	29.3		3 809
2228	1991 03	14.08090	09 27	43.65	+15 29	31.9		3 809
2228	1991 03	14.09549	09 27	43.17	+15 29	34.5		3 809
2228	1991 03	16.09757	09 26	49.80	+15 34	46.6		3 809
2228	1991 03	16.11215	09 26	49.52	+15 34	48.2		3 809
2228	1991 03	16.12674	09 26	49.23	+15 34	49.7		3 809
2228	1991 03	17.07118	09 26	25.73	+15 37	06.3		3 809
2228	1991 03	17.08576	09 26	25.45	+15 37	08.4		3 809
2228	1991 03	17.10035	09 26	25.18	+15 37	10.4		3 809

2237	1991 03	13.06076	09 50	18.51	+15 02	19.0	3 809
2237	1991 03	13.07535	09 50	17.96	+15 02	22.0	3 809
2237	1991 03	13.08993	09 50	17.42	+15 02	24.6	3 809
2237	1991 03	15.10452	09 49	07.16	+15 08	39.7	3 809
2237	1991 03	15.11909	09 49	06.74	+15 08	42.0	3 809
2237	1991 03	15.13368	09 49	06.33	+15 08	44.1	3 809
2240	1991 03	18.17673	10 49	24.57	+08 48	03.2	3 809
2240	1991 03	18.18715	10 49	24.16	+08 48	05.8	3 809
2240	1991 03	18.19757	10 49	23.74	+08 48	08.2	3 809
2240	1991 03	20.05798	10 48	07.35	+08 55	24.1	3 809
2240	1991 03	20.06841	10 48	06.93	+08 55	26.2	3 809
2240	1991 03	20.07882	10 48	06.51	+08 55	28.4	3 809
2240	1991 03	21.04757	10 47	27.87	+08 59	06.8	3 809
2240	1991 03	21.05869	10 47	27.42	+08 59	09.1	3 809
2240	1991 03	21.06979	10 47	26.99	+08 59	11.3	3 809
2274	1991 03	14.18993	10 49	04.06	+07 36	50.6	3 809
2274	1991 03	14.20035	10 49	03.53	+07 36	52.4	3 809
2274	1991 03	14.21076	10 49	02.99	+07 36	54.3	3 809
2274	1991 03	17.20555	10 46	39.17	+07 44	25.1	3 809
2274	1991 03	17.21806	10 46	38.65	+07 44	26.2	3 809
2274	1991 03	17.23056	10 46	38.13	+07 44	27.8	3 809
2274	1991 03	18.17673	10 45	54.89	+07 46	36.7	3 809
2274	1991 03	18.18715	10 45	54.46	+07 46	38.0	3 809
2274	1991 03	18.19757	10 45	54.02	+07 46	39.2	3 809
2279	1991 03	14.12048	09 40	19.73	+15 28	00.1	3 809
2279	1991 03	14.13091	09 40	19.29	+15 28	03.4	3 809
2279	1991 03	14.14132	09 40	18.87	+15 28	06.6	3 809
2279	1991 03	15.05868	09 39	47.34	+15 32	01.5	3 809
2279	1991 03	15.07327	09 39	46.98	+15 32	04.3	3 809
2279	1991 03	15.08784	09 39	46.63	+15 32	07.0	3 809
2279	1991 03	17.11979	09 38	41.64	+15 40	16.9	3 809
2279	1991 03	17.13438	09 38	41.28	+15 40	19.6	3 809
2279	1991 03	17.14896	09 38	40.92	+15 40	22.3	3 809
2279	1991 03	19.06632	09 37	47.01	+15 47	21.8	3 809
2279	1991 03	19.08090	09 37	46.65	+15 47	24.7	3 809
2279	1991 03	19.09549	09 37	46.29	+15 47	27.2	3 809
2311	1991 03	23.13194	10 14	49.31	+11 14	30.0	3 809
2311	1991 03	23.13750	10 14	49.15	+11 14	31.0	3 809
2311	1991 03	23.14305	10 14	48.99	+11 14	32.4	3 809
2311	1991 03	24.04479	10 14	24.01	+11 17	56.6	3 809
2311	1991 03	24.06354	10 14	23.47	+11 18	01.2	3 809
2311	1991 03	24.08229	10 14	22.91	+11 18	05.9	3 809
2362	1991 03	19.18437	10 58	59.24	+08 53	39.1	3 809
2362	1991 03	19.19479	10 58	58.63	+08 53	41.8	3 809
2362	1991 03	19.20521	10 58	58.03	+08 53	44.3	3 809
2367	1991 03	09.16285	09 28	53.10	+12 39	14.8	3 809
2367	1991 03	09.17743	09 28	52.59	+12 39	18.7	3 809
2367	1991 03	09.19202	09 28	52.07	+12 39	22.8	3 809
2367	1991 03	14.02118	09 26	18.81	+13 00	18.3	3 809
2367	1991 03	14.03577	09 26	18.31	+13 00	22.3	3 809
2367	1991 03	14.05035	09 26	17.83	+13 00	26.4	3 809
2439	1991 03	21.25694	13 03	32.01	-06 20	19.1	3 809
2439	1991 03	21.26944	13 03	31.49	-06 20	15.9	3 809
2439	1991 03	21.28194	13 03	31.00	-06 20	12.7	3 809
2469	1991 03	12.05451	09 45	53.14	+13 27	26.3	3 809
2469	1991 03	12.06910	09 45	52.60	+13 27	31.0	3 809
2469	1991 03	12.08368	09 45	52.05	+13 27	36.0	3 809
2469	1991 03	15.05868	09 44	10.93	+13 42	42.1	3 809
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2469	1991 03	15.08784	09 44	10.13	+13 42	50.1		3 809
2480	1991 03	17.35902	13 15	52.51	-05 52	18.6		3 809
2480	1991 03	17.37153	13 15	51.89	-05 52	15.3		3 809
2480	1991 03	17.38403	13 15	51.26	-05 52	12.1		3 809
2480	1991 03	18.33889	13 15	04.36	-05 48	13.9		3 809
2480	1991 03	18.34722	13 15	03.93	-05 48	11.9		3 809
2480	1991 03	18.35556	13 15	03.51	-05 48	09.9		3 809
2480	1991 03	19.35902	13 14	13.00	-05 43	50.6		3 809
2480	1991 03	19.37153	13 14	12.35	-05 43	47.5		3 809
2480	1991 03	19.38403	13 14	11.70	-05 43	44.2		3 809
2480	1991 03	20.32638	13 13	23.34	-05 39	35.9		3 809
2480	1991 03	20.33889	13 13	22.70	-05 39	32.6		3 809
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2480	1991 03	21.33681	13 12	30.07	-05 35	04.8		3 809
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2480	1991 03	21.36180	13 12	28.75	-05 34	58.3		3 809
2484	1991 03	11.05868	10 27	54.00	+08 17	46.5		3 809
2484	1991 03	11.06910	10 27	53.44	+08 17	50.0		3 809
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2484	1991 03	13.10938	10 26	05.42	+08 29	07.6		3 809
2484	1991 03	13.11979	10 26	04.87	+08 29	10.7		3 809
2484	1991 03	13.13021	10 26	04.33	+08 29	13.9		3 809
2484	1991 03	14.25799	10 25	05.73	+08 35	20.1		3 809
2484	1991 03	14.26840	10 25	05.17	+08 35	23.6		3 809
2484	1991 03	14.27882	10 25	04.61	+08 35	27.0		3 809
2484	1991 03	15.15521	10 24	20.03	+08 40	09.1		3 809
2484	1991 03	15.16563	10 24	19.55	+08 40	12.0		3 809
2484	1991 03	15.17604	10 24	19.07	+08 40	15.0		3 809
2484	1991 03	17.16597	10 22	40.38	+08 50	38.4		3 809
2484	1991 03	17.17847	10 22	39.79	+08 50	42.3		3 809
2484	1991 03	17.19097	10 22	39.21	+08 50	45.9		3 809
2484	1991 03	18.14063	10 21	53.45	+08 55	35.1		3 809
2484	1991 03	18.15104	10 21	52.96	+08 55	38.1		3 809
2484	1991 03	18.16146	10 21	52.50	+08 55	41.2		3 809
2499	1991 03	16.09757	09 24	04.72	+14 32	40.9		3 809
2499	1991 03	16.11215	09 24	04.38	+14 32	42.8		3 809
2499	1991 03	16.12674	09 24	04.03	+14 32	44.7		3 809
2509	1991 03	14.06632	09 28	25.01	+15 54	04.8		3 809
2509	1991 03	14.08090	09 28	24.35	+15 54	06.9		3 809
2509	1991 03	14.09549	09 28	23.71	+15 54	09.2		3 809
2509	1991 03	17.07118	09 26	31.98	+16 00	02.1		3 809
2509	1991 03	17.08576	09 26	31.55	+16 00	03.3		3 809
2509	1991 03	17.10035	09 26	31.08	+16 00	04.5		3 809
2567	1991 03	08.09167	08 28	17.93	+17 58	41.0		3 809
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2567	1991 03	08.12986	08 28	17.21	+17 58	49.5		3 809
2572	1991 03	22.29097	13 15	18.23	-09 23	24.9		3 809
2572	1991 03	22.30347	13 15	17.79	-09 23	20.2		3 809
2572	1991 03	22.31597	13 15	17.35	-09 23	15.7		3 809
2638	1991 05	18.13819	16 38	21.94	-21 59	40.5	17.8	4 809
2638	1991 05	18.15139	16 38	21.18	-21 59	35.7		4 809
2638	1991 05	18.16458	16 38	20.38	-21 59	31.2		4 809
2659	1991 03	12.05451	09 37	37.66	+13 59	22.3		3 809
2659	1991 03	12.06910	09 37	37.15	+13 59	25.3		3 809
2659	1991 03	12.08368	09 37	36.65	+13 59	28.2		3 809
2707	1991 05	18.13819	16 33	26.99	-21 05	25.6	18.4	4 809
2707	1991 05	18.15139	16 33	26.36	-21 05	24.8		4 809
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2724	1991 03	17.24548	11 08	00.46	+07 14	10.4		3 809

2724	1991 03	17.25591	11 08	00.00	+07 14	14.3		3 809
2724	1991 03	17.26632	11 07	59.55	+07 14	17.8		3 809
2724	1991 03	19.25174	11 06	30.59	+07 25	30.9		3 809
2724	1991 03	19.26215	11 06	30.14	+07 25	34.2		3 809
2724	1991 03	19.27257	11 06	29.68	+07 25	37.9		3 809
2724	1991 03	20.12952	11 05	51.96	+07 30	24.1		3 809
2724	1991 03	20.13993	11 05	51.51	+07 30	27.7		3 809
2724	1991 03	20.15034	11 05	51.03	+07 30	30.8		3 809
2724	1991 03	21.11771	11 05	08.73	+07 35	48.4		3 809
2724	1991 03	21.12813	11 05	08.27	+07 35	52.0		3 809
2724	1991 03	21.13854	11 05	07.80	+07 35	55.6		3 809
2724	1991 03	23.15278	11 03	41.23	+07 46	44.9		3 809
2724	1991 03	23.15694	11 03	41.05	+07 46	46.6		3 809
2724	1991 03	23.16111	11 03	40.87	+07 46	48.0		3 809
2724	1991 03	24.09549	11 03	01.83	+07 51	41.3		3 809
2724	1991 03	24.11493	11 03	00.98	+07 51	48.1		3 809
2724	1991 03	24.13438	11 03	00.10	+07 51	54.3		3 809
2724	1991 03	24.22396	11 02	55.95	+07 52	22.7		3 809
2724	1991 03	24.23299	11 02	55.55	+07 52	25.3		3 809
2724	1991 03	24.24201	11 02	55.15	+07 52	28.0		3 809
2847	1991 03	07.05937	09 22	40.80	+10 56	21.8		3 809
2847	1991 03	07.07257	09 22	40.22	+10 56	25.3		3 809
2847	1991 03	07.08542	09 22	39.66	+10 56	28.9		3 809
2847	1991 03	09.11354	09 21	02.79	+11 05	53.3		3 809
2847	1991 03	09.12813	09 21	02.15	+11 05	57.2		3 809
2847	1991 03	09.14271	09 21	01.52	+11 06	01.1		3 809
2853	1991 06	06.20972	16 40	56.53	-17 06	14.3	18.5	4 809
2853	1991 06	06.22292	16 40	55.65	-17 06	11.9		4 809
2853	1991 06	06.23611	16 40	54.81	-17 06	09.5		4 809
2853	1991 06	08.18611	16 38	55.37	-17 00	26.5		4 809
2853	1991 06	08.19931	16 38	54.47	-17 00	25.8		4 809
2853	1991 06	08.21250	16 38	53.59	-17 00	23.5		4 809
2865	1991 03	07.05937	09 28	18.69	+11 17	09.9		3 809
2865	1991 03	07.07257	09 28	18.05	+11 17	09.4		3 809
2865	1991 03	07.08542	09 28	17.42	+11 17	09.0		3 809
2865	1991 03	09.11354	09 26	32.32	+11 15	46.1		3 809
2865	1991 03	09.12813	09 26	31.61	+11 15	45.3		3 809
2865	1991 03	09.14271	09 26	30.90	+11 15	44.7		3 809
2925	1991 05	18.13819	16 43	55.37	-20 29	18.0	18.5	4 809
2925	1991 05	18.15139	16 43	54.53	-20 29	16.4		4 809
2925	1991 05	18.16458	16 43	53.75	-20 29	13.7		4 809
2927	1991 03	12.05451	09 40	09.41	+14 40	56.3		3 809
2927	1991 03	12.06910	09 40	08.78	+14 41	03.3		3 809
2927	1991 03	12.08368	09 40	08.19	+14 41	10.5		3 809
2927	1991 03	14.12048	09 38	51.79	+14 56	50.6		3 809
2927	1991 03	14.13091	09 38	51.36	+14 56	55.8		3 809
2927	1991 03	14.14132	09 38	50.93	+14 57	00.8		3 809
2927	1991 03	15.05868	09 38	18.15	+15 03	54.7		3 809
2927	1991 03	15.07327	09 38	17.74	+15 04	00.5		3 809
2927	1991 03	15.08784	09 38	17.32	+15 04	06.3		3 809
2927	1991 03	19.06632	09 36	06.64	+15 32	24.4		3 809
2927	1991 03	19.08090	09 36	06.22	+15 32	30.3		3 809
2927	1991 03	19.09549	09 36	05.79	+15 32	36.1		3 809
2950	1991 06	06.20972	16 37	12.35	-13 00	59.4	18.6	4 809
2950	1991 06	06.22292	16 37	11.60	-13 00	59.6		4 809
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2950	1991 06	08.18611	16 35	27.50	-13 00	45.0		4 809
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2953	1991 03	17.27744	11 08	39.46	+03 44	25.5	3 809
2953	1991 03	17.28785	11 08	38.98	+03 44	28.9	3 809
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2953	1991 03	23.17326	11 04	08.22	+04 14	05.5	3 809
2953	1991 03	23.18369	11 04	07.75	+04 14	08.6	3 809
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2958	1991 02	25.34375	12 11	21.88	-02 36	07.3	3 809
2958	1991 02	25.35625	12 11	21.44	-02 36	04.7	3 809
2958	1991 02	25.36875	12 11	20.97	-02 36	02.1	3 809
2958	1991 02	26.33715	12 10	47.46	-02 32	51.6	3 809
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2958	1991 03	11.23125	12 01	58.66	-01 40	45.7	3 809
2958	1991 03	11.24375	12 01	58.09	-01 40	42.3	3 809
2958	1991 03	11.25625	12 01	57.53	-01 40	38.9	3 809
2958	1991 03	13.30243	12 00	22.83	-01 31	03.0	3 809
2958	1991 03	13.31285	12 00	22.36	-01 31	00.2	3 809
2958	1991 03	13.32326	12 00	21.89	-01 30	57.3	3 809
3054	1991 03	11.09132	10 33	45.80	+09 47	40.1	3 809
3054	1991 03	11.10174	10 33	45.36	+09 47	42.9	3 809
3054	1991 03	11.11215	10 33	44.93	+09 47	45.3	3 809
3054	1991 03	13.15868	10 32	19.82	+09 56	45.4	3 809
3054	1991 03	13.16910	10 32	19.38	+09 56	48.0	3 809
3054	1991 03	13.17951	10 32	18.94	+09 56	50.9	3 809
3070	1991 03	17.35902	13 15	33.26	-06 27	44.7	3 809
3070	1991 03	17.37153	13 15	32.85	-06 27	40.5	3 809
3070	1991 03	17.38403	13 15	32.49	-06 27	36.2	3 809
3070	1991 03	18.33889	13 15	05.84	-06 22	31.6	3 809
3070	1991 03	18.34722	13 15	05.59	-06 22	28.8	3 809
3070	1991 03	18.35556	13 15	05.34	-06 22	25.9	3 809
3070	1991 03	19.35902	13 14	35.58	-06 16	52.7	3 809
3070	1991 03	19.37153	13 14	35.20	-06 16	48.7	3 809
3070	1991 03	19.38403	13 14	34.82	-06 16	44.4	3 809
3070	1991 03	21.33681	13 13	32.21	-06 05	28.2	3 809
3070	1991 03	21.34930	13 13	31.82	-06 05	23.9	3 809
3070	1991 03	21.36180	13 13	31.43	-06 05	19.7	3 809
3074	1991 03	11.19132	11 50	09.35	+00 36	01.0	3 809
3074	1991 03	11.20174	11 50	08.77	+00 36	03.4	3 809
3074	1991 03	11.21215	11 50	08.16	+00 36	05.9	3 809
3114	1991 03	17.20555	10 47	12.17	+07 02	15.8	3 809
3114	1991 03	17.21806	10 47	11.52	+07 02	20.3	3 809
3114	1991 03	17.23056	10 47	10.87	+07 02	24.9	3 809
3114	1991 03	18.17673	10 46	20.54	+07 08	27.5	3 809
3114	1991 03	18.18715	10 46	20.00	+07 08	31.4	3 809
3114	1991 03	18.19757	10 46	19.46	+07 08	35.2	3 809
3123	1991 03	13.06076	09 53	01.19	+14 31	47.1	3 809
3123	1991 03	13.07535	09 53	00.50	+14 31	50.9	3 809
3123	1991 03	13.08993	09 52	59.80	+14 31	54.5	3 809
3123	1991 03	15.10452	09 51	33.48	+14 39	51.4	3 809
3123	1991 03	15.11909	09 51	32.98	+14 39	54.1	3 809
3123	1991 03	15.13368	09 51	32.48	+14 39	56.9	3 809
3147	1991 05	18.13819	16 40	52.37	-19 29	41.6	4 809
3147	1991 05	18.15139	16 40	51.48	-19 29	39.4	4 809
3147	1991 05	18.16458	16 40	50.82	-19 29	37.8	4 809
3161	1991 03	19.18437	10 57	38.57	+07 48	37.9	3 809
3161	1991 03	19.19479	10 57	37.87	+07 48	37.3	3 809
3161	1991 03	19.20521	10 57	37.19	+07 48	36.8	3 809
3195	1991 03	12.09966	10 43	03.68	+06 51	50.4	3 809
3195	1991 03	12.11007	10 43	03.19	+06 51	53.6	3 809

18.6

3195	1991 03	12.12048	10 43	02.70	+06 51	56.6		3 809
3195	1991 03	14.15729	10 41	29.22	+07 01	19.6		3 809
3195	1991 03	14.16771	10 41	28.71	+07 01	22.5		3 809
3195	1991 03	14.17812	10 41	28.23	+07 01	25.5		3 809
3195	1991 03	14.18993	10 41	27.68	+07 01	28.8		3 809
3195	1991 03	14.20035	10 41	27.19	+07 01	31.8		3 809
3195	1991 03	14.21076	10 41	26.69	+07 01	34.6		3 809
3195	1991 03	15.22118	10 40	41.26	+07 06	08.0		3 809
3195	1991 03	15.23160	10 40	40.84	+07 06	10.6		3 809
3195	1991 03	15.24201	10 40	40.42	+07 06	13.0		3 809
3297	1991 03	11.01354	09 14	59.02	+17 52	46.0		3 809
3297	1991 03	11.02812	09 14	58.58	+17 52	48.0		3 809
3297	1991 03	11.04271	09 14	58.11	+17 52	50.1		3 809
3314	1991 03	22.33403	13 23	40.82	-12 21	05.6		3 809
3314	1991 03	22.34653	13 23	40.19	-12 21	05.3		3 809
3314	1991 03	22.35902	13 23	39.57	-12 21	05.2		3 809
3314	1991 03	27.37674	13 18	52.74	-12 15	42.8		3 809
3314	1991 03	27.38854	13 18	52.01	-12 15	41.5		3 809
3314	1991 03	27.40034	13 18	51.25	-12 15	40.4		3 809
3338	1991 03	14.34062	12 27	52.87	-01 51	54.3		3 809
3338	1991 03	14.35104	12 27	52.36	-01 51	50.7		3 809
3338	1991 03	14.36146	12 27	51.85	-01 51	47.2		3 809
3449	1991 03	12.28368	12 30	07.24	-00 09	50.0		3 809
3449	1991 03	12.29410	12 30	06.81	-00 09	47.2		3 809
3449	1991 03	12.30451	12 30	06.38	-00 09	44.4		3 809
3449	1991 03	14.34062	12 28	41.28	-00 00	14.3		3 809
3449	1991 03	14.35104	12 28	40.86	-00 00	11.5		3 809
3449	1991 03	14.36146	12 28	40.44	-00 00	08.4		3 809
3472	1991 05	18.13819	16 41	27.96	-21 46	09.8	19.2	4 809
3472	1991 05	18.15139	16 41	27.24	-21 46	09.3		4 809
3472	1991 05	18.16458	16 41	26.62	-21 46	06.7		4 809
3533	1991 03	14.30590	11 39	43.37	-01 25	35.1		3 809
3533	1991 03	14.31632	11 39	42.80	-01 25	30.0		3 809
3533	1991 03	14.32674	11 39	42.22	-01 25	24.6		3 809
3533	1991 03	15.26493	11 38	49.09	-01 17	10.8		3 809
3533	1991 03	15.27534	11 38	48.52	-01 17	05.2		3 809
3533	1991 03	15.28577	11 38	47.95	-01 16	59.9		3 809
3533	1991 03	17.31736	11 36	52.85	-00 59	03.7		3 809
3533	1991 03	17.32987	11 36	52.16	-00 58	57.0		3 809
3533	1991 03	17.34236	11 36	51.48	-00 58	50.4		3 809
3566	1991 03	07.05937	09 29	04.82	+11 52	49.7		3 809
3566	1991 03	07.07257	09 29	04.36	+11 52	51.7		3 809
3566	1991 03	07.08542	09 29	03.92	+11 52	53.6		3 809
3566	1991 03	09.11354	09 27	45.00	+11 58	34.0		3 809
3566	1991 03	09.12813	09 27	44.49	+11 58	36.3		3 809
3566	1991 03	09.14271	09 27	43.99	+11 58	38.4		3 809
3571	1991 05	18.13819	16 46	21.89	-22 27	33.4	18.0	4 809
3571	1991 05	18.15139	16 46	21.38	-22 27	32.4		4 809
3571	1991 05	18.16458	16 46	20.88	-22 27	30.2		4 809
3727	1991 03	11.05868	10 33	36.77	+08 43	36.4		3 809
3727	1991 03	11.06910	10 33	36.36	+08 43	39.2		3 809
3727	1991 03	11.07951	10 33	35.95	+08 43	42.3		3 809
3727	1991 03	13.10938	10 32	16.55	+08 53	39.5		3 809
3727	1991 03	13.11979	10 32	16.13	+08 53	42.6		3 809
3727	1991 03	13.13021	10 32	15.71	+08 53	45.8		3 809
3925	1991 03	18.17673	10 49	24.13	+08 09	47.1		3 809
3925	1991 03	18.18715	10 49	23.75	+08 09	51.4		3 809
3925	1991 03	18.19757	10 49	23.38	+08 09	55.8		3 809
3930	1991 03	17.35902	13 14	30.33	-07 04	57.2		3 809

3930	1991 03	17.37153	13 14	29.85	-07 04	54.8		3 809
3930	1991 03	17.38403	13 14	29.40	-07 04	52.1		3 809
3930	1991 03	19.35902	13 13	18.63	-06 58	06.2		3 809
3930	1991 03	19.37153	13 13	18.17	-06 58	03.3		3 809
3930	1991 03	19.38403	13 13	17.69	-06 58	00.5		3 809
3934	1991 03	07.05937	09 25	13.93	+12 10	56.6		3 809
3934	1991 03	07.07257	09 25	13.46	+12 11	03.3		3 809
3934	1991 03	07.08542	09 25	13.00	+12 11	09.8		3 809
3978	1991 05	18.13819	16 51	18.29	-20 38	39.7	18.2	4 809
3978	1991 05	18.15139	16 51	17.66	-20 38	35.6		4 809
3978	1991 05	18.16458	16 51	17.01	-20 38	31.3		4 809
4067	1991 08	02.11806	21 01	36.25	-20 10	03.6		4 809
4067	1991 08	02.14444	21 01	34.59	-20 10	06.4		4 809
4067	1991 08	14.16181	20 49	35.98	-20 29	54.8	18.2	4 809
4067	1991 08	14.17500	20 49	35.19	-20 29	55.6		4 809
4067	1991 08	14.18819	20 49	34.39	-20 29	56.8		4 809
4377	1991 05	18.13819	16 51	50.98	-21 01	23.5	18.3	4 809
4377	1991 05	18.15139	16 51	50.29	-21 01	21.8		4 809
4377	1991 05	18.16458	16 51	49.61	-21 01	19.1		4 809
4455	1991 05	18.13819	16 51	04.82	-21 22	49.7	18.3	4 809
4455	1991 05	18.15139	16 51	04.19	-21 22	46.7		4 809
4455	1991 05	18.16458	16 51	03.52	-21 22	43.7		4 809
4891	1991 08	02.11806	21 00	24.11	-18 39	41.6		4 809
4891	1991 08	02.14444	21 00	22.74	-18 39	45.8		4 809
4891	1991 08	14.16181	20 50	49.65	-19 10	45.9	18.5	4 809
4891	1991 08	14.17500	20 50	48.95	-19 10	48.5		4 809
4891	1991 08	14.18819	20 50	48.33	-19 10	49.7		4 809
4927	1991 08	02.11806	20 58	07.02	-17 47	28.8		4 809
4927	1991 08	02.14444	20 58	05.50	-17 47	34.0		4 809
4927	1991 08	14.16181	20 47	53.21	-18 23	27.4	18.6	4 809
4927	1991 08	14.17500	20 47	52.49	-18 23	29.9		4 809
4927	1991 08	14.18819	20 47	51.84	-18 23	32.4		4 809
4960	1991 08	03.09167	21 18	24.92	-16 04	44.7	18.5	4 809
4960	1991 08	03.10486	21 18	24.32	-16 04	47.6		4 809
4960	1991 08	03.11806	21 18	23.64	-16 04	50.1		4 809
4960	1991 08	05.25833	21 16	42.63	-16 13	12.6		4 809
4960	1991 08	05.27153	21 16	41.92	-16 13	15.1		4 809
4960	1991 08	05.28472	21 16	41.22	-16 13	18.4		4 809

## 871 Akou

K. Kawanishi, 2045-1, Kariya, Akou, Hyogo-Ken 678-02, Japan

0.20-m f/6.0 reflector

SAOC

1989 EV	1991 08	18.62778	22 43	53.92	-24 44	21.4	16.0	871
1989 EV	1991 09	10.63993	22 23	08.25	-26 05	40.0	16.0	871

## 885 JCPM Yakiimo Station

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

Observers A. Natori, T. Urata

Measurer T. Urata

0.20-m f/4.0 hyperboloid astrocamera

GSC

1981 TM3	1991 08	31.56458	23 13	40.97	-13 34	26.5	16	885
1986 VG	1991 09	06.74618	01 11	07.08	+11 57	26.0	16.8	885
1986 VG	1991 09	06.76111	01 11	06.60	+11 57	26.2		885

## 886 Susono

T. Furuta, 17-2 Mitsuike, Kagiya, Tokai 477, Japan

Observers M. Akiyama, T. Furuta

Measurer T. Furuta  
0.25-m f/4.2 Wright-Schmidt camera  
SAOC

1991 NS 1991 07 08.60208 19 35 45.4 -26 13 25 886

894 Kiyosato and Otomo

S. Otomo, Kiyosato 3545-3902, Takane-cho, Kitakoma-gun, Yamanashi-ken,  
407-03, Japan

Observer S. Otomo

Measurer S. Otomo

0.25-m reflector

1974 SP1	1991 09	09.68715	23 21	04.63	-07 07	24.4	16.9	894
1974 SP1	1991 09	09.70035	23 21	03.96	-07 07	28.1		894
1977 QD2	1991 09	28.58854	00 12	46.83	+04 47	23.5		894
1977 QD2	1991 09	28.60799	00 12	45.61	+04 47	23.4		894
1981 ED19	1991 08	03.57205	21 27	25.12	-12 52	28.6		894
1981 ED19	1991 08	03.58559	21 27	24.42	-12 52	32.5		894
1981 SY1	1991 08	31.55055	20 49	10.93	-17 09	30.8		894
1981 SY1	1991 08	31.56285	20 49	10.55	-17 09	31.4		894
1982 UT6	1991 09	09.65972	22 59	24.26	-07 09	10.7		894
1982 UT6	1991 09	09.67222	22 59	23.58	-07 09	13.0		894
1984 SM	1991 09	16.77118	00 41	24.08	+16 25	27.9		894
1984 SM	1991 09	16.78681	00 41	23.31	+16 25	24.4		894
1984 SM	1991 09	19.65938	00 39	02.43	+16 15	26.5		894
1984 SM	1991 09	19.67188	00 39	01.69	+16 15	23.4		894
1984 SM	1991 09	28.62951	00 30	59.18	+15 30	19.5		894
1984 SM	1991 09	28.65243	00 30	57.89	+15 30	12.4		894
1986 SD2	1991 08	31.63322	22 13	27.36	+00 19	23.5	16.5	894
1986 SD2	1991 08	31.64410	22 13	26.76	+00 19	23.4		894
1986 SD2	1991 09	07.51233	22 07	36.23	+00 07	47.5	16.5	894
1986 SD2	1991 09	07.57847	22 07	32.82	+00 07	39.4		894
1986 SD2	1991 09	09.60174	22 05	54.05	+00 03	40.8		894
1986 SD2	1991 09	09.61424	22 05	53.44	+00 03	38.7		894
1991 NE1	1991 08	03.57205	21 26	55.97	-12 10	18.9	16.5	894
1991 NE1	1991 08	03.58559	21 26	55.33	-12 10	20.4	16.5	894
1991 PB	1991 08	15.58854	20 59	50.20	-15 47	35.5	15.5	894
1991 PB	1991 08	15.60000	20 59	49.70	-15 47	39.0		894
1991 PB	1991 08	15.64167	20 59	47.83	-15 47	54.9		894
1991 PA11	1991 09	09.75949	23 44	21.61	+02 36	13.9	15.8	894
1991 PA11	1991 09	09.77639	23 44	20.88	+02 36	02.9		894
1991 PD15	1991 08	31.63322	22 21	24.42	+01 57	27.7	16.5	894
1991 PD15	1991 08	31.64410	22 21	23.92	+01 57	28.9		894
1991 PD15	1991 09	07.59236	22 16	55.13	+02 04	30.5	16.5	894
1991 PD15	1991 09	07.60370	22 16	54.71	+02 04	31.2		894
1991 PD15	1991 09	09.50629	22 15	50.18	+02 04	41.9		894
1991 PD15	1991 09	09.54653	22 15	48.71	+02 04	41.6		894
1991 QC	1991 09	09.57500	22 12	39.35	-04 35	54.5		894
1991 QC	1991 09	09.58750	22 12	38.82	-04 35	58.6		894
1991 QD	1991 09	08.69653	22 23	10.47	-01 53	52.0		894
1991 QD	1991 09	09.56042	22 22	20.26	-01 55	31.9		894
1991 QG *	1991 08	31.63322	22 12	20.43	+00 46	32.8	16.5	894
1991 QG	1991 08	31.64410	22 12	20.10	+00 46	27.3		894
1991 QG	1991 09	07.51233	22 09	19.04	-00 14	35.2	16.5	894
1991 QG	1991 09	07.57847	22 09	17.30	-00 15	13.1		894
1991 QG	1991 09	09.60174	22 08	30.29	-00 34	22.2		894
1991 QG	1991 09	09.61424	22 08	30.06	-00 34	29.5		894
1991 QH *	1991 08	31.63322	22 15	49.97	-00 18	21.0	16.2	894
1991 QH	1991 08	31.64410	22 15	49.52	-00 18	26.5		894

1991 QH	1991 09 07.48646	22 11 01.42	-01 11 04.1	16.3	894
1991 QH	1991 09 07.49826	22 11 00.96	-01 11 07.9		894
1991 QH	1991 09 07.51233	22 11 00.38	-01 11 15.9		894
1991 QH	1991 09 07.57847	22 10 57.44	-01 11 47.0		894
1991 QH	1991 09 09.60174	22 09 39.18	-01 28 16.7		894
1991 QH	1991 09 09.61424	22 09 38.62	-01 28 23.0		894
1991 QJ *	1991 08 31.70590	22 51 15.27	-06 56 40.6	16.5	894
1991 QJ	1991 08 31.71840	22 51 14.73	-06 56 46.7		894
1991 QJ	1991 09 09.63160	22 45 15.81	-08 33 58.5	16.7	894
1991 QJ	1991 09 09.64479	22 45 15.31	-08 34 06.9		894
1991 QJ	1991 09 16.70000	22 41 00.26	-09 45 11.0		894
1991 QJ	1991 09 19.68858	22 39 28.74	-10 12 29.9		894
1991 QJ	1991 09 19.70000	22 39 28.25	-10 12 35.2		894
1991 RK2 *	1991 09 09.68715	23 19 45.34	-09 37 17.9	16.5	894
1991 RK2	1991 09 09.70035	23 19 44.69	-09 37 24.0		894
1991 RK2	1991 09 19.73698	23 12 07.52	-11 13 24.9		894
1991 RK2	1991 09 19.74444	23 12 07.28	-11 13 30.5		894
1991 RK2	1991 09 28.55243	23 06 14.96	-12 23 17.2		894
1991 RK2	1991 09 28.57326	23 06 14.05	-12 23 27.1		894
1991 RN4 *	1991 09 09.65972	23 02 20.58	-07 44 10.8	16.5	894
1991 RN4	1991 09 09.67222	23 02 20.00	-07 44 18.6		894
1991 RN4	1991 09 19.71424	22 55 18.85	-09 26 47.3		894
1991 RN4	1991 09 19.72535	22 55 18.28	-09 26 56.3		894
1991 RN4	1991 09 28.54236	22 50 18.85	-10 44 42.8		894
1991 RN4	1991 09 28.56319	22 50 18.40	-10 44 53.2		894
1991 SA *	1991 09 16.77118	00 41 26.37	+17 28 44.5	16.5	894
1991 SA	1991 09 16.78681	00 41 25.76	+17 28 41.5		894
1991 SA	1991 09 19.65938	00 39 19.20	+17 19 08.6		894
1991 SA	1991 09 19.67188	00 39 18.50	+17 19 07.3		894
1991 SA	1991 09 28.62951	00 31 58.10	+16 32 39.4		894
1991 SA	1991 09 28.65243	00 31 56.69	+16 32 31.6		894
1991 SF1 *	1991 09 28.59826	00 12 29.97	+08 45 03.0	16.2	894
1991 SF1	1991 09 28.61875	00 12 28.81	+08 44 46.6		894
1991 SF1	1991 10 01.65521	00 10 07.48	+08 04 10.1		894
1991 SF1	1991 10 01.70139	00 10 05.19	+08 03 29.3		894
1080	1991 09 19.71424	22 55 06.54	-09 04 42.7		894
1080	1991 09 19.72535	22 55 05.80	-09 04 45.4		894
2174	1991 09 19.71424	22 58 05.46	-10 00 12.3		894
2174	1991 09 19.72535	22 58 04.77	-10 00 11.3		894

900 Kiryuu Observatory, Ohtsu  
 Y. Ikari, Katsube 626, Moriyama, Shiga-Ken, 524 Japan  
 Observer Y. Ikari  
 0.26-m f/7.0 reflector

SAOC					
536	1991 09 01.67795	02 00 48.74	-08 18 04.0		900
536	1991 09 05.61551	01 59 55.90	-08 28 43.6		900

The following discoveries were observed on one night only:

1990 OH5 *	1990 07 26.98333	21 43 17.98	-11 59 06.3		033
1990 OH5	1990 07 27.02361	21 43 16.46	-11 59 17.1	18.2	033
1990 OJ5 *	1990 07 18.90109	18 22 35.38	-03 49 47.5	17.3	046
1990 OJ5	1990 07 18.91521	18 22 34.74	-03 49 40.6		046
1990 OK5 *	1990 07 18.90109	18 23 59.57	-05 37 53.8	17.2	046
1990 OK5	1990 07 18.91521	18 23 58.98	-05 37 57.9		046
1990 OL5 *	1990 07 18.90109	18 31 49.48	-04 17 05.8	17.0	046
1990 OL5	1990 07 18.91521	18 31 48.74	-04 16 58.5		046
1990 OM5 *	1990 07 22.92288	20 11 56.98	-16 54 06.8		046

1990	OM5	1990	07	22.93712	20	11	56.61	-16	54	09.7		046
1990	ON5 *	1990	07	22.92288	20	18	27.17	-15	21	25.3	16.7	046
1990	ON5	1990	07	22.93712	20	18	26.42	-15	21	24.7		046
1990	OO5 *	1990	07	24.89028	20	28	08.74	-10	05	45.2		046
1990	OO5	1990	07	24.90440	20	28	08.10	-10	05	42.9		046
1990	OP5 *	1990	07	24.92581	20	50	08.43	-15	13	43.0	16.7	046
1990	OP5	1990	07	24.93993	20	50	07.80	-15	13	39.3		046
1990	OQ5 *	1990	07	24.92581	20	54	21.89	-14	40	37.6	16.6	046
1990	OQ5	1990	07	24.93993	20	54	20.92	-14	40	32.4		046
1990	OR5 *	1990	07	24.96042	21	20	51.91	-02	36	04.5	16.8	046
1990	OR5	1990	07	24.97465	21	20	51.00	-02	36	01.6		046
1990	OS5 *	1990	07	24.34618	20	04	42.42	-11	30	40.2	17.2	675
1990	OS5	1990	07	24.37847	20	04	40.63	-11	30	54.4		675
1990	PG *	1990	08	15.96458	21	22	28.73	-18	03	54.1		046
1990	PG	1990	08	15.97743	21	22	27.80	-18	03	57.2		046
1990	PH *	1990	08	15.96875	21	39	04.09	-11	16	00.4		511
1990	PH	1990	08	15.98750	21	39	03.38	-11	16	12.6	17.5	511
1990	PJ *	1990	08	15.96875	21	39	51.30	-13	52	05.3		511
1990	PJ	1990	08	15.98750	21	39	50.30	-13	52	13.8	17.7	511
1990	PK *	1990	08	15.96875	21	41	43.34	-12	53	56.0		511
1990	PK	1990	08	15.98750	21	41	42.34	-12	54	11.1	18.0	511
1990	PL *	1990	08	01.28566	23	10	06.79	-03	12	15.3		808
1990	PL	1990	08	01.32028	23	10	05.73	-03	12	24.3		808
1990	PM *	1990	08	13.12789	19	52	46.58	-22	39	10.1		808
1990	PM	1990	08	13.16321	19	52	44.77	-22	38	57.1		808
1990	PN *	1990	08	13.12789	19	54	05.84	-22	48	34.2		808
1990	PN	1990	08	13.16321	19	54	04.26	-22	46	48.4		808
1990	PO *	1990	08	13.12789	19	56	41.13	-22	00	24.8		808
1990	PO	1990	08	13.16321	19	56	39.64	-22	00	16.0		808
1990	QD11*	1990	08	17.88257	21	31	52.00	-04	38	53.5	17.0	046
1990	QD11	1990	08	17.89681	21	31	51.28	-04	38	49.4		046
1990	QE11*	1990	08	17.91833	21	37	44.02	-15	25	10.1	16.9	046
1990	QE11	1990	08	17.93118	21	37	43.43	-15	25	07.5		046
1990	QF11*	1990	08	17.96972	21	56	28.06	-07	52	17.0	16.9	046
1990	QF11	1990	08	17.98153	21	56	27.27	-07	52	21.1		046
1990	QG11*	1990	08	17.96972	21	57	13.07	-08	15	56.1	16.7	046
1990	QG11	1990	08	17.98153	21	57	12.17	-08	15	57.3		046
1990	QH11*	1990	08	17.96972	21	58	29.77	-07	11	13.3	16.8	046
1990	QH11	1990	08	17.98153	21	58	29.25	-07	11	14.9		046
1990	QJ11*	1990	08	24.88194	21	14	06.25	-16	46	01.8		046
1990	QJ11	1990	08	24.89597	21	14	05.67	-16	46	05.0		046
1990	QK11*	1990	08	24.91507	21	01	22.30	-13	01	11.9	16.9	046
1990	QK11	1990	08	24.92913	21	01	21.66	-13	01	12.1		046
1990	QL11*	1990	08	24.94819	22	06	58.96	-12	42	40.8	16.1	046
1990	QL11	1990	08	24.96093	22	06	58.35	-12	42	32.0		046
1990	QM11*	1990	08	24.94819	22	10	17.26	-12	47	02.4	16.7	046
1990	QM11	1990	08	24.96093	22	10	16.78	-12	47	09.5		046
1990	QN11*	1990	08	24.97875	22	13	11.70	-03	14	56.0	16.3	046
1990	QN11	1990	08	24.99148	22	13	11.19	-03	14	51.2		046
1990	QO11*	1990	08	24.97875	22	14	53.06	-05	52	53.5	16.7	046
1990	QO11	1990	08	24.99148	22	14	52.63	-05	53	02.0		046
1990	QP11*	1990	08	24.97875	22	15	32.85	-03	33	13.9	17.0	046
1990	QP11	1990	08	24.99148	22	15	32.11	-03	33	07.1		046
1990	QQ11*	1990	08	24.97875	22	19	42.91	-04	18	14.9	16.8	046
1990	QQ11	1990	08	24.99148	22	19	42.42	-04	18	10.4		046
1990	QR11*	1990	08	28.90541	21	44	22.04	+02	51	49.7		046
1990	QR11	1990	08	28.91981	21	44	21.43	+02	51	43.6		046
1990	QS11*	1990	08	28.57269	00	49	29.77	-23	44	05.0	16	V 413
1990	QS11	1990	08	28.69769	00	49	26.51	-23	44	20.7		413

1990	QT11*	1990	08	24.07500	23	28	07.26	+02	22	51.5	18.2	511
1990	QU11*	1990	08	28.08889	23	03	41.42	+02	25	37.6		511
1990	QV11*	1990	08	22.40318	23	17	55.38	-03	16	54.5	17.8	675
1990	QV11	1990	08	22.44363	23	17	53.61	-03	16	59.3		675
1990	QW11*	1990	08	23.43941	23	09	07.21	-08	11	01.2	17.5	675
1990	QW11	1990	08	23.47517	23	09	05.51	-08	11	17.5		675
1990	QX11*	1990	08	25.35955	23	21	00.01	-09	25	47.7	17.5	675
1990	QX11	1990	08	25.39792	23	20	58.41	-09	26	00.8		675
1990	QY11*	1990	08	25.35955	23	29	19.81	-12	12	44.1	17.2	675
1990	QY11	1990	08	25.39792	23	29	17.53	-12	12	47.0		675
1990	QZ11*	1990	08	25.35955	23	35	19.32	-10	14	04.7	17.2	675
1990	QZ11	1990	08	25.39792	23	35	18.35	-10	14	30.5		675
1990	QA12*	1990	08	25.35955	23	36	54.03	-10	21	13.6	17.2	675
1990	QA12	1990	08	25.39792	23	36	52.69	-10	21	25.8		675
1990	QB12*	1990	08	26.36111	22	56	28.12	-13	30	14.6	17.5	675
1990	QB12	1990	08	26.39948	22	56	26.57	-13	30	49.8		675
1990	QC12*	1990	08	26.36111	23	04	09.09	-13	42	51.7	17.0	675
1990	QC12	1990	08	26.39948	23	04	06.93	-13	42	56.9		675
1990	QD12*	1990	08	26.36111	23	10	37.65	-12	54	21.5	17.2	675
1990	QD12	1990	08	26.39948	23	10	35.83	-12	54	37.9		675
1990	QE12*	1990	08	27.36354	22	25	23.08	-11	20	00.8	17.8	675
1990	QE12	1990	08	27.39615	22	25	21.58	-11	20	16.5		675
1990	QF12*	1990	08	27.36354	22	39	01.43	-12	48	46.7	17.2	675
1990	QF12	1990	08	27.39615	22	38	59.42	-12	48	59.3		675
1990	QG12*	1990	08	27.29953	23	29	26.78	-01	39	38.7	19.5R	E 688
1990	QG12	1990	08	27.30711	23	29	26.46	-01	39	40.5		E 688
1990	QH12*	1990	08	21.07765	19	33	59.50	-43	42	24.3		808
1990	QJ12*	1990	08	21.07765	19	50	21.83	-46	02	26.5		808
1990	QK12*	1990	08	22.14833	21	11	53.42	-05	22	33.1		808
1990	QK12	1990	08	22.17257	21	11	52.23	-05	22	41.4		808
1990	QL12*	1990	08	16.21389	22	49	27.06	-09	15	39.3	20.5	809
1990	QL12	1990	08	16.22708	22	49	26.18	-09	15	42.3		809
1990	QL12	1990	08	16.24028	22	49	25.38	-09	15	46.5		809
1990	QM12*	1990	08	16.21389	22	52	21.00	-07	21	52.8	19.4	809
1990	QM12	1990	08	16.22708	22	52	20.27	-07	22	00.7		809
1990	QM12	1990	08	16.24028	22	52	20.01	-07	22	04.5		809
1990	QN12*	1990	08	16.21389	22	54	57.56	-07	57	35.3	20.5	809
1990	QN12	1990	08	16.22708	22	54	56.74	-07	57	39.7		809
1990	QN12	1990	08	16.24028	22	54	55.93	-07	57	45.0		809
1990	QO12*	1990	08	16.21389	22	57	30.07	-06	57	21.9	19.4	809
1990	QO12	1990	08	16.22708	22	57	29.34	-06	57	19.2		809
1990	QO12	1990	08	16.24028	22	57	28.60	-06	57	15.7		809
1990	QP12*	1990	08	16.21389	23	02	31.04	-05	37	55.5	19.3	809
1990	QP12	1990	08	16.22708	23	02	30.53	-05	37	58.1		809
1990	QP12	1990	08	16.24028	23	02	30.05	-05	38	00.4		809
1990	QQ12*	1990	08	16.21389	23	02	57.03	-10	06	14.3	20.0	809
1990	QQ12	1990	08	16.22708	23	02	56.20	-10	06	16.8		809
1990	QQ12	1990	08	16.24028	23	02	55.26	-10	06	16.5		809
1990	QR12*	1990	08	16.21389	23	06	45.21	-06	10	45.4	18.8	809
1990	QR12	1990	08	16.22708	23	06	44.65	-06	10	47.0		809
1990	QR12	1990	08	16.24028	23	06	44.06	-06	10	48.0		809
1990	QS12*	1990	08	16.21389	23	07	00.51	-10	09	14.3	18.6	809
1990	QS12	1990	08	16.22708	23	07	00.12	-10	09	23.6		809
1990	QS12	1990	08	16.24028	23	06	59.65	-10	09	32.6		809
1990	QT12*	1990	08	16.27222	23	17	11.49	-06	21	38.8	20.0	809
1990	QT12	1990	08	16.28542	23	17	11.09	-06	21	45.9		809
1990	QT12	1990	08	16.29861	23	17	10.64	-06	21	53.1		809
1990	QU12*	1990	08	16.27222	23	19	16.37	-05	34	04.5	19.5	809
1990	QU12	1990	08	16.28542	23	19	15.88	-05	34	07.8		809

1990	QU12	1990	08	16.29861	23	19	15.41	-05	34	11.1		809
1990	QV12*	1990	08	16.27222	23	19	37.26	-05	52	49.2	19.2	809
1990	QV12	1990	08	16.28542	23	19	36.96	-05	52	52.7		809
1990	QV12	1990	08	16.29861	23	19	36.61	-05	52	57.1		809
1990	QW12*	1990	08	16.27222	23	20	03.77	-04	12	27.9	19.0	809
1990	QW12	1990	08	16.28542	23	20	03.33	-04	12	30.3		809
1990	QW12	1990	08	16.29861	23	20	02.97	-04	12	31.7		809
1990	QX12*	1990	08	16.27222	23	21	10.72	-06	18	59.6	19.7	809
1990	QX12	1990	08	16.28542	23	21	10.25	-06	19	02.8		809
1990	QX12	1990	08	16.29861	23	21	09.81	-06	19	05.5		809
1990	QY12*	1990	08	16.27222	23	21	52.79	-03	07	27.5	18.7	809
1990	QY12	1990	08	16.28542	23	21	52.25	-03	07	29.5		809
1990	QY12	1990	08	16.29861	23	21	51.72	-03	07	30.9		809
1990	QZ12*	1990	08	16.27222	23	22	29.24	-03	30	48.9	19.7	809
1990	QZ12	1990	08	16.28542	23	22	28.72	-03	30	48.3		809
1990	QZ12	1990	08	16.29861	23	22	28.25	-03	30	47.4		809
1990	QA13*	1990	08	16.27222	23	24	01.87	-03	51	07.1	19.4	809
1990	QA13	1990	08	16.28542	23	24	01.52	-03	51	09.7		809
1990	QA13	1990	08	16.29861	23	24	01.22	-03	51	11.0		809
1990	QB13*	1990	08	16.27222	23	24	34.22	-02	32	42.1	19.0	809
1990	QB13	1990	08	16.28542	23	24	33.64	-02	32	39.7		809
1990	QB13	1990	08	16.29861	23	24	33.02	-02	32	39.5		809
1990	QC13*	1990	08	16.27222	23	24	36.21	-03	17	06.2	18.8	809
1990	QC13	1990	08	16.28542	23	24	35.72	-03	17	10.4		809
1990	QC13	1990	08	16.29861	23	24	35.20	-03	17	13.2		809
1990	QD13*	1990	08	16.27222	23	27	57.64	-05	51	56.9	19.5	809
1990	QD13	1990	08	16.28542	23	27	56.97	-05	52	04.0		809
1990	QD13	1990	08	16.29861	23	27	56.36	-05	52	10.1		809
1990	QE13*	1990	08	16.27222	23	28	03.39	-03	29	32.6	19.0	809
1990	QE13	1990	08	16.28542	23	28	02.90	-03	29	33.3		809
1990	QE13	1990	08	16.29861	23	28	02.39	-03	29	35.0		809
1990	QF13*	1990	08	16.27222	23	30	55.59	-06	23	04.5	19.5	809
1990	QF13	1990	08	16.28542	23	30	55.25	-06	23	05.5		809
1990	QF13	1990	08	16.29861	23	30	54.96	-06	23	10.8		809
1990	QG13*	1990	08	16.27222	23	31	51.70	-05	38	34.1	19.2	809
1990	QG13	1990	08	16.28542	23	31	51.24	-05	38	37.2		809
1990	QG13	1990	08	16.29861	23	31	50.65	-05	38	39.9		809
1990	QH13*	1990	08	16.27222	23	31	56.87	-03	33	57.8	18.6	809
1990	QH13	1990	08	16.28542	23	31	56.42	-03	33	59.6		809
1990	QH13	1990	08	16.29861	23	31	55.93	-03	34	00.4		809
1990	QJ13*	1990	08	16.27222	23	33	59.16	-04	38	56.7	19.0	809
1990	QJ13	1990	08	16.28542	23	33	58.93	-04	39	05.9		809
1990	QJ13	1990	08	16.29861	23	33	58.62	-04	39	14.3		809
1990	QK13*	1990	08	16.27222	23	34	08.05	-07	25	21.3	18.6	809
1990	QK13	1990	08	16.28542	23	34	07.77	-07	25	27.8		809
1990	QK13	1990	08	16.29861	23	34	07.33	-07	25	35.7		809
1990	QL13*	1990	08	16.27222	23	35	13.80	-04	35	24.6	19.5	809
1990	QL13	1990	08	16.28542	23	35	13.41	-04	35	31.1		809
1990	QL13	1990	08	16.29861	23	35	13.03	-04	35	37.9		809
1990	QM13*	1990	08	18.22361	22	45	52.45	-10	11	35.7	18.8	809
1990	QM13	1990	08	18.23681	22	45	51.62	-10	11	36.0		809
1990	QM13	1990	08	18.25000	22	45	50.70	-10	11	38.2		809
1990	QN13*	1990	08	18.22361	22	46	51.52	-08	44	46.1	18.6	809
1990	QN13	1990	08	18.23681	22	46	51.31	-08	44	56.4		809
1990	QN13	1990	08	18.25000	22	46	51.20	-08	45	03.4		809
1990	QO13*	1990	08	18.22361	22	51	26.33	-07	29	52.8	19.7	809
1990	QO13	1990	08	18.23681	22	51	25.75	-07	29	58.5		809
1990	QO13	1990	08	18.25000	22	51	25.16	-07	30	03.3		809
1990	QP13*	1990	08	20.23194	23	15	50.28	-03	36	59.8	18.5	809



1990	QP13	1990	08	20.24514	23	15	49.82	-03	37	01.5		809
1990	QP13	1990	08	20.25833	23	15	49.40	-03	37	03.1		809
1990	QQ13*	1990	08	20.23194	23	17	28.29	-05	56	58.7	20.0	809
1990	QQ13	1990	08	20.24514	23	17	27.53	-05	57	00.0		809
1990	QQ13	1990	08	20.25833	23	17	26.72	-05	57	00.2		809
1990	QR13*	1990	08	20.23194	23	18	10.73	-03	12	12.0	19.0	809
1990	QR13	1990	08	20.24514	23	18	10.24	-03	12	16.2		809
1990	QR13	1990	08	20.25833	23	18	09.71	-03	12	20.1		809
1990	QS13*	1990	08	20.23194	23	18	49.52	-04	14	59.4	19.2	809
1990	QS13	1990	08	20.24514	23	18	48.88	-04	14	59.5		809
1990	QS13	1990	08	20.25833	23	18	48.22	-04	15	00.3		809
1990	QT13*	1990	08	20.23194	23	19	48.80	-06	35	13.8	20.5	809
1990	QT13	1990	08	20.24514	23	19	48.34	-06	35	17.4		809
1990	QT13	1990	08	20.25833	23	19	47.86	-06	35	22.2		809
1990	QU13*	1990	08	20.23194	23	19	51.92	-04	50	50.6	20.5	809
1990	QU13	1990	08	20.24514	23	19	51.38	-04	50	55.7		809
1990	QU13	1990	08	20.25833	23	19	50.83	-04	51	00.7		809
1990	QV13*	1990	08	20.23194	23	19	52.02	-03	17	21.8	18.7	809
1990	QV13	1990	08	20.24514	23	19	51.44	-03	17	29.7		809
1990	QV13	1990	08	20.25833	23	19	50.81	-03	17	36.4		809
1990	QW13*	1990	08	20.23194	23	20	03.79	-04	12	27.5	18.6	809
1990	QW13	1990	08	20.24514	23	20	03.33	-04	12	28.7		809
1990	QW13	1990	08	20.25833	23	20	02.84	-04	12	31.0		809
1990	QX13*	1990	08	20.23194	23	20	45.89	-04	04	07.4	19.6	809
1990	QX13	1990	08	20.24514	23	20	45.37	-04	04	10.3		809
1990	QX13	1990	08	20.25833	23	20	44.82	-04	04	13.5		809
1990	QY13*	1990	08	20.23194	23	21	40.32	-06	44	27.9	20.5	809
1990	QY13	1990	08	20.24514	23	21	39.88	-06	44	28.4		809
1990	QY13	1990	08	20.25833	23	21	39.33	-06	44	29.8		809
1990	QZ13*	1990	08	20.23194	23	21	40.86	-05	53	20.0	20.5	809
1990	QZ13	1990	08	20.24514	23	21	40.37	-05	53	24.0		809
1990	QZ13	1990	08	20.25833	23	21	39.87	-05	53	30.7		809
1990	QA14*	1990	08	20.23194	23	21	42.48	-02	58	31.0	19.2	809
1990	QA14	1990	08	20.24514	23	21	42.05	-02	58	37.7		809
1990	QA14	1990	08	20.25833	23	21	41.54	-02	58	43.6		809
1990	QB14*	1990	08	20.23194	23	21	46.55	-07	59	34.5	18.8	809
1990	QB14	1990	08	20.24514	23	21	46.02	-07	59	38.8		809
1990	QB14	1990	08	20.25833	23	21	45.55	-07	59	41.4		809
1990	QC14*	1990	08	20.23194	23	24	02.07	-03	01	01.9	19.3	809
1990	QC14	1990	08	20.24514	23	24	01.66	-03	01	04.5		809
1990	QC14	1990	08	20.25833	23	24	01.23	-03	01	07.7		809
1990	QD14*	1990	08	20.23194	23	25	02.49	-05	54	23.7	19.0	809
1990	QD14	1990	08	20.24514	23	25	01.81	-05	54	23.0		809
1990	QD14	1990	08	20.25833	23	25	01.12	-05	54	22.7		809
1990	QE14*	1990	08	20.23194	23	25	40.10	-06	23	35.8	19.3	809
1990	QE14	1990	08	20.24514	23	25	39.64	-06	23	42.6		809
1990	QE14	1990	08	20.25833	23	25	39.04	-06	23	50.6		809
1990	QF14*	1990	08	20.23194	23	25	54.39	-06	49	20.8	19.6	809
1990	QF14	1990	08	20.24514	23	25	53.70	-06	49	23.9		809
1990	QF14	1990	08	20.25833	23	25	53.13	-06	49	27.5		809
1990	QG14*	1990	08	20.23194	23	26	42.41	-03	13	44.6	19.5	809
1990	QG14	1990	08	20.24514	23	26	41.89	-03	13	45.1		809
1990	QG14	1990	08	20.25833	23	26	41.36	-03	13	45.2		809
1990	QH14*	1990	08	20.23194	23	27	56.92	-05	08	40.2	19.7	809
1990	QH14	1990	08	20.24514	23	27	56.39	-05	08	46.2		809
1990	QH14	1990	08	20.25833	23	27	56.00	-05	08	51.1		809
1990	QJ14*	1990	08	20.23194	23	28	27.09	-06	17	35.6	19.5	809
1990	QJ14	1990	08	20.24514	23	28	26.43	-06	17	33.9		809
1990	QJ14	1990	08	20.25833	23	28	25.79	-06	17	33.7		809

1990	QK14*	1990	08	20.23194	23	31	04.97	-03	18	25.9	18.8	809
1990	QK14	1990	08	20.24514	23	31	04.29	-03	18	27.0		809
1990	QK14	1990	08	20.25833	23	31	03.62	-03	18	30.0		809
1990	QL14*	1990	08	20.23194	23	31	44.79	-07	59	39.6	20.0	809
1990	QL14	1990	08	20.24514	23	31	44.03	-07	59	43.5		809
1990	QL14	1990	08	20.25833	23	31	43.37	-07	59	49.2		809
1990	QM14*	1990	08	20.23194	23	33	04.94	-05	41	55.4	20.0	809
1990	QM14	1990	08	20.24514	23	33	04.58	-05	41	58.8		809
1990	QM14	1990	08	20.25833	23	33	04.21	-05	42	00.7		809
1990	QN14*	1990	08	20.23194	23	34	48.36	-05	09	05.4	20.5	809
1990	QN14	1990	08	20.24514	23	34	47.77	-05	09	06.4		809
1990	QN14	1990	08	20.25833	23	34	47.26	-05	09	06.7		809
1990	QO14*	1990	08	26.16042	22	38	00.67	-08	40	36.2	18.6	809
1990	QO14	1990	08	26.17361	22	38	00.19	-08	40	45.3		809
1990	QO14	1990	08	26.18681	22	37	59.66	-08	40	54.9		809
1990	QP14*	1990	08	26.16042	22	38	08.45	-10	29	49.5	18.6	809
1990	QP14	1990	08	26.17361	22	38	07.64	-10	29	51.2		809
1990	QP14	1990	08	26.18681	22	38	06.83	-10	29	53.1		809
1990	QQ14*	1990	08	26.16042	22	38	37.45	-11	03	23.4	18.7	809
1990	QQ14	1990	08	26.17361	22	38	36.64	-11	03	22.6		809
1990	QQ14	1990	08	26.18681	22	38	35.79	-11	03	21.6		809
1990	QR14*	1990	08	26.16042	22	38	51.38	-08	39	00.5	18.5	809
1990	QR14	1990	08	26.17361	22	38	50.88	-08	39	08.8		809
1990	QR14	1990	08	26.18681	22	38	50.30	-08	39	19.6		809
1990	QS14*	1990	08	26.16042	22	38	52.43	-11	03	20.3	19.4	809
1990	QS14	1990	08	26.17361	22	38	51.78	-11	03	24.8		809
1990	QS14	1990	08	26.18681	22	38	51.01	-11	03	31.6		809
1990	QT14*	1990	08	26.16042	22	38	55.37	-07	57	41.8	19.3	809
1990	QT14	1990	08	26.17361	22	38	54.66	-07	57	45.1		809
1990	QT14	1990	08	26.18681	22	38	53.96	-07	57	47.6		809
1990	QU14*	1990	08	26.16042	22	39	17.95	-10	45	41.2	18.6	809
1990	QU14	1990	08	26.17361	22	39	17.34	-10	45	45.9		809
1990	QU14	1990	08	26.18681	22	39	16.73	-10	45	49.9		809
1990	QV14*	1990	08	26.16042	22	39	47.52	-10	17	33.0	18.5	809
1990	QV14	1990	08	26.17361	22	39	47.21	-10	17	42.5		809
1990	QV14	1990	08	26.18681	22	39	46.81	-10	17	53.8		809
1990	QW14*	1990	08	26.16042	22	39	58.23	-11	03	14.2	18.8	809
1990	QW14	1990	08	26.17361	22	39	57.55	-11	03	17.9		809
1990	QW14	1990	08	26.18681	22	39	56.94	-11	03	21.5		809
1990	QX14*	1990	08	26.16042	22	40	39.09	-09	54	55.5	19.2	809
1990	QX14	1990	08	26.17361	22	40	38.69	-09	54	59.9		809
1990	QX14	1990	08	26.18681	22	40	38.11	-09	55	05.4		809
1990	QY14*	1990	08	26.16042	22	41	51.20	-10	43	38.1	19.8	809
1990	QY14	1990	08	26.17361	22	41	50.62	-10	43	42.5		809
1990	QY14	1990	08	26.18681	22	41	49.85	-10	43	48.4		809
1990	QZ14*	1990	08	26.16042	22	42	14.76	-11	40	37.0	19.5	809
1990	QZ14	1990	08	26.17361	22	42	13.93	-11	40	40.3		809
1990	QZ14	1990	08	26.18681	22	42	13.19	-11	40	44.1		809
1990	QA15*	1990	08	26.16042	22	43	00.17	-11	31	10.8	19.7	809
1990	QA15	1990	08	26.17361	22	42	59.45	-11	31	16.9		809
1990	QA15	1990	08	26.18681	22	42	58.85	-11	31	22.2		809
1990	QB15*	1990	08	26.16042	22	43	04.17	-09	59	42.7	19.3	809
1990	QB15	1990	08	26.17361	22	43	03.54	-09	59	48.6		809
1990	QB15	1990	08	26.18681	22	43	02.75	-09	59	55.8		809
1990	QC15*	1990	08	26.16042	22	43	18.38	-07	24	02.0	18.6	809
1990	QC15	1990	08	26.17361	22	43	17.85	-07	24	09.8		809
1990	QC15	1990	08	26.18681	22	43	17.27	-07	24	19.5		809
1990	QD15*	1990	08	26.16042	22	43	18.39	-11	57	07.3	19.6	809
1990	QD15	1990	08	26.17361	22	43	17.64	-11	57	08.1		809

1990	QD15	1990	08	26.18681	22	43	16.99	-11	57	10.8		809
1990	QE15*	1990	08	26.16042	22	43	34.68	-09	57	08.6	20.0	809
1990	QE15	1990	08	26.17361	22	43	33.97	-09	57	11.5		809
1990	QE15	1990	08	26.18681	22	43	33.41	-09	57	14.1		809
1990	QF15*	1990	08	26.16042	22	43	41.75	-10	09	25.0	19.5	809
1990	QF15	1990	08	26.17361	22	43	40.98	-10	09	18.9		809
1990	QF15	1990	08	26.18681	22	43	40.12	-10	09	15.0		809
1990	QG15*	1990	08	26.16042	22	43	48.80	-09	58	50.9	19.6	809
1990	QG15	1990	08	26.17361	22	43	48.17	-09	58	52.6		809
1990	QG15	1990	08	26.18681	22	43	47.52	-09	58	54.7		809
1990	QH15*	1990	08	26.16042	22	43	56.70	-11	33	18.6	19.6	809
1990	QH15	1990	08	26.17361	22	43	56.04	-11	33	24.0		809
1990	QH15	1990	08	26.18681	22	43	55.38	-11	33	29.7		809
1990	QJ15*	1990	08	26.16042	22	45	39.45	-10	17	54.5	18.5	809
1990	QJ15	1990	08	26.17361	22	45	39.29	-10	18	04.3		809
1990	QJ15	1990	08	26.18681	22	45	39.06	-10	18	13.7		809
1990	QK15*	1990	08	26.16042	22	46	04.68	-08	04	50.0	18.8	809
1990	QK15	1990	08	26.17361	22	46	04.06	-08	04	56.1		809
1990	QK15	1990	08	26.18681	22	46	03.44	-08	05	01.7		809
1990	QL15*	1990	08	26.16042	22	46	07.29	-07	26	00.2	19.2	809
1990	QL15	1990	08	26.17361	22	46	06.71	-07	26	05.3		809
1990	QL15	1990	08	26.18681	22	46	06.26	-07	26	09.2		809
1990	QM15*	1990	08	26.16042	22	46	44.64	-12	00	39.5	19.0	809
1990	QM15	1990	08	26.17361	22	46	44.06	-12	00	43.0		809
1990	QM15	1990	08	26.18681	22	46	43.43	-12	00	47.3		809
1990	QN15*	1990	08	26.16042	22	47	27.69	-10	59	49.5	19.5	809
1990	QN15	1990	08	26.17361	22	47	27.03	-10	59	52.8		809
1990	QN15	1990	08	26.18681	22	47	26.39	-10	59	55.7		809
1990	QO15*	1990	08	26.16042	22	47	30.32	-10	23	14.5	20.0	809
1990	QO15	1990	08	26.17361	22	47	29.92	-10	23	16.4		809
1990	QO15	1990	08	26.18681	22	47	29.47	-10	23	17.9		809
1990	QP15*	1990	08	26.16042	22	47	41.15	-06	55	44.5	19.5	809
1990	QP15	1990	08	26.17361	22	47	40.20	-06	55	43.6		809
1990	QP15	1990	08	26.18681	22	47	39.39	-06	55	42.7		809
1990	QQ15*	1990	08	26.16042	22	47	47.49	-08	06	17.3	20.0	809
1990	QQ15	1990	08	26.17361	22	47	46.77	-08	06	21.6		809
1990	QQ15	1990	08	26.18681	22	47	46.16	-08	06	25.7		809
1990	QR15*	1990	08	26.16042	22	47	51.37	-07	33	36.8	19.0	809
1990	QR15	1990	08	26.17361	22	47	50.68	-07	33	37.7		809
1990	QR15	1990	08	26.18681	22	47	49.89	-07	33	41.5		809
1990	QS15*	1990	08	26.16042	22	47	57.68	-09	39	37.9	18.8	809
1990	QS15	1990	08	26.17361	22	47	57.19	-09	39	46.5		809
1990	QS15	1990	08	26.18681	22	47	56.67	-09	39	55.7		809
1990	QT15*	1990	08	26.16042	22	48	36.56	-09	53	33.6	19.0	809
1990	QT15	1990	08	26.17361	22	48	35.89	-09	53	39.0		809
1990	QT15	1990	08	26.18681	22	48	35.17	-09	53	45.4		809
1990	QU15*	1990	08	26.16042	22	49	01.93	-09	59	55.6	19.5	809
1990	QU15	1990	08	26.17361	22	49	01.32	-10	00	01.8		809
1990	QU15	1990	08	26.18681	22	49	00.71	-10	00	08.5		809
1990	QV15*	1990	08	26.16042	22	50	01.99	-08	12	58.1	18.9	809
1990	QV15	1990	08	26.17361	22	50	01.57	-08	13	10.2		809
1990	QV15	1990	08	26.18681	22	50	01.15	-08	13	21.5		809
1990	QW15*	1990	08	26.16042	22	50	07.19	-08	59	31.0	20.0	809
1990	QW15	1990	08	26.17361	22	50	06.51	-08	59	31.8		809
1990	QW15	1990	08	26.18681	22	50	05.81	-08	59	32.4		809
1990	QX15*	1990	08	26.16042	22	50	35.90	-11	24	47.2	19.3	809
1990	QX15	1990	08	26.17361	22	50	35.23	-11	24	52.6		809
1990	QX15	1990	08	26.18681	22	50	34.44	-11	24	57.4		809
1990	QY15*	1990	08	26.16042	22	50	45.60	-10	07	44.0	19.6	809

1990	QY15	1990	08	26.17361	22	50	44.86	-10	07	47.1		809
1990	QY15	1990	08	26.18681	22	50	44.20	-10	07	50.6		809
1990	QZ15*	1990	08	26.16042	22	51	24.99	-10	11	57.8	18.7	809
1990	QZ15	1990	08	26.17361	22	51	24.53	-10	12	08.1		809
1990	QZ15	1990	08	26.18681	22	51	23.99	-10	12	18.0		809
1990	QA16*	1990	08	26.16042	22	51	40.12	-09	02	29.9	19.3	809
1990	QA16	1990	08	26.17361	22	51	39.55	-09	02	37.4		809
1990	QA16	1990	08	26.18681	22	51	38.96	-09	02	45.0		809
1990	QB16*	1990	08	26.16042	22	51	51.03	-09	02	48.0	19.0	809
1990	QB16	1990	08	26.17361	22	51	50.27	-09	02	45.7		809
1990	QB16	1990	08	26.18681	22	51	49.34	-09	02	46.8		809
1990	QC16*	1990	08	26.16042	22	52	14.97	-09	21	53.5	19.5	809
1990	QC16	1990	08	26.17361	22	52	14.26	-09	21	55.3		809
1990	QC16	1990	08	26.18681	22	52	13.53	-09	21	55.9		809
1990	QD16*	1990	08	26.16042	22	52	20.15	-10	37	16.8	19.3	809
1990	QD16	1990	08	26.17361	22	52	19.53	-10	37	21.1		809
1990	QD16	1990	08	26.18681	22	52	18.82	-10	37	24.8		809
1990	QE16*	1990	08	26.16042	22	52	23.12	-11	10	49.8	20.5	809
1990	QE16	1990	08	26.17361	22	52	22.57	-11	10	56.7		809
1990	QE16	1990	08	26.18681	22	52	22.02	-11	11	00.2		809
1990	QF16*	1990	08	26.16042	22	52	27.24	-09	22	17.1	19.5	809
1990	QF16	1990	08	26.17361	22	52	26.67	-09	22	21.3		809
1990	QF16	1990	08	26.18681	22	52	26.03	-09	22	25.0		809
1990	QG16*	1990	08	26.16042	22	53	17.62	-07	16	05.1	19.5	809
1990	QG16	1990	08	26.17361	22	53	17.02	-07	16	12.6		809
1990	QG16	1990	08	26.18681	22	53	16.51	-07	16	22.5		809
1990	QH16*	1990	08	26.16042	22	53	29.41	-07	25	42.6	19.8	809
1990	QH16	1990	08	26.17361	22	53	28.84	-07	25	43.4		809
1990	QH16	1990	08	26.18681	22	53	28.26	-07	25	43.9		809
1990	QJ16*	1990	08	26.16042	22	54	36.47	-11	02	02.0	19.0	809
1990	QJ16	1990	08	26.17361	22	54	35.80	-11	02	06.4		809
1990	QJ16	1990	08	26.18681	22	54	35.06	-11	02	10.8		809
1990	QK16*	1990	08	26.16042	22	55	48.12	-10	41	27.5	19.3	809
1990	QK16	1990	08	26.17361	22	55	47.46	-10	41	34.8		809
1990	QK16	1990	08	26.18681	22	55	46.87	-10	41	42.2		809
1990	QL16*	1990	08	26.16042	22	55	52.67	-09	08	32.7	20.0	809
1990	QL16	1990	08	26.17361	22	55	51.96	-09	08	33.8		809
1990	QL16	1990	08	26.18681	22	55	51.28	-09	08	34.4		809
1990	QM16*	1990	08	26.16042	22	58	24.79	-10	32	21.5	19.5	809
1990	QM16	1990	08	26.17361	22	58	24.15	-10	32	24.8		809
1990	QM16	1990	08	26.18681	22	58	23.40	-10	32	27.4		809
1990	QN16*	1990	08	26.16042	22	58	40.91	-10	46	13.5	19.5	809
1990	QN16	1990	08	26.17361	22	58	40.39	-10	46	18.2		809
1990	QN16	1990	08	26.18681	22	58	39.58	-10	46	24.1		809
1990	QO16*	1990	08	26.16042	22	58	51.62	-11	08	39.3	20.0	809
1990	QO16	1990	08	26.17361	22	58	50.95	-11	08	40.0		809
1990	QO16	1990	08	26.18681	22	58	50.29	-11	08	42.4		809
1990	QP16*	1990	08	26.16042	22	59	26.74	-10	56	09.6	19.0	809
1990	QP16	1990	08	26.17361	22	59	26.09	-10	56	14.4		809
1990	QP16	1990	08	26.18681	22	59	25.48	-10	56	20.3		809
1990	QQ16*	1990	08	26.20347	23	07	44.23	-08	19	27.2	18.2	809
1990	QQ16	1990	08	26.21667	23	07	43.74	-08	19	38.4		809
1990	QQ16	1990	08	26.22986	23	07	43.15	-08	19	48.7		809
1990	QR16*	1990	08	26.20347	23	07	56.41	-06	58	01.6	19.3	809
1990	QR16	1990	08	26.21667	23	07	55.58	-06	58	06.7		809
1990	QR16	1990	08	26.22986	23	07	54.52	-06	58	11.3		809
1990	QS16*	1990	08	26.20347	23	08	02.13	-07	05	31.6	20.0	809
1990	QS16	1990	08	26.21667	23	08	01.41	-07	05	38.2		809
1990	QS16	1990	08	26.22986	23	08	00.82	-07	05	42.6		809

1990	QT16*	1990	08	26.20347	23	08	05.72	-07	12	22.3	19.3	809
1990	QT16	1990	08	26.21667	23	08	04.95	-07	12	24.2		809
1990	QT16	1990	08	26.22986	23	08	04.23	-07	12	26.9		809
1990	QU16*	1990	08	26.20347	23	08	34.86	-07	39	14.8	20.5	809
1990	QU16	1990	08	26.21667	23	08	34.30	-07	39	17.9		809
1990	QU16	1990	08	26.22986	23	08	33.84	-07	39	22.6		809
1990	QV16*	1990	08	26.20347	23	08	49.91	-08	14	01.0	18.7	809
1990	QV16	1990	08	26.21667	23	08	49.31	-08	14	04.7		809
1990	QV16	1990	08	26.22986	23	08	48.69	-08	14	09.9		809
1990	QW16*	1990	08	26.20347	23	09	58.04	-06	54	52.3	19.0	809
1990	QW16	1990	08	26.21667	23	09	57.45	-06	54	58.8		809
1990	QW16	1990	08	26.22986	23	09	56.94	-06	55	03.1		809
1990	QX16*	1990	08	26.20347	23	10	27.71	-08	16	28.2	20.0	809
1990	QX16	1990	08	26.21667	23	10	27.10	-08	16	32.0		809
1990	QX16	1990	08	26.22986	23	10	26.27	-08	16	37.9		809
1990	QY16*	1990	08	26.20347	23	10	44.28	-08	32	14.6	19.5	809
1990	QY16	1990	08	26.21667	23	10	43.59	-08	32	26.2		809
1990	QY16	1990	08	26.22986	23	10	42.96	-08	32	35.9		809
1990	QZ16*	1990	08	26.20347	23	10	57.92	-07	18	45.9	19.6	809
1990	QZ16	1990	08	26.21667	23	10	57.09	-07	18	42.8		809
1990	QZ16	1990	08	26.22986	23	10	56.30	-07	18	39.4		809
1990	QA17*	1990	08	26.20347	23	11	26.69	-07	10	26.8	19.6	809
1990	QA17	1990	08	26.21667	23	11	26.18	-07	10	33.8		809
1990	QA17	1990	08	26.22986	23	11	25.59	-07	10	39.7		809
1990	QB17*	1990	08	26.20347	23	14	23.99	-07	07	48.2	20.0	809
1990	QB17	1990	08	26.21667	23	14	23.31	-07	07	55.8		809
1990	QB17	1990	08	26.22986	23	14	22.61	-07	08	02.3		809
1990	QC17*	1990	08	26.20347	23	21	47.70	-06	41	33.4	19.6	809
1990	QC17	1990	08	26.21667	23	21	47.23	-06	41	42.5		809
1990	QC17	1990	08	26.22986	23	21	46.75	-06	41	50.4		809
1990	QD17*	1990	08	26.20347	23	22	35.04	-08	56	19.3	18.7	809
1990	QD17	1990	08	26.21667	23	22	34.45	-08	56	23.7		809
1990	QD17	1990	08	26.22986	23	22	33.88	-08	56	27.9		809
1990	QE17*	1990	08	26.20347	23	24	32.44	-04	59	35.0	20.5	809
1990	QE17	1990	08	26.21667	23	24	31.90	-04	59	35.5		809
1990	QE17	1990	08	26.22986	23	24	31.26	-04	59	36.6		809
1990	QF17*	1990	08	26.20347	23	24	34.24	-09	10	08.0	18.6	809
1990	QF17	1990	08	26.21667	23	24	33.74	-09	10	13.8		809
1990	QF17	1990	08	26.22986	23	24	33.14	-09	10	18.7		809
1990	QG17*	1990	08	26.20347	23	26	10.39	-05	59	45.5	19.4	809
1990	QG17	1990	08	26.21667	23	26	09.83	-05	59	50.6		809
1990	QG17	1990	08	26.22986	23	26	09.39	-05	59	57.1		809
1990	QH17*	1990	08	26.20347	23	26	25.39	-08	16	50.4	19.6	809
1990	QH17	1990	08	26.21667	23	26	24.76	-08	16	53.6		809
1990	QH17	1990	08	26.22986	23	26	24.04	-08	16	58.4		809
1990	QJ17*	1990	08	26.20347	23	26	47.84	-08	52	31.3	18.7	809
1990	QJ17	1990	08	26.21667	23	26	47.25	-08	52	37.1		809
1990	QJ17	1990	08	26.22986	23	26	46.63	-08	52	40.4		809
1990	QK17*	1990	08	26.20347	23	27	20.93	-06	50	44.4	20.0	809
1990	QK17	1990	08	26.21667	23	27	20.37	-06	50	46.1		809
1990	QK17	1990	08	26.22986	23	27	19.82	-06	50	48.0		809
1990	QL17*	1990	08	26.20347	23	27	39.36	-06	29	02.6	21.0	809
1990	QL17	1990	08	26.21667	23	27	38.91	-06	29	08.5		809
1990	QL17	1990	08	26.22986	23	27	38.28	-06	29	16.2		809
1990	RR10*	1990	09	14.17917	20	52	53.33	-05	13	45.2	18.2	675
1990	RR10	1990	09	14.21875	20	52	52.29	-05	13	47.2		675
1990	RS10*	1990	09	14.17917	20	54	56.00	-05	54	03.3	17.5	675
1990	RS10	1990	09	14.21875	20	54	55.25	-05	54	11.9	17.8	675
1990	RT10*	1990	09	14.18924	21	04	03.97	-15	13	15.4	18.0	675

1990	RT10	1990	09	14.22760	21	04	03.57	-15	13	11.0		675
1990	RU10*	1990	09	14.18924	21	04	11.00	-16	47	15.5	18.2	675
1990	RU10	1990	09	14.22760	21	04	10.33	-16	47	26.9		675
1990	RV10*	1990	09	14.18924	21	25	46.98	-15	21	01.3	18.2	675
1990	RV10	1990	09	14.22760	21	25	45.41	-15	21	09.4		675
1990	RW10*	1990	09	14.19948	21	31	07.82	-28	43	22.5	17.2	675
1990	RW10	1990	09	14.23663	21	31	06.26	-28	43	01.2		675
1990	RX10*	1990	09	14.19948	21	31	15.31	-23	52	13.5	17.5	675
1990	RX10	1990	09	14.23663	21	31	14.00	-23	52	20.9		675
1990	RY10*	1990	09	14.19948	21	31	56.85	-23	33	50.1	18.2	675
1990	RY10	1990	09	14.23663	21	31	56.17	-23	33	54.2		675
1990	RZ10*	1990	09	14.19948	21	38	20.86	-28	54	57.1	17.5	675
1990	RZ10	1990	09	14.23663	21	38	19.46	-28	54	57.5		675
1990	RA11*	1990	09	14.19948	21	39	37.67	-28	34	10.9	16.8	675
1990	RA11	1990	09	14.23663	21	39	36.54	-28	34	13.3		675
1990	RB11*	1990	09	14.19948	21	42	42.20	-27	04	45.2	16.5	675
1990	RB11	1990	09	14.23663	21	42	40.49	-27	04	42.2		675
1990	RC11*	1990	09	14.19948	21	45	47.14	-24	31	07.4	17.0	675
1990	RC11	1990	09	14.23663	21	45	45.52	-24	30	49.4		675
1990	RD11*	1990	09	14.26441	22	01	37.42	-09	18	32.1	16.8	675
1990	RD11	1990	09	14.30417	22	01	35.88	-09	18	41.6		675
1990	RE11*	1990	09	14.26441	22	07	49.56	-09	13	16.1	16.8	675
1990	RE11	1990	09	14.30417	22	07	48.02	-09	13	35.4		675
1990	RF11*	1990	09	14.26441	22	10	11.59	-14	14	20.5	17.5	675
1990	RF11	1990	09	14.30417	22	10	10.09	-14	14	28.2		675
1990	RG11*	1990	09	14.26441	22	17	22.24	-12	17	41.7	17.5	675
1990	RG11	1990	09	14.30417	22	17	20.43	-12	17	46.6		675
1990	RH11*	1990	09	14.26441	22	20	19.43	-11	54	57.1	17.0	675
1990	RH11	1990	09	14.30417	22	20	17.79	-11	55	13.3		675
1990	RJ11*	1990	09	14.27604	22	23	45.72	-21	16	15.8	17.5	675
1990	RJ11	1990	09	14.31354	22	23	44.09	-21	16	29.2		675
1990	RK11*	1990	09	14.27604	22	26	20.03	-20	47	35.0	18.2	675
1990	RK11	1990	09	14.31354	22	26	18.44	-20	47	45.3		675
1990	RL11*	1990	09	14.27604	22	29	27.70	-20	19	02.7	17.5	675
1990	RL11	1990	09	14.31354	22	29	26.28	-20	19	17.8		675
1990	RM11*	1990	09	14.27604	22	31	00.58	-21	16	04.8	17.0	675
1990	RM11	1990	09	14.31354	22	30	58.75	-21	16	18.8		675
1990	RN11*	1990	09	14.27604	22	31	09.18	-19	54	48.2	17.0	675
1990	RN11	1990	09	14.31354	22	31	07.57	-19	54	50.3		675
1990	RO11*	1990	09	14.27604	22	33	04.60	-23	16	51.1	17.5	675
1990	RO11	1990	09	14.31354	22	33	02.93	-23	17	14.4		675
1990	RP11*	1990	09	14.27604	22	39	34.09	-22	55	10.8	17.5	675
1990	RP11	1990	09	14.31354	22	39	32.23	-22	55	12.0		675
1990	RQ11*	1990	09	14.27604	22	44	41.06	-21	54	59.6	18.0	675
1990	RQ11	1990	09	14.31354	22	44	38.99	-21	55	00.1		675
1990	RR11*	1990	09	14.27604	22	45	03.06	-19	35	13.1	16.8	675
1990	RR11	1990	09	14.31354	22	45	00.72	-19	35	16.8		675
1990	RS11*	1990	09	14.27604	22	45	43.41	-18	49	12.2	16.8	675
1990	RS11	1990	09	14.31354	22	45	41.25	-18	49	15.9		675
1990	RT11*	1990	09	14.32222	23	09	11.57	-05	07	54.0	17.5	675
1990	RT11	1990	09	14.35938	23	09	09.62	-05	08	11.4		675
1990	RU11*	1990	09	14.32222	23	14	32.52	-03	41	05.2	17.5	675
1990	RU11	1990	09	14.33073	23	14	32.25	-03	41	08.4	17.5	675
1990	RU11	1990	09	14.35938	23	14	30.92	-03	41	20.1		675
1990	RU11	1990	09	14.36858	23	14	30.40	-03	41	22.5		675
1990	RV11*	1990	09	14.32222	23	19	02.90	-04	15	04.6	17.5	675
1990	RV11	1990	09	14.33073	23	19	02.48	-04	15	06.8	17.5	675
1990	RV11	1990	09	14.35938	23	19	00.55	-04	15	13.0		675
1990	RV11	1990	09	14.36858	23	19	00.02	-04	15	15.8		675

1990	RW11*	1990	09	14.32222	23	19	43.55	-08	00	49.7	17.5	675
1990	RW11	1990	09	14.35938	23	19	41.24	-08	00	55.6		675
1990	RX11*	1990	09	14.33073	23	16	39.70	-03	30	13.6	17.8	675
1990	RX11	1990	09	14.36858	23	16	38.25	-03	30	01.3		675
1990	RY11*	1990	09	14.33073	23	21	31.98	-03	44	47.9	17.5	675
1990	RY11	1990	09	14.36858	23	21	29.68	-03	45	00.2		675
1990	RZ11*	1990	09	14.33073	23	28	32.05	-06	16	04.8	17.0	675
1990	RZ11	1990	09	14.36858	23	28	29.88	-06	16	21.3		675
1990	RA12*	1990	09	14.33976	00	09	24.34	-00	59	32.6	17.8	675
1990	RA12	1990	09	14.37673	00	09	22.54	-00	59	39.3		675
1990	RB12*	1990	09	15.20590	20	29	41.65	-19	28	35.5	17.0	675
1990	RB12	1990	09	15.23229	20	29	41.76	-19	28	47.0		675
1990	RC12*	1990	09	15.20590	20	54	00.90	-17	53	52.7	18.2	675
1990	RC12	1990	09	15.23229	20	54	00.91	-17	53	53.4		675
1990	RD12*	1990	09	15.24097	21	04	21.67	-24	44	09.5	17.0	675
1990	RD12	1990	09	15.27777	21	04	20.73	-24	43	48.3		675
1990	RE12*	1990	09	15.24097	21	12	06.80	-21	10	44.7	17.5	675
1990	RE12	1990	09	15.27777	21	12	05.81	-21	10	50.4		675
1990	RF12*	1990	09	15.24983	21	31	23.61	-04	42	35.1	17.5	675
1990	RF12	1990	09	15.28663	21	31	22.37	-04	42	43.7		675
1990	RG12*	1990	09	15.24983	21	33	59.41	+01	14	11.8	17.0	675
1990	RG12	1990	09	15.28663	21	33	58.32	+01	13	59.0		675
1990	RH12*	1990	09	15.25885	21	38	22.47	-12	36	29.8	17.0	675
1990	RH12	1990	09	15.29497	21	38	21.69	-12	36	46.6		675
1990	RJ12*	1990	09	15.25885	21	43	57.96	-15	28	18.3	18.0	675
1990	RJ12	1990	09	15.29497	21	43	56.65	-15	28	21.3		675
1990	RK12*	1990	09	15.25885	21	53	55.84	-13	42	41.3	17.8	675
1990	RK12	1990	09	15.29497	21	53	54.70	-13	42	49.1		675
1990	RL12*	1990	09	15.26840	21	51	20.14	-23	56	38.2	17.8	675
1990	RL12	1990	09	15.30330	21	51	18.43	-23	56	33.5		675
1990	RM12*	1990	09	15.26840	22	07	51.49	-25	31	54.7	17.5	675
1990	RM12	1990	09	15.30330	22	07	50.10	-25	31	59.9		675
1990	RN12*	1990	09	15.26840	22	10	08.48	-25	12	22.3	18.0	675
1990	RN12	1990	09	15.30330	22	10	06.51	-25	12	07.6		675
1990	RO12*	1990	09	15.31146	22	44	54.14	-01	51	07.8	17.5	675
1990	RO12	1990	09	15.34701	22	44	52.00	-01	51	20.6		675
1990	RP12*	1990	09	15.31146	22	58	20.44	-04	20	36.0	17.8	675
1990	RP12	1990	09	15.34701	22	58	18.58	-04	20	45.0		675
1990	RQ12*	1990	09	15.33698	23	24	43.72	+03	07	28.6	17.5	675
1990	RQ12	1990	09	15.37274	23	24	41.92	+03	07	20.0		675
1990	RR12*	1990	09	15.33698	23	27	30.93	+01	17	00.1	17.2	675
1990	RR12	1990	09	15.37274	23	27	28.88	+01	16	52.8		675
1990	RS12*	1990	09	13.06435	20	19	29.41	-34	29	33.0		808
1990	RT12*	1990	09	13.06435	20	19	45.11	-34	32	59.2		808
1990	RU12*	1990	09	01.38091	23	59	48.07	-00	35	40.1	16.8	809
1990	RU12	1990	09	01.38576	23	59	47.82	-00	35	46.1		809
1990	RU12	1990	09	01.39063	23	59	47.57	-00	35	52.1		809
1990	RV12*	1990	09	13.99860	22	33	23.79	-09	26	51.0	17.9	809
1990	RV12	1990	09	14.01251	22	33	23.22	-09	26	54.3		809
1990	RV12	1990	09	14.02640	22	33	22.59	-09	26	57.0		809
1990	RW12*	1990	09	14.04654	22	53	20.58	-08	55	50.3	18.2	809
1990	RW12	1990	09	14.06042	22	53	19.92	-08	55	54.7		809
1990	RW12	1990	09	14.07431	22	53	19.25	-08	55	59.6		809
1990	RX12*	1990	09	14.04654	22	56	06.05	-07	50	38.7	18.4	809
1990	RX12	1990	09	14.06042	22	56	05.34	-07	50	41.1		809
1990	RX12	1990	09	14.07431	22	56	04.64	-07	50	43.4		809
1990	RY12*	1990	09	14.18542	23	08	12.23	-06	39	33.0	18.1	809
1990	RY12	1990	09	14.19931	23	08	11.58	-06	39	38.3		809
1990	RY12	1990	09	14.21320	23	08	10.94	-06	39	44.0		809

1990 RA13*	1990 09 14.18611	00 07 21.77	-05 16 05.9	19.2	809
1990 RA13	1990 09 14.19931	00 07 20.95	-05 16 08.9		809
1990 RA13	1990 09 14.21250	00 07 19.90	-05 16 13.7		809
1990 RC13*	1990 09 14.18611	00 08 19.99	-03 45 09.3	19.0	809
1990 RC13	1990 09 14.19931	00 08 19.14	-03 45 09.0		809
1990 RC13	1990 09 14.21250	00 08 18.35	-03 45 09.5		809
1990 RD13*	1990 09 14.18611	00 08 25.28	-06 20 55.1	20.0	809
1990 RD13	1990 09 14.19931	00 08 24.71	-06 21 00.2		809
1990 RD13	1990 09 14.21250	00 08 24.12	-06 21 06.4		809
1990 RJ13*	1990 09 14.18611	00 11 41.96	-04 31 18.7	19.5	809
1990 RJ13	1990 09 14.19931	00 11 41.08	-04 31 18.5		809
1990 RJ13	1990 09 14.21250	00 11 39.99	-04 31 17.7		809
1990 RL13*	1990 09 14.18611	00 13 04.89	-05 26 00.2	19.3	809
1990 RL13	1990 09 14.19931	00 13 04.48	-05 26 03.1		809
1990 RL13	1990 09 14.21250	00 13 03.95	-05 26 06.2		809
1990 RN13*	1990 09 14.18611	00 14 07.06	-04 42 00.5	19.8	809
1990 RN13	1990 09 14.19931	00 14 06.48	-04 42 05.3		809
1990 RN13	1990 09 14.21250	00 14 05.73	-04 42 12.8		809
1990 RO13*	1990 09 14.18611	00 14 18.67	-04 59 10.1	19.5	809
1990 RO13	1990 09 14.19931	00 14 18.12	-04 59 13.9		809
1990 RO13	1990 09 14.21250	00 14 17.61	-04 59 19.1		809
1990 RP13*	1990 09 14.18611	00 14 25.07	-04 31 30.9	20.0	809
1990 RP13	1990 09 14.19931	00 14 24.31	-04 31 31.9		809
1990 RP13	1990 09 14.21250	00 14 23.69	-04 31 34.4		809
1990 RQ13*	1990 09 14.18611	00 14 38.55	-06 33 49.7	20.0	809
1990 RQ13	1990 09 14.19931	00 14 37.67	-06 33 52.5		809
1990 RQ13	1990 09 14.21250	00 14 36.85	-06 33 54.3		809
1990 RR13*	1990 09 14.18611	00 14 46.82	-02 39 23.9	20.0	809
1990 RR13	1990 09 14.19931	00 14 46.18	-02 39 28.9		809
1990 RR13	1990 09 14.21250	00 14 45.40	-02 39 34.3		809
1990 RS13*	1990 09 14.18611	00 14 50.77	-07 31 19.8	18.7	809
1990 RS13	1990 09 14.19931	00 14 50.07	-07 31 30.2		809
1990 RS13	1990 09 14.21250	00 14 49.43	-07 31 39.3		809
1990 RV13*	1990 09 14.18611	00 16 41.44	-03 22 16.1	19.0	809
1990 RV13	1990 09 14.19931	00 16 40.98	-03 22 19.9		809
1990 RV13	1990 09 14.21250	00 16 40.36	-03 22 26.0		809
1990 RW13*	1990 09 14.18611	00 17 19.34	-06 14 58.3	20.5	809
1990 RW13	1990 09 14.19931	00 17 18.79	-06 15 04.7		809
1990 RW13	1990 09 14.21250	00 17 17.90	-06 15 12.8		809
1990 RX13*	1990 09 14.18611	00 18 01.85	-02 22 49.2	18.3	809
1990 RX13	1990 09 14.19931	00 18 01.21	-02 22 52.1		809
1990 RX13	1990 09 14.21250	00 18 00.64	-02 22 54.9		809
1990 RZ13*	1990 09 14.18611	00 18 03.90	-04 14 39.1	20.0	809
1990 RZ13	1990 09 14.19931	00 18 03.07	-04 14 40.4		809
1990 RZ13	1990 09 14.21250	00 18 02.45	-04 14 43.1		809
1990 RF14*	1990 09 14.18611	00 20 03.53	-02 52 06.2	19.6	809
1990 RF14	1990 09 14.19931	00 20 03.05	-02 52 14.1		809
1990 RF14	1990 09 14.21250	00 20 02.50	-02 52 21.2		809
1990 RG14*	1990 09 14.18611	00 20 15.23	-05 38 58.0	20.0	809
1990 RG14	1990 09 14.19931	00 20 14.73	-05 39 04.5		809
1990 RG14	1990 09 14.21250	00 20 14.25	-05 39 11.8		809
1990 RH14*	1990 09 14.18611	00 20 17.01	-04 09 47.8	18.5	809
1990 RH14	1990 09 14.19931	00 20 16.20	-04 09 43.4		809
1990 RH14	1990 09 14.21250	00 20 15.27	-04 09 37.8		809
1990 RJ14*	1990 09 14.18611	00 20 48.22	-02 44 54.9	19.2	809
1990 RJ14	1990 09 14.19931	00 20 47.84	-02 44 57.1		809
1990 RJ14	1990 09 14.21250	00 20 47.09	-02 45 00.8		809
1990 RK14*	1990 09 14.18611	00 20 59.22	-06 20 26.1	19.6	809
1990 RK14	1990 09 14.19931	00 20 58.57	-06 20 32.7		809



1990	RK14	1990	09	14.21250	00	20	57.93	-06	20	37.1		809
1990	RL14*	1990	09	14.18611	00	21	25.33	-04	55	27.2	19.6	809
1990	RL14	1990	09	14.19931	00	21	24.70	-04	55	30.0		809
1990	RL14	1990	09	14.21250	00	21	23.95	-04	55	33.9		809
1990	RN14*	1990	09	14.18611	00	21	50.90	-02	18	52.8	18.7	809
1990	RN14	1990	09	14.19931	00	21	50.15	-02	18	54.2		809
1990	RN14	1990	09	14.21250	00	21	49.29	-02	18	56.5		809
1990	RO14*	1990	09	14.18611	00	21	54.51	-02	55	53.4	19.6	809
1990	RO14	1990	09	14.19931	00	21	54.05	-02	56	01.5		809
1990	RO14	1990	09	14.21250	00	21	53.17	-02	56	11.6		809
1990	RP14*	1990	09	14.18611	00	21	58.14	-02	19	38.7	19.0	809
1990	RP14	1990	09	14.19931	00	21	57.52	-02	19	42.5		809
1990	RP14	1990	09	14.21250	00	21	56.78	-02	19	42.8		809
1990	RR14*	1990	09	14.18611	00	23	03.52	-04	12	25.6	19.3	809
1990	RR14	1990	09	14.19931	00	23	02.69	-04	12	27.8		809
1990	RR14	1990	09	14.21250	00	23	01.92	-04	12	29.2		809
1990	RT14*	1990	09	14.18611	00	23	34.05	-05	01	24.6	19.5	809
1990	RT14	1990	09	14.19931	00	23	33.10	-05	01	30.8		809
1990	RT14	1990	09	14.21250	00	23	32.31	-05	01	35.1		809
1990	RV14*	1990	09	14.18611	00	23	54.48	-03	22	29.0	18.5	809
1990	RV14	1990	09	14.19931	00	23	53.77	-03	22	33.2		809
1990	RV14	1990	09	14.21250	00	23	53.07	-03	22	36.5		809
1990	RX14*	1990	09	14.18611	00	26	31.88	-04	18	48.8	18.2	809
1990	RX14	1990	09	14.19931	00	26	31.58	-04	18	48.3		809
1990	RX14	1990	09	14.21250	00	26	30.78	-04	18	48.8		809
1990	RY14*	1990	09	14.18611	00	26	39.24	-06	30	58.9	20.5	809
1990	RY14	1990	09	14.19931	00	26	38.57	-06	30	59.1		809
1990	RY14	1990	09	14.21250	00	26	37.85	-06	31	00.4		809
1990	RZ14*	1990	09	14.18611	00	27	28.33	-05	05	03.3	19.2	809
1990	RZ14	1990	09	14.19931	00	27	27.66	-05	05	05.7		809
1990	RZ14	1990	09	14.21250	00	27	26.97	-05	05	07.1		809
1990	RA15*	1990	09	14.18611	00	27	39.69	-05	39	06.9	19.2	809
1990	RA15	1990	09	14.19931	00	27	39.22	-05	39	11.9		809
1990	RA15	1990	09	14.21250	00	27	38.60	-05	39	17.2		809
1990	RB15*	1990	09	14.18611	00	27	54.20	-04	03	47.8	18.2	809
1990	RB15	1990	09	14.19931	00	27	53.46	-04	03	48.1		809
1990	RB15	1990	09	14.21250	00	27	52.75	-04	03	49.9		809
1990	RD15*	1990	09	14.18611	00	28	13.61	-03	25	04.9	19.2	809
1990	RD15	1990	09	14.19931	00	28	12.61	-03	25	00.7		809
1990	RD15	1990	09	14.21250	00	28	11.72	-03	24	55.9		809
1990	RE15*	1990	09	15.13055	22	55	30.93	-06	45	04.4	17.9	809
1990	RE15	1990	09	15.14444	22	55	30.12	-06	45	07.6		809
1990	RE15	1990	09	15.15833	22	55	29.33	-06	45	10.7		809
1990	RF15*	1990	09	15.18333	00	30	48.93	+00	27	58.3	18.6	809
1990	RF15	1990	09	15.19653	00	30	48.21	+00	27	58.9		809
1990	RF15	1990	09	15.20972	00	30	47.46	+00	27	58.5		809
1990	RG15*	1990	09	15.18333	00	32	39.22	-01	54	36.1	18.5	809
1990	RG15	1990	09	15.19653	00	32	37.88	-01	54	31.3		809
1990	RG15	1990	09	15.20972	00	32	36.36	-01	54	26.8		809
1990	RJ15*	1990	09	15.18333	00	34	06.90	+01	20	51.3	18.6	809
1990	RJ15	1990	09	15.19653	00	34	06.22	+01	20	45.3		809
1990	RJ15	1990	09	15.20972	00	34	05.58	+01	20	40.5		809
1990	RK15*	1990	09	15.18333	00	35	23.92	+01	01	27.4	18.7	809
1990	RK15	1990	09	15.19653	00	35	23.34	+01	01	25.2		809
1990	RK15	1990	09	15.20972	00	35	22.69	+01	01	24.0		809
1990	RL15*	1990	09	15.18333	00	36	01.57	-02	55	27.2	19.0	809
1990	RL15	1990	09	15.19653	00	36	00.81	-02	55	31.2		809
1990	RL15	1990	09	15.20972	00	35	59.94	-02	55	36.1		809
1990	RM15*	1990	09	15.18333	00	36	27.02	-00	24	10.2	19.0	809

1990	RM15	1990	09	15.19653	00	36	26.08	-00	24	15.6		809
1990	RM15	1990	09	15.20972	00	36	25.17	-00	24	21.9		809
1990	RN15*	1990	09	15.18333	00	38	17.24	-03	32	41.5	20.0	809
1990	RN15	1990	09	15.19653	00	38	16.77	-03	32	46.0		809
1990	RN15	1990	09	15.20972	00	38	16.11	-03	32	52.0		809
1990	RO15*	1990	09	15.18333	00	38	19.50	+01	28	37.8	19.0	809
1990	RO15	1990	09	15.19653	00	38	18.70	+01	28	35.7		809
1990	RO15	1990	09	15.20972	00	38	17.90	+01	28	35.6		809
1990	RP15*	1990	09	15.18333	00	39	08.63	+01	05	33.7	18.7	809
1990	RP15	1990	09	15.19653	00	39	08.08	+01	05	28.1		809
1990	RP15	1990	09	15.20972	00	39	07.53	+01	05	23.0		809
1990	RQ15*	1990	09	15.18333	00	39	38.61	-02	15	19.5	20.0	809
1990	RQ15	1990	09	15.19653	00	39	38.10	-02	15	21.2		809
1990	RQ15	1990	09	15.20972	00	39	37.45	-02	15	23.6		809
1990	RR15*	1990	09	15.18333	00	39	40.42	-02	40	08.1	19.7	809
1990	RR15	1990	09	15.19653	00	39	39.69	-02	40	10.3		809
1990	RR15	1990	09	15.20972	00	39	39.03	-02	40	11.6		809
1990	RT15*	1990	09	15.18333	00	41	33.71	+01	07	08.0	19.4	809
1990	RT15	1990	09	15.19653	00	41	33.09	+01	07	04.1		809
1990	RT15	1990	09	15.20972	00	41	32.54	+01	07	00.9		809
1990	RU15*	1990	09	15.18333	00	41	34.93	+01	32	14.0	19.2	809
1990	RU15	1990	09	15.19653	00	41	34.37	+01	32	10.7		809
1990	RU15	1990	09	15.20972	00	41	33.80	+01	32	08.6		809
1990	RV15*	1990	09	15.18333	00	42	24.81	+00	13	20.2	18.7	809
1990	RV15	1990	09	15.19653	00	42	24.07	+00	13	20.1		809
1990	RV15	1990	09	15.20972	00	42	23.28	+00	13	19.0		809
1990	RW15*	1990	09	15.18333	00	43	20.56	+01	10	48.3	19.7	809
1990	RW15	1990	09	15.19653	00	43	19.84	+01	10	49.1		809
1990	RW15	1990	09	15.20972	00	43	19.23	+01	10	48.3		809
1990	RX15*	1990	09	15.18333	00	43	34.45	+01	09	32.7	19.5	809
1990	RX15	1990	09	15.19653	00	43	33.74	+01	09	31.9		809
1990	RX15	1990	09	15.20972	00	43	33.13	+01	09	31.4		809
1990	RY15*	1990	09	15.18333	00	44	34.44	+01	04	39.4	20.0	809
1990	RY15	1990	09	15.19653	00	44	33.26	+01	04	36.5		809
1990	RY15	1990	09	15.20972	00	44	32.33	+01	04	31.5		809
1990	RZ15*	1990	09	15.18333	00	44	55.83	-02	32	48.4	19.2	809
1990	RZ15	1990	09	15.19653	00	44	55.13	-02	32	53.6		809
1990	RZ15	1990	09	15.20972	00	44	54.50	-02	32	58.7		809
1990	RA16*	1990	09	15.18333	00	45	18.66	+01	31	28.2	18.6	809
1990	RA16	1990	09	15.19653	00	45	18.09	+01	31	26.0		809
1990	RA16	1990	09	15.20972	00	45	17.59	+01	31	23.7		809
1990	RC16*	1990	09	15.18333	00	45	55.31	+01	18	10.0	19.5	809
1990	RC16	1990	09	15.19653	00	45	54.77	+01	18	05.4		809
1990	RC16	1990	09	15.20972	00	45	54.21	+01	18	01.3		809
1990	RD16*	1990	09	15.18333	00	46	15.80	+00	07	57.4	19.3	809
1990	RD16	1990	09	15.19653	00	46	15.16	+00	07	55.7		809
1990	RD16	1990	09	15.20972	00	46	14.53	+00	07	53.4		809
1990	RE16*	1990	09	15.18333	00	47	27.63	+01	08	28.3	19.0	809
1990	RE16	1990	09	15.19653	00	47	27.06	+01	08	25.0		809
1990	RE16	1990	09	15.20972	00	47	26.51	+01	08	22.7		809
1990	RH16*	1990	09	15.18333	00	48	55.46	+00	48	37.7	19.0	809
1990	RH16	1990	09	15.19653	00	48	54.91	+00	48	36.9		809
1990	RH16	1990	09	15.20972	00	48	54.37	+00	48	36.3		809
1990	RJ16*	1990	09	15.18333	00	49	07.47	-02	07	39.2	19.7	809
1990	RJ16	1990	09	15.19653	00	49	06.54	-02	07	37.0		809
1990	RJ16	1990	09	15.20972	00	49	05.72	-02	07	34.2		809
1990	RL16*	1990	09	15.18333	00	49	09.33	+00	50	52.0	19.6	809
1990	RL16	1990	09	15.19653	00	49	08.84	+00	50	48.0		809
1990	RL16	1990	09	15.20972	00	49	08.36	+00	50	44.4		809

1990	RM16*	1990	09	15.18333	00	49	31.15	+00	54	01.0	18.7	809
1990	RM16	1990	09	15.19653	00	49	30.52	+00	53	59.0		809
1990	RM16	1990	09	15.20972	00	49	29.96	+00	53	57.0		809
1990	RN16*	1990	09	15.18333	00	49	46.09	+00	26	10.1	18.5	809
1990	RN16	1990	09	15.19653	00	49	45.64	+00	26	06.3		809
1990	RN16	1990	09	15.20972	00	49	45.14	+00	26	02.2		809
1990	RO16*	1990	09	15.18333	00	49	48.76	-00	05	14.3	19.0	809
1990	RO16	1990	09	15.19653	00	49	47.94	-00	05	15.6		809
1990	RO16	1990	09	15.20972	00	49	47.16	-00	05	16.7		809
1990	RP16*	1990	09	15.18333	00	50	17.70	+00	17	20.8	19.6	809
1990	RP16	1990	09	15.19653	00	50	17.02	+00	17	16.7		809
1990	RP16	1990	09	15.20972	00	50	16.38	+00	17	09.8		809
1990	RQ16*	1990	09	15.18333	00	51	07.53	+00	25	34.9	18.7	809
1990	RQ16	1990	09	15.19653	00	51	06.97	+00	25	31.1		809
1990	RQ16	1990	09	15.20972	00	51	06.30	+00	25	26.6		809
1990	RR16*	1990	09	15.23682	23	00	41.22	-12	02	53.4	18.0	809
1990	RR16	1990	09	15.25070	23	00	40.48	-12	02	58.0		809
1990	RR16	1990	09	15.26459	23	00	39.72	-12	03	02.9		809
1990	RS16*	1990	09	15.28125	23	29	48.38	-03	02	29.4	17.7	809
1990	RS16	1990	09	15.29376	23	29	47.54	-03	02	32.1		809
1990	RS16	1990	09	15.30624	23	29	46.70	-03	02	34.9		809
1990	RT16*	1990	09	15.28125	23	32	28.17	-04	20	14.8	18.0	809
1990	RT16	1990	09	15.29376	23	32	27.42	-04	20	18.8		809
1990	RT16	1990	09	15.30624	23	32	26.65	-04	20	22.6		809
1990	RU16*	1990	09	15.28125	23	32	44.76	-02	56	44.1	17.7	809
1990	RU16	1990	09	15.29376	23	32	44.05	-02	56	47.7		809
1990	RU16	1990	09	15.30624	23	32	43.37	-02	56	51.3		809
1990	RV16*	1990	09	15.28125	23	33	18.08	-03	39	22.8	17.8	809
1990	RV16	1990	09	15.29376	23	33	17.36	-03	39	24.6		809
1990	RV16	1990	09	15.30624	23	33	16.66	-03	39	26.3		809
1990	RW16*	1990	09	15.28125	23	34	21.49	-04	21	41.8	18.0	809
1990	RW16	1990	09	15.29376	23	34	21.20	-04	21	46.0		809
1990	RW16	1990	09	15.30624	23	34	20.91	-04	21	49.5		809
1990	RX16*	1990	09	15.28125	23	35	38.39	-04	15	28.6	18.0	809
1990	RX16	1990	09	15.29376	23	35	37.85	-04	15	34.7		809
1990	RX16	1990	09	15.30624	23	35	37.32	-04	15	40.8		809
1990	RY16*	1990	09	15.36182	00	41	07.75	-01	00	26.2	18.1	809
1990	RY16	1990	09	15.37430	00	41	07.28	-01	00	31.4		809
1990	RY16	1990	09	15.38681	00	41	06.83	-01	00	36.6		809
1990	SL17*	1990	09	16.86780	22	29	17.38	-05	28	12.7	17.1	046
1990	SL17	1990	09	16.88220	22	29	16.79	-05	27	57.4		046
1990	SM17*	1990	09	16.90278	22	41	02.88	-15	03	04.8	17.0	046
1990	SM17	1990	09	16.91667	22	41	02.11	-15	03	08.1		046
1990	SN17*	1990	09	16.93889	01	46	18.08	+19	53	55.0	17.2	046
1990	SN17	1990	09	16.95359	01	46	17.47	+19	54	04.9		046
1990	SO17*	1990	09	16.93889	01	46	19.36	+19	55	06.7	16.6	046
1990	SO17	1990	09	16.95359	01	46	18.91	+19	55	09.5		046
1990	SP17*	1990	09	17.85278	22	28	28.64	-07	07	03.9	17.1	046
1990	SP17	1990	09	17.86701	22	28	27.79	-07	07	06.9		046
1990	SQ17*	1990	09	24.82535	22	20	30.01	-06	28	52.3	16.7	046
1990	SQ17	1990	09	24.83958	22	20	29.75	-06	28	49.1		046
1990	SR17*	1990	09	24.89792	22	57	53.37	+04	57	38.9	17.1	046
1990	SR17	1990	09	24.91215	22	57	52.44	+04	57	39.2		046
1990	SS17*	1990	09	24.93472	00	15	49.74	-05	13	53.3	16.8	046
1990	SS17	1990	09	24.94896	00	15	49.12	-05	13	52.6		046
1990	ST17*	1990	09	24.93472	00	17	53.57	-04	13	12.8	16.4	046
1990	ST17	1990	09	24.94896	00	17	52.73	-04	13	11.5		046
1990	SU17*	1990	09	24.97014	01	40	40.69	+23	47	07.8	16.7	046
1990	SU17	1990	09	24.98090	01	40	39.86	+23	47	08.7		046

1990	SV17*	1990	09	20.47388	21	43	38.72	-38	55	50.5	17	V	413
1990	SV17	1990	09	20.51554	21	43	37.25	-38	55	40.8			413
1990	SW17*	1990	09	20.47388	21	52	46.52	-39	34	24.5	17.5V		413
1990	SW17	1990	09	20.51554	21	52	44.95	-39	34	15.9			413
1990	SX17*	1990	09	20.53620	23	45	07.46	-54	07	11.8	17.5V		413
1990	SX17	1990	09	20.57787	23	45	04.57	-54	07	13.6			413
1990	SY17*	1990	09	22.38889	20	07	54.75	-48	53	03.8	17	V	413
1990	SY17	1990	09	22.42244	20	07	56.94	-48	52	11.7			413
1990	SY17	1990	09	22.45050	20	07	58.80	-48	51	27.4			413
1990	SZ17*	1990	09	27.74912	02	44	10.31	+12	34	10.4	19	V V	413
1990	SA18*	1990	09	27.74912	02	44	15.48	+12	39	39.1	18	V	413
1990	SB18*	1990	09	27.74912	02	48	18.46	+12	59	34.1	18	V	413
1990	SC18*	1990	09	28.69442	03	46	22.92	-01	34	00.7	17	V	413
1990	SC18	1990	09	28.73609	03	46	22.64	-01	34	15.3			413
1990	SD18*	1990	09	16.18038	21	07	51.06	-08	25	55.0	17.8		675
1990	SD18	1990	09	16.22465	21	07	49.98	-08	26	10.7			675
1990	SE18*	1990	09	16.18038	21	09	13.02	-09	06	26.6	17.8		675
1990	SE18	1990	09	16.22465	21	09	11.99	-09	06	35.9			675
1990	SF18*	1990	09	16.18038	21	09	58.55	-10	09	37.1	16.5		675
1990	SF18	1990	09	16.22465	21	09	58.07	-10	09	37.4			675
1990	SG18*	1990	09	16.18038	21	13	56.07	-11	35	22.9	17.8		675
1990	SG18	1990	09	16.22465	21	13	54.70	-11	35	26.0			675
1990	SH18*	1990	09	16.18038	21	15	26.44	-09	00	27.4	18.0		675
1990	SH18	1990	09	16.22465	21	15	24.74	-09	00	24.3			675
1990	SJ18*	1990	09	16.18038	21	18	53.66	-11	47	40.8	17.5		675
1990	SJ18	1990	09	16.22465	21	18	52.52	-11	47	50.2			675
1990	SK18*	1990	09	16.18038	21	23	34.51	-12	39	03.7	18.2		675
1990	SK18	1990	09	16.22465	21	23	33.38	-12	39	12.3			675
1990	SL18*	1990	09	16.18906	21	23	14.58	-21	51	27.4	18.2		675
1990	SL18	1990	09	16.23316	21	23	13.38	-21	51	22.3			675
1990	SM18*	1990	09	16.18906	21	38	03.47	-21	42	14.7	18.2		675
1990	SM18	1990	09	16.23316	21	38	01.90	-21	42	22.6			675
1990	SN18*	1990	09	16.18906	21	42	27.90	-19	24	49.8	18.2		675
1990	SN18	1990	09	16.23316	21	42	26.29	-19	24	46.3			675
1990	SO18*	1990	09	16.18906	21	47	17.86	-21	28	15.0	18.2		675
1990	SO18	1990	09	16.23316	21	47	16.48	-21	28	29.2			675
1990	SP18*	1990	09	16.25504	22	20	42.86	-07	27	18.3	17.5		675
1990	SP18	1990	09	16.29149	22	20	41.24	-07	27	33.6			675
1990	SQ18*	1990	09	16.26406	22	20	55.43	-15	12	40.3	17.0		675
1990	SQ18	1990	09	16.30069	22	20	54.09	-15	12	43.7			675
1990	SR18*	1990	09	16.26406	22	21	00.54	-15	21	06.2	16.2		675
1990	SR18	1990	09	16.30069	22	20	58.44	-15	21	00.4			675
1990	SS18*	1990	09	16.26406	22	21	15.05	-14	26	11.3	18.8		675
1990	SS18	1990	09	16.30069	22	21	13.27	-14	26	10.4	18.5		675
1990	ST18*	1990	09	16.26406	22	24	27.51	-14	43	05.3	16.8		675
1990	ST18	1990	09	16.30069	22	24	25.42	-14	43	04.7			675
1990	SU18*	1990	09	16.26406	22	24	33.44	-13	27	02.8	17.5		675
1990	SU18	1990	09	16.30069	22	24	31.98	-13	27	10.3			675
1990	SV18*	1990	09	16.26406	22	25	29.85	-13	28	55.4	17.5		675
1990	SV18	1990	09	16.30069	22	25	28.06	-13	28	49.0	16.8		675
1990	SW18*	1990	09	16.26406	22	32	08.98	-14	43	52.2	17.5		675
1990	SW18	1990	09	16.30069	22	32	06.92	-14	43	53.2			675
1990	SX18*	1990	09	16.26406	22	36	00.57	-13	05	25.5	18.0		675
1990	SX18	1990	09	16.30069	22	35	58.38	-13	05	26.6			675
1990	SY18*	1990	09	16.26406	22	40	19.77	-15	43	04.7	17.5		675
1990	SY18	1990	09	16.30069	22	40	17.87	-15	43	11.6			675
1990	SZ18*	1990	09	16.26406	22	41	42.51	-13	31	31.3	17.8		675
1990	SZ18	1990	09	16.30069	22	41	40.81	-13	31	39.2			675
1990	SA19*	1990	09	16.26406	22	42	56.48	-12	13	12.9	17.5		675

1990 SA19	1990 09 16.30069	22 42 52.96	-12 13 00.5		675
1990 SB19*	1990 09 16.26406	22 43 51.11	-16 13 40.7	18.5	675
1990 SB19	1990 09 16.30069	22 43 49.35	-16 13 55.3		675
1990 SC19*	1990 09 16.26406	22 44 55.25	-14 29 20.9	17.0	675
1990 SC19	1990 09 16.30069	22 44 53.26	-14 29 22.8	17.2	675
1990 SD19*	1990 09 16.26406	22 47 56.88	-15 58 58.8	18.5	675
1990 SD19	1990 09 16.30069	22 47 54.61	-15 58 53.4		675
1990 SE19*	1990 09 17.16302	21 35 49.61	-07 01 16.3	17.5	675
1990 SE19	1990 09 17.19462	21 35 48.31	-07 01 16.1		675
1990 SF19*	1990 09 17.21181	22 00 56.31	-16 14 57.6	17.5	675
1990 SF19	1990 09 17.24549	22 00 55.30	-16 15 02.2		675
1990 SG19*	1990 09 17.21181	22 15 41.93	-17 38 26.8	17.5	675
1990 SG19	1990 09 17.24549	22 15 40.71	-17 38 37.7		675
1990 SH19*	1990 09 17.30556	00 06 24.01	-12 38 48.8	17.5	675
1990 SH19	1990 09 17.33941	00 06 22.22	-12 38 53.4		675
1990 SJ19*	1990 09 17.30556	23 40 14.67	-13 45 34.7	18.0	675
1990 SJ19	1990 09 17.33941	23 40 12.91	-13 46 22.3		675
1990 SK19*	1990 09 17.30556	23 47 16.02	-11 11 51.0	17.5	675
1990 SK19	1990 09 17.33941	23 47 14.25	-11 12 06.3		675
1990 SL19*	1990 09 17.30556	23 54 47.07	-12 52 23.9	17.5	675
1990 SL19	1990 09 17.33941	23 54 45.18	-12 52 31.8		675
1990 SM19*	1990 09 17.30556	23 58 58.76	-14 06 29.6	17.5	675
1990 SM19	1990 09 17.33941	23 58 57.37	-14 06 48.7		675
1990 SN19*	1990 09 18.19097	22 37 00.53	-05 38 38.7	18.2	675
1990 SN19	1990 09 18.22222	22 36 59.24	-05 38 46.4		675
1990 SO19*	1990 09 18.19097	22 37 06.79	-07 00 04.6	17.5	675
1990 SO19	1990 09 18.22222	22 37 04.91	-07 00 00.8		675
1990 SP19*	1990 09 18.19097	22 43 20.04	-04 46 51.1	17.5	675
1990 SP19	1990 09 18.22222	22 43 18.87	-04 47 06.8		675
1990 SQ19*	1990 09 18.19097	22 45 23.80	-10 43 12.9	18.5	675
1990 SQ19	1990 09 18.22222	22 45 22.38	-10 43 24.5		675
1990 SR19*	1990 09 18.19097	22 47 45.36	-11 14 37.1	17.8	675
1990 SR19	1990 09 18.22222	22 47 43.71	-11 14 10.1		675
1990 SS19*	1990 09 18.29497	23 37 39.62	+08 58 21.8	17.5	675
1990 SS19	1990 09 18.32760	23 37 37.96	+08 58 14.2		675
1990 ST19*	1990 09 18.29497	23 41 08.26	+13 26 04.3	16.8	675
1990 ST19	1990 09 18.32760	23 41 06.38	+13 25 57.3		675
1990 SU19*	1990 09 18.37517	01 17 11.80	-02 17 22.7	17.2	675
1990 SU19	1990 09 18.40694	01 17 10.48	-02 17 38.8		675
1990 SV19*	1990 09 18.38351	01 08 28.22	+11 26 31.9	17.2	675
1990 SV19	1990 09 18.41493	01 08 27.19	+11 26 17.8		675
1990 SW19*	1990 09 18.38351	01 08 36.73	+15 43 45.5	17.2	675
1990 SW19	1990 09 18.41493	01 08 35.29	+15 43 47.7		675
1990 SX19*	1990 09 18.38351	01 11 07.36	+13 36 52.6	16.5	675
1990 SX19	1990 09 18.41493	01 11 05.51	+13 36 54.9		675
1990 SY19*	1990 09 19.24244	22 21 07.53	-05 13 04.4	17.8	675
1990 SY19	1990 09 19.27587	22 21 06.41	-05 13 20.4		675
1990 SZ19*	1990 09 19.26892	23 19 11.98	+01 53 09.2	17.2	675
1990 SZ19	1990 09 19.29653	23 19 10.41	+01 52 57.2		675
1990 SA20*	1990 09 19.30417	23 27 28.35	-17 58 23.6	17.0	675
1990 SA20	1990 09 19.33472	23 27 27.12	-17 58 41.3		675
1990 SB20*	1990 09 19.30417	23 31 54.95	-12 55 38.8	17.0	675
1990 SB20	1990 09 19.33472	23 31 53.20	-12 55 43.7		675
1990 SC20*	1990 09 19.31962	23 11 13.15	-04 14 12.8	17.8	675
1990 SC20	1990 09 19.35000	23 11 12.21	-04 14 01.8		675
1990 SD20*	1990 09 19.40087	00 05 26.10	+06 37 19.2	17.5	675
1990 SD20	1990 09 19.42205	00 05 25.12	+06 37 10.9		675
1990 SE20*	1990 09 19.40087	00 19 41.41	+07 00 46.2	17.5	675
1990 SE20	1990 09 19.42205	00 19 40.34	+07 00 41.9		675

1990	SF20*	1990	09	19.40087	23	52	34.76	+04	06	54.4	17.5	675
1990	SF20	1990	09	19.42205	23	52	33.38	+04	06	49.8		675
1990	SG20*	1990	09	19.40087	23	52	44.59	+04	04	56.2	17.5	675
1990	SG20	1990	09	19.42205	23	52	43.35	+04	04	50.0		675
1990	SH20*	1990	09	19.40087	23	54	20.16	+04	40	01.2	17.5	675
1990	SH20	1990	09	19.42205	23	54	18.98	+04	39	56.0		675
1990	SJ20*	1990	09	20.25590	21	51	54.45	-19	47	27.4		675
1990	SJ20	1990	09	20.29097	21	51	52.98	-19	48	01.7		675
1990	SK20*	1990	09	20.25590	21	58	38.66	-19	18	31.8	17.2	675
1990	SK20	1990	09	20.29097	21	58	36.75	-19	18	41.3		675
1990	SL20*	1990	09	20.25590	22	14	03.28	-17	52	58.2	18.0	675
1990	SL20	1990	09	20.29097	22	14	02.06	-17	53	06.9		675
1990	SM20*	1990	09	20.26991	22	43	38.05	-02	21	21.6	17.8	675
1990	SM20	1990	09	20.30463	22	43	36.62	-02	21	34.1		675
1990	SN20*	1990	09	20.26991	22	59	29.62	-02	16	03.6	17.5	675
1990	SN20	1990	09	20.30463	22	59	27.82	-02	16	18.1		675
1990	SO20*	1990	09	20.33009	23	28	12.11	-01	52	11.8	17.5	675
1990	SO20	1990	09	20.36094	23	28	10.40	-01	52	18.4		675
1990	SP20*	1990	09	20.33009	23	32	40.66	-01	57	44.1	17.5	675
1990	SP20	1990	09	20.36094	23	32	39.02	-01	57	58.8		675
1990	SQ20*	1990	09	20.33669	23	20	30.09	+03	17	49.0	17.5	675
1990	SQ20	1990	09	20.36742	23	20	28.19	+03	17	43.3		675
1990	SR20*	1990	09	20.33669	23	31	17.85	+02	53	21.4	17.5	675
1990	SR20	1990	09	20.36742	23	31	16.22	+02	53	16.6		675
1990	SS20*	1990	09	20.33669	23	37	47.52	+02	29	02.9	17.2	675
1990	SS20	1990	09	20.36742	23	37	45.85	+02	29	00.2		675
1990	ST20*	1990	09	20.33669	23	38	46.03	+04	10	17.0	17.5	675
1990	ST20	1990	09	20.36742	23	38	44.68	+04	10	01.4		675
1990	SU20*	1990	09	20.33669	23	51	38.72	+04	03	58.9	17.5	675
1990	SU20	1990	09	20.36742	23	51	36.78	+04	03	54.2		675
1990	SV20*	1990	09	20.34366	00	00	25.08	-13	04	29.6	17.5	675
1990	SV20	1990	09	20.37373	00	00	23.50	-13	04	41.5		675
1990	SW20*	1990	09	20.34366	23	56	02.47	-13	50	09.4	17.0	675
1990	SW20	1990	09	20.37373	23	56	00.89	-13	50	17.7		675
1990	SX20*	1990	09	20.39878	00	30	13.51	+06	00	09.5	17.2	675
1990	SX20	1990	09	20.43299	00	30	12.11	+05	59	46.8		675
1990	SY20*	1990	09	19.05862	21	12	23.53	-07	08	01.8	18.0	801
1990	SY20	1990	09	19.09692	21	12	22.55	-07	08	18.1		801
1990	SZ20*	1990	09	19.11190	21	43	44.03	-16	55	04.3	18.0	801
1990	SZ20	1990	09	19.14289	21	43	43.13	-16	54	54.9		801
1990	SA21*	1990	09	26.24668	01	20	55.30	-18	43	33.7		808
1990	SA21	1990	09	26.28269	01	20	54.00	-18	43	55.4		808
1990	SB21*	1990	09	18.28125	23	34	02.17	-05	28	25.5	17.5	809
1990	SB21	1990	09	18.29513	23	34	01.52	-05	28	30.3		809
1990	SB21	1990	09	18.30902	23	34	00.86	-05	28	34.5		809
1990	SC21*	1990	09	18.33334	00	24	35.12	+02	29	28.4	17.7	809
1990	SC21	1990	09	18.34723	00	24	34.51	+02	29	20.7		809
1990	SC21	1990	09	18.36112	00	24	33.94	+02	29	13.0		809
1990	SD21*	1990	09	22.12500	00	01	36.03	-05	23	41.3	20.0	809
1990	SD21	1990	09	22.13819	00	01	35.43	-05	23	46.7		809
1990	SD21	1990	09	22.15139	00	01	34.95	-05	23	51.0		809
1990	SE21*	1990	09	22.12500	00	02	16.02	-08	08	04.9	19.7	809
1990	SE21	1990	09	22.13819	00	02	15.18	-08	08	07.7		809
1990	SE21	1990	09	22.15139	00	02	14.45	-08	08	09.8		809
1990	SF21*	1990	09	22.12500	00	02	42.80	-03	43	51.5	18.6	809
1990	SF21	1990	09	22.13819	00	02	42.11	-03	43	57.6		809
1990	SF21	1990	09	22.15139	00	02	41.51	-03	44	01.0		809
1990	SG21*	1990	09	22.12500	00	05	56.63	-04	19	49.9	19.3	809
1990	SG21	1990	09	22.13819	00	05	55.59	-04	19	57.1		809

1990	SG21	1990	09	22.15139	00	05	54.76	-04	20	04.5		809
1990	SH21*	1990	09	22.12500	00	06	57.33	-03	32	57.4	20.2	809
1990	SH21	1990	09	22.13819	00	06	56.78	-03	32	59.7		809
1990	SH21	1990	09	22.15139	00	06	56.15	-03	33	01.2		809
1990	SJ21*	1990	09	22.12500	00	07	53.78	-07	40	40.4	19.0	809
1990	SJ21	1990	09	22.13819	00	07	53.11	-07	40	40.2		809
1990	SJ21	1990	09	22.15139	00	07	52.54	-07	40	40.1		809
1990	SK21*	1990	09	22.12500	00	08	48.40	-07	05	53.4	20.5	809
1990	SK21	1990	09	22.13819	00	08	47.29	-07	06	01.7		809
1990	SK21	1990	09	22.15139	00	08	46.56	-07	06	08.8		809
1990	SL21*	1990	09	22.12500	00	09	31.50	-08	37	48.5	19.5	809
1990	SL21	1990	09	22.13819	00	09	30.68	-08	37	52.7		809
1990	SL21	1990	09	22.15139	00	09	29.94	-08	37	57.7		809
1990	SM21*	1990	09	22.12500	00	12	28.57	-08	00	11.8	20.0	809
1990	SM21	1990	09	22.13819	00	12	27.92	-08	00	17.2		809
1990	SM21	1990	09	22.15139	00	12	27.36	-08	00	20.1		809
1990	SN21*	1990	09	22.12500	00	14	16.67	-04	07	23.6	19.8	809
1990	SN21	1990	09	22.13819	00	14	15.78	-04	07	26.9		809
1990	SN21	1990	09	22.15139	00	14	14.97	-04	07	32.9		809
1990	SO21*	1990	09	22.12500	00	15	32.16	-04	23	11.8	20.0	809
1990	SO21	1990	09	22.13819	00	15	31.54	-04	23	18.2		809
1990	SO21	1990	09	22.15139	00	15	30.95	-04	23	22.1		809
1990	SP21*	1990	09	22.12500	00	15	32.32	-04	21	59.6	19.7	809
1990	SP21	1990	09	22.13819	00	15	31.64	-04	22	01.0		809
1990	SP21	1990	09	22.15139	00	15	30.95	-04	22	01.2		809
1990	SQ21*	1990	09	22.12500	00	16	12.21	-04	00	52.1	18.6	809
1990	SQ21	1990	09	22.13819	00	16	10.84	-04	00	43.7		809
1990	SQ21	1990	09	22.15139	00	16	09.63	-04	00	37.0		809
1990	SR21*	1990	09	22.12500	00	17	19.90	-03	54	20.6	18.6	809
1990	SR21	1990	09	22.13819	00	17	19.16	-03	54	23.6		809
1990	SR21	1990	09	22.15139	00	17	18.43	-03	54	26.0		809
1990	SS21*	1990	09	22.12500	00	17	25.84	-04	55	49.8	20.5	809
1990	SS21	1990	09	22.13819	00	17	25.07	-04	55	55.7		809
1990	SS21	1990	09	22.15139	00	17	24.49	-04	56	01.7		809
1990	ST21*	1990	09	22.12500	00	18	54.17	-04	18	09.4	18.6	809
1990	ST21	1990	09	22.13819	00	18	53.30	-04	18	09.6		809
1990	ST21	1990	09	22.15139	00	18	52.44	-04	18	09.7		809
1990	SU21*	1990	09	22.12500	00	19	10.88	-07	56	26.6	19.6	809
1990	SU21	1990	09	22.13819	00	19	09.97	-07	56	31.4		809
1990	SU21	1990	09	22.15139	00	19	09.30	-07	56	34.6		809
1990	SV21*	1990	09	22.12500	00	20	31.20	-05	09	00.8	19.8	809
1990	SV21	1990	09	22.13819	00	20	30.55	-05	09	05.7		809
1990	SV21	1990	09	22.15139	00	20	30.10	-05	09	10.6		809
1990	SW21*	1990	09	22.12500	00	20	52.68	-05	12	14.7	18.6	809
1990	SW21	1990	09	22.13819	00	20	51.86	-05	12	15.5		809
1990	SW21	1990	09	22.15139	00	20	51.09	-05	12	15.3		809
1990	SX21*	1990	09	22.12500	00	21	04.86	-05	02	35.5	19.5	809
1990	SX21	1990	09	22.13819	00	21	04.06	-05	02	40.1		809
1990	SX21	1990	09	22.15139	00	21	03.33	-05	02	43.6		809
1990	SY21*	1990	09	22.17153	00	27	29.10	-02	11	20.0	20.0	809
1990	SY21	1990	09	22.18472	00	27	28.40	-02	11	24.9		809
1990	SY21	1990	09	22.19792	00	27	27.83	-02	11	29.8		809
1990	SZ21*	1990	09	22.17153	00	28	53.94	-01	37	46.5	18.6	809
1990	SZ21	1990	09	22.18472	00	28	53.24	-01	37	53.3		809
1990	SZ21	1990	09	22.19792	00	28	52.51	-01	38	00.8		809
1990	SA22*	1990	09	22.17153	00	32	56.91	-02	53	27.3	20.2	809
1990	SA22	1990	09	22.18472	00	32	56.39	-02	53	34.3		809
1990	SA22	1990	09	22.19792	00	32	55.79	-02	53	41.6		809
1990	SB22*	1990	09	22.17153	00	34	27.79	+00	15	46.8	18.2	809

1990	SB22	1990	09	22.18472	00	34	27.12	+00	15	40.4		809
1990	SB22	1990	09	22.19792	00	34	26.52	+00	15	34.9		809
1990	SC22*	1990	09	22.17153	00	34	59.73	-04	39	13.7	19.4	809
1990	SC22	1990	09	22.18472	00	34	58.95	-04	39	19.5		809
1990	SC22	1990	09	22.19792	00	34	58.25	-04	39	25.0		809
1990	SD22*	1990	09	22.17153	00	35	09.70	-04	41	03.6	17.9	809
1990	SD22	1990	09	22.18472	00	35	08.62	-04	40	59.1		809
1990	SD22	1990	09	22.19792	00	35	07.50	-04	40	54.2		809
1990	SE22*	1990	09	22.17153	00	35	26.52	+00	05	19.1	18.8	809
1990	SE22	1990	09	22.18472	00	35	25.61	+00	05	17.6		809
1990	SE22	1990	09	22.19792	00	35	24.68	+00	05	17.6		809
1990	SF22*	1990	09	22.17153	00	36	49.74	-02	58	05.8	20.5	809
1990	SF22	1990	09	22.18472	00	36	48.90	-02	58	04.7		809
1990	SF22	1990	09	22.19792	00	36	48.29	-02	58	06.6		809
1990	SG22*	1990	09	22.17153	00	42	53.75	+00	11	19.7	19.0	809
1990	SG22	1990	09	22.18472	00	42	53.07	+00	11	14.5		809
1990	SG22	1990	09	22.19792	00	42	52.53	+00	11	09.3		809
1990	SH22*	1990	09	22.17153	00	43	02.01	-00	20	24.0	19.6	809
1990	SH22	1990	09	22.18472	00	43	01.17	-00	20	25.6		809
1990	SH22	1990	09	22.19792	00	43	00.23	-00	20	27.9		809
1990	SJ22*	1990	09	22.17153	00	43	08.11	-00	44	53.5	19.6	809
1990	SJ22	1990	09	22.18472	00	43	07.37	-00	44	58.1		809
1990	SJ22	1990	09	22.19792	00	43	06.83	-00	45	01.5		809
1990	SK22*	1990	09	23.05695	23	39	11.49	-04	45	19.1	18.2	809
1990	SK22	1990	09	23.06946	23	39	11.01	-04	45	22.7		809
1990	SK22	1990	09	23.08194	23	39	10.52	-04	45	26.1		809
1990	SL22*	1990	09	23.17569	23	24	01.54	-05	23	39.6	18.0	809
1990	SL22	1990	09	23.18820	23	24	01.12	-05	23	46.0		809
1990	SL22	1990	09	23.20068	23	24	00.69	-05	23	52.4		809
1990	SM22*	1990	09	25.17778	00	01	20.60	-09	01	27.2	18.5	809
1990	SM22	1990	09	25.19097	00	01	19.77	-09	01	22.0		809
1990	SM22	1990	09	25.20417	00	01	18.88	-09	01	17.4		809
1990	SN22*	1990	09	25.17778	00	01	50.83	-04	54	41.0	20.3	809
1990	SN22	1990	09	25.19097	00	01	49.94	-04	54	40.7		809
1990	SN22	1990	09	25.20417	00	01	48.95	-04	54	41.6		809
1990	SO22*	1990	09	25.17778	00	02	21.58	-07	28	20.0	19.6	809
1990	SO22	1990	09	25.19097	00	02	20.75	-07	28	27.7		809
1990	SO22	1990	09	25.20417	00	02	19.88	-07	28	36.5		809
1990	SP22*	1990	09	25.17778	00	03	00.65	-08	56	51.6	18.9	809
1990	SP22	1990	09	25.19097	00	02	59.90	-08	56	53.8		809
1990	SP22	1990	09	25.20417	00	02	59.06	-08	56	56.1		809
1990	SQ22*	1990	09	25.17778	00	03	27.10	-07	05	38.6	19.7	809
1990	SQ22	1990	09	25.19097	00	03	26.25	-07	05	40.6		809
1990	SQ22	1990	09	25.20417	00	03	25.16	-07	05	43.3		809
1990	SR22*	1990	09	25.17778	00	04	21.84	-05	00	16.2	19.6	809
1990	SR22	1990	09	25.19097	00	04	21.00	-05	00	17.9		809
1990	SR22	1990	09	25.20417	00	04	20.15	-05	00	19.0		809
1990	SS22*	1990	09	25.17778	00	05	08.36	-09	07	54.5	18.7	809
1990	SS22	1990	09	25.19097	00	05	07.65	-09	07	56.2		809
1990	SS22	1990	09	25.20417	00	05	06.92	-09	07	57.5		809
1990	ST22*	1990	09	25.17778	00	05	11.24	-07	33	06.5	19.0	809
1990	ST22	1990	09	25.19097	00	05	10.51	-07	33	08.7		809
1990	ST22	1990	09	25.20417	00	05	09.63	-07	33	09.3		809
1990	SU22*	1990	09	25.17778	00	05	13.95	-09	08	54.5	18.0	809
1990	SU22	1990	09	25.19097	00	05	13.07	-09	08	53.0		809
1990	SU22	1990	09	25.20417	00	05	12.10	-09	08	52.0		809
1990	SV22*	1990	09	25.17778	00	08	29.14	-09	09	43.1	20.0	809
1990	SV22	1990	09	25.19097	00	08	28.39	-09	09	44.3		809
1990	SV22	1990	09	25.20417	00	08	27.52	-09	09	45.3		809



1990	SW22*	1990	09	25.17778	00	10	05.02	-06	43	11.3	20.5	809
1990	SW22	1990	09	25.19097	00	10	04.39	-06	43	16.7		809
1990	SW22	1990	09	25.20417	00	10	03.76	-06	43	22.0		809
1990	SX22*	1990	09	25.17778	00	12	22.75	-05	13	54.6	20.0	809
1990	SX22	1990	09	25.19097	00	12	21.85	-05	13	56.6		809
1990	SX22	1990	09	25.20417	00	12	20.91	-05	13	58.5		809
1990	SY22*	1990	09	25.17778	00	12	24.32	-07	05	40.8	19.8	809
1990	SY22	1990	09	25.19097	00	12	23.36	-07	05	44.3		809
1990	SY22	1990	09	25.20417	00	12	22.45	-07	05	48.1		809
1990	SZ22*	1990	09	25.17778	00	12	48.17	-04	16	31.4	19.4	809
1990	SZ22	1990	09	25.19097	00	12	47.66	-04	16	37.9		809
1990	SZ22	1990	09	25.20417	00	12	46.95	-04	16	44.6		809
1990	SA23*	1990	09	25.17778	00	12	48.44	-05	36	15.1	20.0	809
1990	SA23	1990	09	25.19097	00	12	47.70	-05	36	23.0		809
1990	SA23	1990	09	25.20417	00	12	47.07	-05	36	29.7		809
1990	SB23*	1990	09	25.17778	00	13	42.48	-08	13	07.6	20.3	809
1990	SB23	1990	09	25.19097	00	13	41.69	-08	13	06.5		809
1990	SB23	1990	09	25.20417	00	13	40.78	-08	13	05.1		809
1990	SC23*	1990	09	25.17778	00	14	03.35	-04	41	46.7	19.4	809
1990	SC23	1990	09	25.19097	00	14	02.72	-04	41	56.6		809
1990	SC23	1990	09	25.20417	00	14	02.10	-04	42	03.4		809
1990	SD23*	1990	09	25.17778	23	55	45.40	-07	42	53.8	19.2	809
1990	SD23	1990	09	25.19097	23	55	44.58	-07	42	57.7		809
1990	SD23	1990	09	25.20417	23	55	43.67	-07	43	01.4		809
1990	SE23*	1990	09	25.17778	23	56	20.16	-08	12	32.7	19.7	809
1990	SE23	1990	09	25.19097	23	56	19.46	-08	12	37.4		809
1990	SE23	1990	09	25.20417	23	56	18.64	-08	12	41.5		809
1990	SF23*	1990	09	25.17778	23	56	56.75	-08	14	34.0	19.0	809
1990	SF23	1990	09	25.19097	23	56	55.92	-08	14	30.3		809
1990	SF23	1990	09	25.20417	23	56	54.87	-08	14	27.6		809
1990	SG23*	1990	09	25.17778	23	56	58.50	-08	01	40.7	18.7	809
1990	SG23	1990	09	25.19097	23	56	57.73	-08	01	44.2		809
1990	SG23	1990	09	25.20417	23	56	56.91	-08	01	47.7		809
1990	SH23*	1990	09	25.17778	23	57	02.72	-07	47	10.0	19.6	809
1990	SH23	1990	09	25.19097	23	57	01.79	-07	47	12.8		809
1990	SH23	1990	09	25.20417	23	57	01.01	-07	47	15.3		809
1990	SJ23*	1990	09	25.17778	23	57	49.31	-04	47	28.5	19.6	809
1990	SJ23	1990	09	25.19097	23	57	48.59	-04	47	31.1		809
1990	SJ23	1990	09	25.20417	23	57	47.73	-04	47	34.9		809
1990	SK23*	1990	09	25.17778	23	59	05.79	-08	38	51.3	18.6	809
1990	SK23	1990	09	25.19097	23	59	05.16	-08	38	57.5		809
1990	SK23	1990	09	25.20417	23	59	04.51	-08	39	05.0		809
1990	SL23*	1990	09	25.22153	00	21	12.70	-01	42	13.9	19.2	809
1990	SL23	1990	09	25.23472	00	21	12.04	-01	42	19.5		809
1990	SL23	1990	09	25.24792	00	21	11.16	-01	42	26.6		809
1990	SM23*	1990	09	25.22153	00	21	38.90	-04	40	29.6	18.6	809
1990	SM23	1990	09	25.23472	00	21	38.29	-04	40	31.1		809
1990	SM23	1990	09	25.24792	00	21	37.72	-04	40	32.8		809
1990	SN23*	1990	09	25.22153	00	21	48.09	-01	19	20.3	18.8	809
1990	SN23	1990	09	25.23472	00	21	47.71	-01	19	23.6		809
1990	SN23	1990	09	25.24792	00	21	47.22	-01	19	30.6		809
1990	SO23*	1990	09	25.22153	00	22	01.40	-01	22	25.3	19.0	809
1990	SO23	1990	09	25.23472	00	22	00.82	-01	22	29.8		809
1990	SO23	1990	09	25.24792	00	22	00.18	-01	22	35.7		809
1990	SP23*	1990	09	25.22153	00	22	16.50	-01	02	03.4	20.5	809
1990	SP23	1990	09	25.23472	00	22	15.79	-01	02	07.2		809
1990	SP23	1990	09	25.24792	00	22	15.20	-01	02	12.3		809
1990	SQ23*	1990	09	25.22153	00	22	28.51	-01	32	48.2	19.2	809
1990	SQ23	1990	09	25.23472	00	22	27.87	-01	32	53.0		809

1990	SQ23	1990	09	25.24792	00	22	27.19	-01	32	55.6		809
1990	SR23*	1990	09	25.22153	00	22	49.33	-04	24	25.1	19.6	809
1990	SR23	1990	09	25.23472	00	22	48.72	-04	24	32.2		809
1990	SR23	1990	09	25.24792	00	22	48.10	-04	24	37.1		809
1990	SS23*	1990	09	25.22153	00	22	56.78	-03	32	33.5	18.9	809
1990	SS23	1990	09	25.23472	00	22	56.01	-03	32	39.9		809
1990	SS23	1990	09	25.24792	00	22	55.20	-03	32	46.4		809
1990	ST23*	1990	09	25.22153	00	22	57.76	-05	04	40.2	19.0	809
1990	ST23	1990	09	25.23472	00	22	56.88	-05	04	43.3		809
1990	ST23	1990	09	25.24792	00	22	55.95	-05	04	46.3		809
1990	SU23*	1990	09	25.22153	00	23	01.74	-01	16	47.7	18.8	809
1990	SU23	1990	09	25.23472	00	23	01.00	-01	16	53.4		809
1990	SU23	1990	09	25.24792	00	23	00.39	-01	16	59.1		809
1990	SV23*	1990	09	25.22153	00	23	14.18	-03	37	05.8	18.7	809
1990	SV23	1990	09	25.23472	00	23	13.54	-03	37	08.5		809
1990	SV23	1990	09	25.24792	00	23	12.74	-03	37	11.0		809
1990	SW23*	1990	09	25.22153	00	23	19.35	-04	16	44.0	19.5	809
1990	SW23	1990	09	25.23472	00	23	18.68	-04	16	49.3		809
1990	SW23	1990	09	25.24792	00	23	17.98	-04	16	53.4		809
1990	SX23*	1990	09	25.22153	00	23	35.02	-01	13	43.4	19.0	809
1990	SX23	1990	09	25.23472	00	23	34.48	-01	13	51.2		809
1990	SX23	1990	09	25.24792	00	23	33.90	-01	13	57.8		809
1990	SY23*	1990	09	25.22153	00	23	39.64	-02	43	49.9	20.5	809
1990	SY23	1990	09	25.23472	00	23	39.08	-02	43	55.9		809
1990	SY23	1990	09	25.24792	00	23	38.46	-02	43	59.4		809
1990	SZ23*	1990	09	25.22153	00	24	13.96	-05	10	28.9	18.8	809
1990	SZ23	1990	09	25.23472	00	24	13.24	-05	10	33.3		809
1990	SZ23	1990	09	25.24792	00	24	12.61	-05	10	38.2		809
1990	SA24*	1990	09	25.22153	00	24	35.95	-03	28	14.9	19.6	809
1990	SA24	1990	09	25.23472	00	24	35.25	-03	28	17.3		809
1990	SA24	1990	09	25.24792	00	24	34.63	-03	28	20.2		809
1990	SB24*	1990	09	25.22153	00	25	24.71	-00	35	24.1	20.0	809
1990	SB24	1990	09	25.23472	00	25	23.96	-00	35	26.8		809
1990	SB24	1990	09	25.24792	00	25	23.26	-00	35	27.7		809
1990	SC24*	1990	09	25.22153	00	25	31.87	-05	14	40.7	18.5	809
1990	SC24	1990	09	25.23472	00	25	31.01	-05	14	47.9		809
1990	SC24	1990	09	25.24792	00	25	30.26	-05	14	53.9		809
1990	SD24*	1990	09	25.22153	00	26	15.82	-02	01	39.6	19.7	809
1990	SD24	1990	09	25.23472	00	26	15.04	-02	01	45.5		809
1990	SD24	1990	09	25.24792	00	26	14.35	-02	01	51.7		809
1990	SE24*	1990	09	25.22153	00	26	25.65	-01	56	33.0	19.4	809
1990	SE24	1990	09	25.23472	00	26	25.05	-01	56	35.7		809
1990	SE24	1990	09	25.24792	00	26	24.49	-01	56	39.5		809
1990	SF24*	1990	09	25.22153	00	26	29.01	-02	02	08.4	19.0	809
1990	SF24	1990	09	25.23472	00	26	28.43	-02	02	13.9		809
1990	SF24	1990	09	25.24792	00	26	27.73	-02	02	21.3		809
1990	SG24*	1990	09	25.22153	00	26	40.16	-02	01	54.9	19.8	809
1990	SG24	1990	09	25.23472	00	26	39.45	-02	01	57.0		809
1990	SG24	1990	09	25.24792	00	26	38.83	-02	01	57.7		809
1990	SH24*	1990	09	25.22153	00	26	42.39	-03	44	53.8	18.7	809
1990	SH24	1990	09	25.23472	00	26	41.62	-03	44	57.6		809
1990	SH24	1990	09	25.24792	00	26	40.74	-03	45	01.2		809
1990	SJ24*	1990	09	25.22153	00	26	46.22	-02	49	57.6	19.4	809
1990	SJ24	1990	09	25.23472	00	26	45.36	-02	49	56.5		809
1990	SJ24	1990	09	25.24792	00	26	44.49	-02	49	57.6		809
1990	SK24*	1990	09	25.22153	00	27	39.46	-00	52	29.6	20.0	809
1990	SK24	1990	09	25.23472	00	27	38.74	-00	52	34.6		809
1990	SK24	1990	09	25.24792	00	27	37.99	-00	52	38.8		809
1990	SL24*	1990	09	25.22153	00	27	43.31	-02	12	27.2	19.2	809

1990	SL24	1990	09	25.23472	00	27	42.60	-02	12	33.8		809
1990	SL24	1990	09	25.24792	00	27	42.00	-02	12	36.8		809
1990	SM24*	1990	09	25.22153	00	27	56.49	-03	06	38.2	20.0	809
1990	SM24	1990	09	25.23472	00	27	55.80	-03	06	40.7		809
1990	SM24	1990	09	25.24792	00	27	54.98	-03	06	42.8		809
1990	SN24*	1990	09	25.22153	00	28	24.88	-03	00	01.8	19.2	809
1990	SN24	1990	09	25.23472	00	28	24.22	-03	00	03.6		809
1990	SN24	1990	09	25.24792	00	28	23.51	-03	00	09.0		809
1990	SO24*	1990	09	25.22153	00	28	38.28	-02	56	38.5	19.3	809
1990	SO24	1990	09	25.23472	00	28	37.62	-02	56	40.2		809
1990	SO24	1990	09	25.24792	00	28	36.79	-02	56	45.1		809
1990	SP24*	1990	09	25.22153	00	29	14.11	-03	57	09.9	19.3	809
1990	SP24	1990	09	25.23472	00	29	13.53	-03	57	15.2		809
1990	SP24	1990	09	25.24792	00	29	12.84	-03	57	21.6		809
1990	SQ24*	1990	09	25.22153	00	29	25.63	-03	53	24.2	20.0	809
1990	SQ24	1990	09	25.23472	00	29	24.86	-03	53	25.8		809
1990	SQ24	1990	09	25.24792	00	29	23.86	-03	53	29.2		809
1990	SR24*	1990	09	25.22153	00	30	05.03	-04	03	31.1	19.2	809
1990	SR24	1990	09	25.23472	00	30	04.29	-04	03	36.9		809
1990	SR24	1990	09	25.24792	00	30	03.59	-04	03	42.4		809
1990	SS24*	1990	09	25.22153	00	30	39.72	-04	19	17.6	18.4	809
1990	SS24	1990	09	25.23472	00	30	38.48	-04	19	11.9		809
1990	SS24	1990	09	25.24792	00	30	37.30	-04	19	05.9		809
1990	ST24*	1990	09	25.22153	00	30	41.72	-01	20	39.8	19.5	809
1990	ST24	1990	09	25.23472	00	30	41.02	-01	20	48.3		809
1990	ST24	1990	09	25.24792	00	30	40.39	-01	20	55.1		809
1990	SU24*	1990	09	25.22153	00	31	24.86	-03	11	16.3	20.5	809
1990	SU24	1990	09	25.23472	00	31	24.17	-03	11	17.4		809
1990	SU24	1990	09	25.24792	00	31	23.54	-03	11	19.1		809
1990	SV24*	1990	09	25.22153	00	31	25.22	-03	03	52.0	19.3	809
1990	SV24	1990	09	25.23472	00	31	24.42	-03	03	53.3		809
1990	SV24	1990	09	25.24792	00	31	23.77	-03	03	54.6		809
1990	SW24*	1990	09	25.22153	00	32	11.69	-00	26	52.4	19.2	809
1990	SW24	1990	09	25.23472	00	32	10.94	-00	26	58.0		809
1990	SW24	1990	09	25.24792	00	32	10.28	-00	27	02.2		809
1990	SX24*	1990	09	25.22153	00	33	14.22	-01	46	40.4	20.0	809
1990	SX24	1990	09	25.23472	00	33	13.40	-01	46	42.5		809
1990	SX24	1990	09	25.24792	00	33	12.60	-01	46	46.5		809
1990	SY24*	1990	09	25.22153	00	33	35.04	-00	25	12.8	19.0	809
1990	SY24	1990	09	25.23472	00	33	34.24	-00	25	15.8		809
1990	SY24	1990	09	25.24792	00	33	33.39	-00	25	20.3		809
1990	SZ24*	1990	09	25.22153	00	33	44.33	-01	27	52.2	20.0	809
1990	SZ24	1990	09	25.23472	00	33	43.76	-01	27	58.2		809
1990	SZ24	1990	09	25.24792	00	33	43.19	-01	28	02.0		809
1990	SA25*	1990	09	25.22153	00	33	50.70	-00	34	52.6	19.5	809
1990	SA25	1990	09	25.23472	00	33	50.01	-00	34	56.6		809
1990	SA25	1990	09	25.24792	00	33	49.36	-00	34	59.7		809
1990	SB25*	1990	09	25.22153	00	33	56.62	-00	40	04.5	19.3	809
1990	SB25	1990	09	25.23472	00	33	55.95	-00	40	09.6		809
1990	SB25	1990	09	25.24792	00	33	55.18	-00	40	16.6		809
1990	SC25*	1990	09	25.22153	00	34	13.90	-02	05	20.1	18.0	809
1990	SC25	1990	09	25.23472	00	34	13.04	-02	05	20.5		809
1990	SC25	1990	09	25.24792	00	34	12.27	-02	05	20.0		809
1990	SD25*	1990	09	25.22153	00	34	28.93	-05	04	10.9	19.6	809
1990	SD25	1990	09	25.23472	00	34	28.16	-05	04	12.5		809
1990	SD25	1990	09	25.24792	00	34	27.56	-05	04	14.9		809
1990	SE25*	1990	09	25.22153	00	34	34.58	-01	52	09.6	19.7	809
1990	SE25	1990	09	25.23472	00	34	33.79	-01	52	12.0		809
1990	SE25	1990	09	25.24792	00	34	33.12	-01	52	14.4		809

1990	SF25*	1990	09	25.22153	00	34	50.20	-05	01	15.6	19.2	809
1990	SF25	1990	09	25.23472	00	34	49.63	-05	01	20.1		809
1990	SF25	1990	09	25.24792	00	34	49.02	-05	01	25.2		809
1990	SG25*	1990	09	25.22153	00	35	05.26	-02	59	22.6	19.5	809
1990	SG25	1990	09	25.23472	00	35	04.48	-02	59	25.0		809
1990	SG25	1990	09	25.24792	00	35	03.67	-02	59	27.9		809
1990	SH25*	1990	09	25.22153	00	35	33.04	-02	42	39.3	18.9	809
1990	SH25	1990	09	25.23472	00	35	32.32	-02	42	45.0		809
1990	SH25	1990	09	25.24792	00	35	31.63	-02	42	52.6		809
1990	SJ25*	1990	09	25.22153	00	36	16.17	-04	40	16.3	19.0	809
1990	SJ25	1990	09	25.23472	00	36	15.36	-04	40	18.6		809
1990	SJ25	1990	09	25.24792	00	36	14.55	-04	40	20.6		809
1990	SK25*	1990	09	25.22153	00	36	47.73	-02	47	28.4	19.2	809
1990	SK25	1990	09	25.23472	00	36	46.99	-02	47	33.7		809
1990	SK25	1990	09	25.24792	00	36	46.34	-02	47	36.7		809
1990	SL25*	1990	09	25.22153	00	36	54.00	-03	31	09.0	19.2	809
1990	SL25	1990	09	25.23472	00	36	53.28	-03	31	14.1		809
1990	SL25	1990	09	25.24792	00	36	52.60	-03	31	18.2		809
1990	SM25*	1990	09	25.22153	00	37	55.05	-01	49	06.7	19.0	809
1990	SM25	1990	09	25.23472	00	37	54.31	-01	49	13.4		809
1990	SM25	1990	09	25.24792	00	37	53.65	-01	49	20.3		809
1990	SN25*	1990	09	25.22153	00	39	00.98	-01	41	32.7	19.2	809
1990	SN25	1990	09	25.23472	00	38	59.99	-01	41	30.3		809
1990	SN25	1990	09	25.24792	00	38	59.15	-01	41	27.7		809
1990	SO25*	1990	09	25.22153	00	39	03.11	-05	02	58.2	18.7	809
1990	SO25	1990	09	25.23472	00	39	02.20	-05	02	54.0		809
1990	SO25	1990	09	25.24792	00	39	01.28	-05	02	48.6		809
1990	SP25*	1990	09	25.22153	00	40	25.11	-01	24	30.1	19.8	809
1990	SP25	1990	09	25.23472	00	40	24.11	-01	24	37.0		809
1990	SP25	1990	09	25.24792	00	40	23.31	-01	24	40.4		809
1990	SQ25*	1990	09	25.22153	00	41	01.06	-02	54	47.6	19.6	809
1990	SQ25	1990	09	25.23472	00	41	00.45	-02	54	54.6		809
1990	SQ25	1990	09	25.24792	00	40	59.70	-02	55	02.0		809
1990	SR25*	1990	09	25.25903	23	35	56.37	-00	33	43.0	18.2	809
1990	SR25	1990	09	25.27152	23	35	55.85	-00	33	45.3		809
1990	SR25	1990	09	25.28403	23	35	55.34	-00	33	47.7		809
1990	SS25*	1990	09	25.34235	01	45	21.77	+10	11	09.5	18.0	809
1990	SS25	1990	09	25.35486	01	45	21.33	+10	11	07.5		809
1990	SS25	1990	09	25.36737	01	45	20.88	+10	11	05.4		809
1990	ST25*	1990	09	18.54965	23	53	23.87	+01	47	20.4	15.0	877
1990	ST25	1990	09	18.57986	23	53	23.25	+01	47	06.8		877
1990	TP14*	1990	10	13.82951	01	14	00.02	+09	45	01.1	17.0	046
1990	TP14	1990	10	13.84236	01	13	59.31	+09	45	03.1		046
1990	TQ14*	1990	10	14.88657	01	17	34.42	+08	15	53.6	16.7	046
1990	TQ14	1990	10	14.89931	01	17	33.62	+08	15	56.5		046
1990	TR14*	1990	10	15.81620	00	35	54.12	+09	21	46.2	16.8	046
1990	TR14	1990	10	15.82894	00	35	53.12	+09	21	45.5		046
1990	TS14*	1990	10	15.84832	00	59	10.32	+06	13	07.1	17.1	046
1990	TS14	1990	10	15.86111	00	59	09.61	+06	13	06.6		046
1990	TT14*	1990	10	15.87905	01	18	46.52	+08	11	29.3	17.1	046
1990	TT14	1990	10	15.89178	01	18	45.96	+08	11	21.5		046
1990	TU14*	1990	10	12.59248	01	28	58.12	+06	06	02.1	18	V 413
1990	TU14	1990	10	12.64803	01	28	55.33	+06	05	49.7		413
1990	TV14*	1990	10	12.59248	01	31	56.64	+01	47	13.8	17	V 413
1990	TV14	1990	10	12.64803	01	31	53.12	+01	47	05.7		413
1990	TW14*	1990	10	12.59248	01	36	57.97	+02	00	44.8	17	V 413
1990	TW14	1990	10	12.64803	01	36	55.17	+02	00	19.8		413
1990	TX14*	1990	10	13.39514	20	50	10.81	-47	42	16.3	17	V 413
1990	TX14	1990	10	13.44722	20	50	16.13	-47	40	53.2		413

1990 TY14*	1990 10 14.20930	02 14 54.37	+12 48 31.4		808
1990 TY14	1990 10 14.23354	02 14 52.98	+12 48 34.5		808
1990 TZ14*	1990 10 14.20930	02 15 54.77	+11 02 51.2		808
1990 TZ14	1990 10 14.23354	02 15 53.58	+11 02 48.5		808
1990 UA6 *	1990 10 23.01563	02 09 35.96	+15 59 26.7	17.6	017
1990 UB6 *	1990 10 16.81429	00 35 14.32	+09 11 55.3	16.8	046
1990 UB6	1990 10 16.82708	00 35 13.68	+09 11 48.8		046
1990 UC6 *	1990 10 24.89416	01 39 58.95	+15 00 23.7	16.9	046
1990 UC6	1990 10 24.90833	01 39 58.30	+15 00 21.0		046
1990 UD6 *	1990 10 24.89416	01 40 05.58	+14 22 51.9	17.0	046
1990 UD6	1990 10 24.90833	01 40 04.93	+14 22 45.8		046
1990 UE6 *	1990 10 24.89416	01 41 11.83	+14 30 46.7	16.7	046
1990 UE6	1990 10 24.90833	01 41 11.02	+14 30 42.2		046
1990 UF6 *	1990 10 24.89416	01 43 10.57	+15 38 43.0	17.0	046
1990 UF6	1990 10 24.90833	01 43 09.78	+15 38 41.8		046
1990 UG6 *	1990 10 24.89416	01 47 49.10	+16 09 10.2	16.8	046
1990 UG6	1990 10 24.90833	01 47 48.26	+16 09 03.7		046
1990 UG6	1990 10 24.92905	01 47 46.68	+16 08 54.2		046
1990 UG6	1990 10 24.94317	01 47 45.77	+16 08 43.8		046
1990 UH6 *	1990 10 24.92905	01 50 25.32	+18 59 04.6	16.7	046
1990 UH6	1990 10 24.94317	01 50 24.52	+18 59 05.3		046
1990 UJ6 *	1990 10 24.92905	01 53 38.41	+19 00 49.9	16.7	046
1990 UJ6	1990 10 24.94317	01 53 37.77	+19 00 47.0		046
1990 UK6 *	1990 10 24.92905	01 55 11.16	+17 31 29.9	17.0	046
1990 UK6	1990 10 24.94317	01 55 10.32	+17 31 28.3		046
1990 UL6 *	1990 10 24.92905	01 55 17.71	+19 41 37.1	16.7	046
1990 UL6	1990 10 24.94317	01 55 16.91	+19 41 38.3		046
1990 UM6 *	1990 10 24.92905	01 55 35.05	+16 25 58.7	16.8	046
1990 UM6	1990 10 24.94317	01 55 34.14	+16 25 55.2		046
1990 UN6 *	1990 10 24.92905	01 57 39.68	+17 59 35.9	16.9	046
1990 UN6	1990 10 24.94317	01 57 38.95	+17 59 29.6		046
1990 UO6 *	1990 10 26.55972	02 06 15.44	+06 29 23.3	16	d 385
1990 UO6	1990 10 26.57986	02 06 15.02	+06 29 14.9		d 385
1990 UP6 *	1990 10 20.41343	22 02 54.02	+11 06 27.0	15	V 413
1990 UP6	1990 10 20.46898	22 02 55.02	+11 05 56.7		413
1990 UQ6 *	1990 10 20.63919	03 41 59.68	+06 29 20.1	17	V 413
1990 UQ6	1990 10 20.69475	03 41 58.18	+06 29 00.9		413
1990 UR6 *	1990 10 27.72469	03 20 26.37	+07 43 07.0		413
1990 US6 *	1990 10 21.47049	04 26 14.32	+12 15 01.3	18.0	675
1990 US6	1990 10 21.52188	04 26 12.12	+12 15 13.2		675
1990 UT6 *	1990 10 22.14306	23 17 13.04	-04 33 47.7	17.8	675
1990 UT6	1990 10 22.17517	23 17 12.55	-04 33 51.3		675
1990 UU6 *	1990 10 22.14306	23 27 12.64	-03 17 31.1	18.5	675
1990 UU6	1990 10 22.17517	23 27 12.22	-03 17 40.4		675
1990 UV6 *	1990 10 22.14306	23 30 32.71	-03 19 14.3	17.8	675
1990 UV6	1990 10 22.17517	23 30 32.00	-03 19 18.1		675
1990 UW6 *	1990 10 22.14306	23 33 49.87	-04 49 48.3	17.8	675
1990 UW6	1990 10 22.17517	23 33 49.65	-04 49 53.3		675
1990 UX6 *	1990 10 22.14306	23 35 18.70	+00 36 55.4	18.0	675
1990 UX6	1990 10 22.17517	23 35 18.03	+00 36 44.9		675
1990 UY6 *	1990 10 22.14306	23 36 10.20	-01 47 33.8	18.5	675
1990 UY6	1990 10 22.17517	23 36 09.06	-01 47 34.2		675
1990 UZ6 *	1990 10 22.14306	23 37 44.38	-00 26 30.1	18.8	675
1990 UZ6	1990 10 22.17517	23 37 43.38	-00 26 36.4		675
1990 UA7 *	1990 10 22.14306	23 40 15.55	-06 32 17.2	17.5	675
1990 UA7	1990 10 22.17517	23 40 14.59	-06 32 16.0		675
1990 UB7 *	1990 10 30.2988	04 22 19.7	+00 27 05	17.5V	776
1990 UB7	1990 10 30.3111	04 22 19.4	+00 27 00		776
1990 UB7	1990 10 30.3259	04 22 18.9	+00 26 50		776

1990 UB7	1990 10 30.3361	04 22 18.6	+00 26 45		776
1990 UB7	1990 10 30.3461	04 22 18.3	+00 26 40		776
1990 UB7	1990 10 30.3596	04 22 17.9	+00 26 33		776
1990 UB7	1990 10 30.4077	04 22 16.6	+00 26 08		776
1990 UB7	1990 10 30.4283	04 22 16.0	+00 25 57		776
1990 UC7 *	1990 10 16.11714	23 31 43.80	-08 33 59.0	17.5	801
1990 UC7	1990 10 16.15053	23 31 41.32	-08 33 29.0		801
1990 UD7 *	1990 10 20.36137	03 55 02.97	+14 57 23.8	18	801
1990 UD7	1990 10 20.38650	03 55 02.24	+14 57 21.7		801
1990 UE7 *	1990 10 21.01258	00 20 48.55	+01 24 13.0	18.5	V 801
1990 UE7	1990 10 21.03703	00 20 47.61	+01 24 06.9		V 801
1990 UF7 *	1990 10 16.19276	00 59 23.53	-01 01 52.7		808
1990 UF7	1990 10 16.21769	00 59 21.86	-01 02 19.6		808
1990 UG7 *	1990 10 18.10904	00 22 32.66	+20 44 42.4		808
1990 UG7	1990 10 18.14298	00 22 31.94	+20 44 50.5		808
1990 UH7 *	1990 10 18.21015	02 29 13.17	-01 52 22.8		808
1990 UH7	1990 10 18.24201	02 29 11.19	-01 52 17.9		808
1990 UJ7 *	1990 10 16.23750	02 49 57.61	+10 18 42.8		809
1990 UJ7	1990 10 16.25069	02 49 57.01	+10 18 41.6		809
1990 UJ7	1990 10 16.26389	02 49 56.38	+10 18 41.0		809
1990 UK7 *	1990 10 16.23750	02 51 32.14	+10 22 15.7		809
1990 UK7	1990 10 16.25069	02 51 31.49	+10 22 17.6		809
1990 UK7	1990 10 16.26389	02 51 30.84	+10 22 18.2		809
1990 UL7 *	1990 10 16.23750	02 54 57.93	+07 51 41.8	19.6	809
1990 UL7	1990 10 16.25069	02 54 57.24	+07 51 36.9		809
1990 UL7	1990 10 16.26389	02 54 56.62	+07 51 31.5		809
1990 UM7 *	1990 10 16.23750	02 55 05.45	+10 40 48.1		809
1990 UM7	1990 10 16.25069	02 55 04.93	+10 40 44.5		809
1990 UM7	1990 10 16.26389	02 55 04.24	+10 40 41.7		809
1990 UN7 *	1990 10 16.23750	02 55 34.90	+10 20 58.9		809
1990 UN7	1990 10 16.25069	02 55 34.11	+10 20 54.8		809
1990 UN7	1990 10 16.26389	02 55 33.43	+10 20 51.1		809
1990 UO7 *	1990 10 16.23750	02 56 11.69	+10 33 50.4		809
1990 UO7	1990 10 16.25069	02 56 11.13	+10 33 45.3		809
1990 UO7	1990 10 16.26389	02 56 10.45	+10 33 42.1		809
1990 UP7 *	1990 10 16.23750	02 58 17.49	+10 28 33.5		809
1990 UP7	1990 10 16.25069	02 58 16.86	+10 28 33.4		809
1990 UP7	1990 10 16.26389	02 58 16.09	+10 28 33.1		809
1990 UQ7 *	1990 10 16.23750	03 06 03.90	+08 40 51.5		809
1990 UQ7	1990 10 16.25069	03 06 03.30	+08 40 46.2		809
1990 UQ7	1990 10 16.26389	03 06 02.81	+08 40 41.1		809
1990 UR7 *	1990 10 16.28472	03 15 16.83	+11 35 39.4		809
1990 UR7	1990 10 16.29792	03 15 16.19	+11 35 38.1		809
1990 UR7	1990 10 16.31111	03 15 15.28	+11 35 37.6		809
1990 US7 *	1990 10 16.28472	03 15 40.35	+10 58 19.8		809
1990 US7	1990 10 16.29792	03 15 39.76	+10 58 21.7		809
1990 US7	1990 10 16.31111	03 15 39.21	+10 58 20.6		809
1990 UT7 *	1990 10 19.23819	02 51 52.27	+08 36 55.4		809
1990 UT7	1990 10 19.25139	02 51 51.58	+08 36 52.3	19.3	809
1990 UT7	1990 10 19.26458	02 51 50.84	+08 36 49.3		809
1990 UU7 *	1990 10 19.23819	02 52 59.17	+07 18 23.0		809
1990 UU7	1990 10 19.26458	02 52 58.17	+07 18 11.3		809
1990 UV7 *	1990 10 19.23819	02 54 01.39	+09 30 59.9		809
1990 UV7	1990 10 19.26458	02 54 00.08	+09 30 48.3		809
1990 UW7 *	1990 10 19.23819	02 55 00.63	+09 18 38.0		809
1990 UW7	1990 10 19.25139	02 54 59.94	+09 18 37.5	18.8	809
1990 UW7	1990 10 19.26458	02 54 59.28	+09 18 35.4		809
1990 UX7 *	1990 10 19.23819	02 55 03.37	+07 52 32.8		809
1990 UX7	1990 10 19.25139	02 55 02.74	+07 52 28.8	19.3	809

1990 UX7		1990 10	19.26458	02 55	02.02	+07 52	26.4		809
1990 UY7	*	1990 10	19.23819	02 56	23.85	+07 32	59.4		809
1990 UY7		1990 10	19.25139	02 56	23.32	+07 33	00.8	19.6	809
1990 UY7		1990 10	19.26458	02 56	22.54	+07 33	00.5		809
1990 UZ7	*	1990 10	19.23819	02 56	38.07	+05 16	03.3		809
1990 UZ7		1990 10	19.25139	02 56	37.47	+05 15	58.4	18.7	809
1990 UZ7		1990 10	19.26458	02 56	36.73	+05 15	52.6		809
1990 UA8	*	1990 10	19.25139	02 47	46.77	+08 05	23.8	20.0	809
1990 UB8	*	1990 10	19.25139	02 52	58.70	+07 18	16.7	18.6	809
1990 UC8	*	1990 10	19.25139	02 54	00.69	+09 30	54.0	19.5	809
1990 UD8	*	1990 10	20.24444	03 03	42.70	+10 13	56.2	18.4	809
1990 UD8		1990 10	20.25764	03 03	41.96	+10 13	53.0		809
1990 UD8		1990 10	20.27083	03 03	41.31	+10 13	50.3		809
1990 UE8	*	1990 10	20.24444	03 04	51.72	+08 56	05.5	19.7	809
1990 UE8		1990 10	20.25764	03 04	50.92	+08 56	04.6		809
1990 UE8		1990 10	20.27083	03 04	50.36	+08 56	00.5		809
1990 UF8	*	1990 10	20.24444	03 05	58.39	+11 09	54.0	19.3	809
1990 UF8		1990 10	20.25764	03 05	57.58	+11 09	49.1		809
1990 UF8		1990 10	20.27083	03 05	56.92	+11 09	43.7		809
1990 UG8	*	1990 10	20.24444	03 07	42.29	+07 26	57.2	20.0	809
1990 UG8		1990 10	20.25764	03 07	41.46	+07 26	51.5		809
1990 UG8		1990 10	20.27083	03 07	40.92	+07 26	48.0		809
1990 UH8	*	1990 10	20.24444	03 08	06.23	+11 11	22.0	19.2	809
1990 UH8		1990 10	20.25764	03 08	05.69	+11 11	18.4		809
1990 UH8		1990 10	20.27083	03 08	05.26	+11 11	13.5		809
1990 UJ8	*	1990 10	20.24444	03 09	26.59	+11 32	40.3	19.0	809
1990 UJ8		1990 10	20.25764	03 09	25.96	+11 32	37.1		809
1990 UJ8		1990 10	20.27083	03 09	25.47	+11 32	32.7		809
1990 UK8	*	1990 10	20.24444	03 10	02.32	+08 07	43.3	19.8	809
1990 UK8		1990 10	20.25764	03 10	01.55	+08 07	41.2		809
1990 UK8		1990 10	20.27083	03 10	00.89	+08 07	37.9		809
1990 UL8	*	1990 10	20.24444	03 11	08.40	+11 14	11.6	18.5	809
1990 UL8		1990 10	20.25764	03 11	07.74	+11 14	09.4		809
1990 UL8		1990 10	20.27083	03 11	07.26	+11 14	08.6		809
1990 UM8	*	1990 10	20.24444	03 17	59.52	+10 53	20.3	18.7	809
1990 UM8		1990 10	20.25764	03 17	58.95	+10 53	16.4		809
1990 UM8		1990 10	20.27083	03 17	58.37	+10 53	12.8		809
1990 UN8	*	1990 10	24.25417	02 39	55.18	+07 40	54.4	18.7	809
1990 UN8		1990 10	24.26736	02 39	54.40	+07 40	53.2		809
1990 UN8		1990 10	24.28056	02 39	53.61	+07 40	52.5		809
1990 UO8	*	1990 10	24.25417	02 40	18.49	+05 59	21.5	19.0	809
1990 UO8		1990 10	24.26736	02 40	17.73	+05 59	16.3		809
1990 UO8		1990 10	24.28056	02 40	17.06	+05 59	12.0		809
1990 UP8	*	1990 10	24.25417	02 42	21.15	+04 44	36.9	18.6	809
1990 UP8		1990 10	24.26736	02 42	20.34	+04 44	32.2		809
1990 UP8		1990 10	24.28056	02 42	19.44	+04 44	28.2		809
1990 UQ8	*	1990 10	24.25417	02 42	35.11	+04 23	20.5	18.9	809
1990 UQ8		1990 10	24.26736	02 42	34.39	+04 23	14.8		809
1990 UQ8		1990 10	24.28056	02 42	33.65	+04 23	09.5		809
1990 UR8	*	1990 10	24.25417	02 42	44.95	+06 38	54.9	18.8	809
1990 UR8		1990 10	24.26736	02 42	44.33	+06 38	54.6		809
1990 UR8		1990 10	24.28056	02 42	43.61	+06 38	52.2		809
1990 US8	*	1990 10	24.25417	02 42	46.13	+04 36	12.1	19.3	809
1990 US8		1990 10	24.26736	02 42	45.28	+04 36	07.9		809
1990 US8		1990 10	24.28056	02 42	44.55	+04 36	05.8		809
1990 UT8	*	1990 10	24.25417	02 43	04.23	+06 37	20.4	19.8	809
1990 UT8		1990 10	24.26736	02 43	03.38	+06 37	17.0		809
1990 UT8		1990 10	24.28056	02 43	02.61	+06 37	13.5		809
1990 UU8	*	1990 10	24.25417	02 43	26.45	+05 01	15.8	18.7	809

1990	UU8	1990	10	24.26736	02	43	25.60	+05	01	17.2	809
1990	UU8	1990	10	24.28056	02	43	24.67	+05	01	19.5	809
1990	UV8	* 1990	10	24.25417	02	43	33.41	+03	54	16.7	18.6 809
1990	UV8	1990	10	24.26736	02	43	32.44	+03	54	17.9	809
1990	UV8	1990	10	24.28056	02	43	31.50	+03	54	18.9	809
1990	UW8	* 1990	10	24.25417	02	45	29.10	+05	44	01.7	19.6 809
1990	UW8	1990	10	24.26736	02	45	28.60	+05	43	58.8	809
1990	UW8	1990	10	24.28056	02	45	28.07	+05	43	56.4	809
1990	UX8	* 1990	10	24.25417	02	45	33.51	+05	15	37.7	20.0 809
1990	UX8	1990	10	24.26736	02	45	32.86	+05	15	32.2	809
1990	UX8	1990	10	24.28056	02	45	31.97	+05	15	25.9	809
1990	UY8	* 1990	10	24.25417	02	45	52.30	+07	26	48.3	19.7 809
1990	UY8	1990	10	24.26736	02	45	51.45	+07	26	48.0	809
1990	UY8	1990	10	24.28056	02	45	50.62	+07	26	46.5	809
1990	UZ8	* 1990	10	24.25417	02	46	08.88	+07	45	18.5	19.5 809
1990	UZ8	1990	10	24.26736	02	46	08.33	+07	45	16.3	809
1990	UZ8	1990	10	24.28056	02	46	07.65	+07	45	12.6	809
1990	UA9	* 1990	10	24.25417	02	46	56.72	+06	47	48.3	19.2 809
1990	UA9	1990	10	24.26736	02	46	55.93	+06	47	44.2	809
1990	UA9	1990	10	24.28056	02	46	55.29	+06	47	40.6	809
1990	UB9	* 1990	10	24.25417	02	47	44.95	+08	16	54.3	19.1 809
1990	UB9	1990	10	24.26736	02	47	44.26	+08	16	50.7	809
1990	UB9	1990	10	24.28056	02	47	43.54	+08	16	47.5	809
1990	UC9	* 1990	10	24.25417	02	48	02.31	+03	51	30.1	19.0 809
1990	UC9	1990	10	24.26736	02	48	01.69	+03	51	22.2	809
1990	UC9	1990	10	24.28056	02	48	01.02	+03	51	15.3	809
1990	UD9	* 1990	10	24.25417	02	49	48.58	+08	55	20.3	19.0 809
1990	UD9	1990	10	24.26736	02	49	47.81	+08	55	13.5	809
1990	UD9	1990	10	24.28056	02	49	46.90	+08	55	06.8	809
1990	UE9	* 1990	10	24.25417	02	50	11.20	+06	37	15.9	19.3 809
1990	UE9	1990	10	24.26736	02	50	10.60	+06	37	11.5	809
1990	UE9	1990	10	24.28056	02	50	09.82	+06	37	08.2	809
1990	UF9	* 1990	10	24.25417	02	51	17.46	+07	59	49.1	19.7 809
1990	UF9	1990	10	24.26736	02	51	16.57	+07	59	46.1	809
1990	UF9	1990	10	24.28056	02	51	15.62	+07	59	42.0	809
1990	UG9	* 1990	10	24.25417	02	51	19.65	+07	31	26.6	19.2 809
1990	UG9	1990	10	24.26736	02	51	18.90	+07	31	22.4	809
1990	UG9	1990	10	24.28056	02	51	18.29	+07	31	19.0	809
1990	UH9	* 1990	10	24.25417	02	51	27.42	+03	48	06.0	18.7 809
1990	UH9	1990	10	24.26736	02	51	26.55	+03	48	01.3	809
1990	UH9	1990	10	24.28056	02	51	25.86	+03	47	58.3	809
1990	UJ9	* 1990	10	24.25417	02	51	49.01	+08	17	38.4	19.2 809
1990	UJ9	1990	10	24.26736	02	51	48.16	+08	17	37.0	809
1990	UJ9	1990	10	24.28056	02	51	47.25	+08	17	34.9	809
1990	UK9	* 1990	10	24.25417	02	51	54.22	+04	03	39.8	20.0 809
1990	UK9	1990	10	24.26736	02	51	53.21	+04	03	32.7	809
1990	UK9	1990	10	24.28056	02	51	52.38	+04	03	26.9	809
1990	UL9	* 1990	10	24.25417	02	52	21.00	+06	35	29.4	20.0 809
1990	UL9	1990	10	24.26736	02	52	20.29	+06	35	22.6	809
1990	UL9	1990	10	24.28056	02	52	19.76	+06	35	18.2	809
1990	UM9	* 1990	10	24.25417	02	52	33.76	+04	46	01.2	19.1 809
1990	UM9	1990	10	24.26736	02	52	33.00	+04	45	56.8	809
1990	UM9	1990	10	24.28056	02	52	32.27	+04	45	50.2	809
1990	UN9	* 1990	10	24.25417	02	52	44.87	+03	54	58.2	19.4 809
1990	UN9	1990	10	24.26736	02	52	44.08	+03	54	53.2	809
1990	UN9	1990	10	24.28056	02	52	43.33	+03	54	49.4	809
1990	UO9	* 1990	10	24.25417	02	59	25.73	+04	48	24.0	19.2 809
1990	UO9	1990	10	24.26736	02	59	25.24	+04	48	11.8	809
1990	UO9	1990	10	24.28056	02	59	24.55	+04	47	57.1	809



1990	UP9	*	1990	10	24.25417	03	00	09.75	+05	16	37.2	18.5	809
1990	UP9		1990	10	24.26736	03	00	08.96	+05	16	38.7		809
1990	UP9		1990	10	24.28056	03	00	08.20	+05	16	39.5		809
1990	UQ9	*	1990	10	24.25417	03	00	40.37	+07	55	44.5	19.6	809
1990	UQ9		1990	10	24.26736	03	00	39.76	+07	55	40.1		809
1990	UQ9		1990	10	24.28056	03	00	39.11	+07	55	34.9		809
1990	UQ9		1990	10	24.29722	03	00	38.58	+07	55	31.8	19.5	809
1990	UQ9		1990	10	24.31042	03	00	37.98	+07	55	27.0		809
1990	UQ9		1990	10	24.32361	03	00	37.32	+07	55	20.1		809
1990	UR9	*	1990	10	24.29722	02	57	26.59	+09	47	21.5	20.0	809
1990	UR9		1990	10	24.31042	02	57	25.93	+09	47	20.3		809
1990	UR9		1990	10	24.32361	02	57	25.09	+09	47	18.2		809
1990	US9	*	1990	10	24.29722	02	58	49.54	+09	08	34.8	18.7	809
1990	US9		1990	10	24.31042	02	58	48.91	+09	08	23.2		809
1990	US9		1990	10	24.32361	02	58	48.29	+09	08	09.7		809
1990	UT9	*	1990	10	24.29722	02	59	24.75	+10	58	19.4	19.0	809
1990	UT9		1990	10	24.31042	02	59	24.15	+10	58	15.6		809
1990	UT9		1990	10	24.32361	02	59	23.61	+10	58	10.3		809
1990	UU9	*	1990	10	24.29722	03	00	07.18	+09	58	12.7	18.7	809
1990	UU9		1990	10	24.31042	03	00	06.42	+09	58	09.3		809
1990	UU9		1990	10	24.32361	03	00	05.63	+09	58	05.4		809
1990	UV9	*	1990	10	24.29722	03	01	06.87	+09	58	57.3	19.0	809
1990	UV9		1990	10	24.31042	03	01	06.04	+09	58	56.9		809
1990	UV9		1990	10	24.32361	03	01	05.39	+09	58	55.8		809
1990	UW9	*	1990	10	24.29722	03	01	20.49	+06	18	54.7	19.2	809
1990	UW9		1990	10	24.31042	03	01	19.84	+06	18	51.4		809
1990	UW9		1990	10	24.32361	03	01	19.27	+06	18	48.7		809
1990	UX9	*	1990	10	24.29722	03	02	14.91	+06	09	12.1	19.5	809
1990	UX9		1990	10	24.31042	03	02	14.07	+06	09	07.9		809
1990	UX9		1990	10	24.32361	03	02	13.24	+06	09	03.9		809
1990	UY9	*	1990	10	24.29722	03	02	19.49	+10	43	16.2	18.8	809
1990	UY9		1990	10	24.31042	03	02	18.75	+10	43	11.8		809
1990	UY9		1990	10	24.32361	03	02	17.88	+10	43	06.0		809
1990	UZ9	*	1990	10	24.29722	03	02	25.54	+09	06	02.6	20.0	809
1990	UZ9		1990	10	24.31042	03	02	25.00	+09	05	56.7		809
1990	UZ9		1990	10	24.32361	03	02	24.49	+09	05	50.4		809
1990	UA10*		1990	10	24.29722	03	04	11.05	+06	10	24.0	20.0	809
1990	UA10		1990	10	24.31042	03	04	10.55	+06	10	16.6		809
1990	UA10		1990	10	24.32361	03	04	09.96	+06	10	09.4		809
1990	UB10*		1990	10	24.29722	03	04	44.99	+09	04	14.5	18.7	809
1990	UB10		1990	10	24.31042	03	04	44.29	+09	04	08.0		809
1990	UB10		1990	10	24.32361	03	04	43.76	+09	04	01.9		809
1990	UC10*		1990	10	24.29722	03	05	28.37	+10	49	58.6	19.4	809
1990	UC10		1990	10	24.31042	03	05	27.74	+10	49	54.2		809
1990	UC10		1990	10	24.32361	03	05	27.15	+10	49	49.8		809
1990	UD10*		1990	10	24.29722	03	06	41.88	+11	15	46.7	18.7	809
1990	UD10		1990	10	24.31042	03	06	41.28	+11	15	43.0		809
1990	UD10		1990	10	24.32361	03	06	40.60	+11	15	38.8		809
1990	UE10*		1990	10	24.29722	03	07	03.14	+10	04	25.9	19.2	809
1990	UE10		1990	10	24.31042	03	07	02.25	+10	04	24.4		809
1990	UE10		1990	10	24.32361	03	07	01.33	+10	04	22.0		809
1990	UF10*		1990	10	24.29722	03	07	42.71	+09	00	14.6	18.7	809
1990	UF10		1990	10	24.31042	03	07	41.92	+09	00	06.9		809
1990	UF10		1990	10	24.32361	03	07	41.21	+08	59	59.2		809
1990	UG10*		1990	10	24.29722	03	07	45.91	+08	16	40.1	19.4	809
1990	UG10		1990	10	24.31042	03	07	45.20	+08	16	34.5		809
1990	UG10		1990	10	24.32361	03	07	44.51	+08	16	30.3		809
1990	UH10*		1990	10	24.29722	03	08	17.03	+11	05	27.9	18.6	809
1990	UH10		1990	10	24.31042	03	08	16.41	+11	05	26.3		809

1990 UH10	1990 10	24.32361	03 08	15.81	+11 05	23.5		809
1990 UJ10*	1990 10	24.29722	03 09	53.03	+11 04	06.8	19.0	809
1990 UJ10	1990 10	24.31042	03 09	52.20	+11 04	06.7		809
1990 UJ10	1990 10	24.32361	03 09	51.55	+11 04	06.6		809
1990 UK10*	1990 10	24.29722	03 13	08.29	+09 25	44.6	18.7	809
1990 UK10	1990 10	24.31042	03 13	07.51	+09 25	38.8		809
1990 UK10	1990 10	24.32361	03 13	06.72	+09 25	32.1		809
1990 VZ8 *	1990 11	10.80292	01 58	07.55	+27 05	26.3	17.0	046
1990 VZ8	1990 11	10.81698	01 58	06.77	+27 05	24.4		046
1990 VA9 *	1990 11	10.83642	01 31	04.24	+17 42	30.1	16.9	046
1990 VA9	1990 11	10.85066	01 31	03.40	+17 42	26.6		046
1990 VB9 *	1990 11	10.83642	01 32	10.92	+14 49	50.1	16.9	046
1990 VB9	1990 11	10.85066	01 32	10.23	+14 49	46.1		046
1990 VC9 *	1990 11	10.83642	01 32	25.73	+16 39	16.2	16.7	046
1990 VC9	1990 11	10.85066	01 32	25.34	+16 39	02.1		046
1990 VD9 *	1990 11	10.83642	01 34	10.29	+14 56	19.4	17.0	046
1990 VD9	1990 11	10.85066	01 34	09.61	+14 56	36.8		046
1990 VE9 *	1990 11	10.83642	01 39	38.83	+16 36	39.6	16.7	046
1990 VE9	1990 11	10.85066	01 39	38.22	+16 36	47.8		046
1990 VF9 *	1990 11	10.87167	02 15	05.41	+08 53	05.6	16.9	046
1990 VF9	1990 11	10.88590	02 15	05.06	+08 53	08.2		046
1990 VG9 *	1990 11	10.87167	02 18	18.32	+10 29	46.2	16.9	046
1990 VG9	1990 11	10.88590	02 18	17.75	+10 29	47.2		046
1990 VH9 *	1990 11	10.91837	02 53	35.42	+11 11	48.5	16.7	046
1990 VH9	1990 11	10.93243	02 53	34.40	+11 11	47.1		046
1990 VJ9 *	1990 11	10.91837	03 01	30.05	+13 31	43.8	16.7	046
1990 VJ9	1990 11	10.93243	03 01	29.24	+13 31	41.4		046
1990 VK9 *	1990 11	10.91837	03 02	06.46	+09 30	30.1	16.8	046
1990 VK9	1990 11	10.93243	03 02	06.00	+09 30	24.4		046
1990 VL9 *	1990 11	10.91837	03 02	15.74	+11 33	37.8	17.0	046
1990 VL9	1990 11	10.93243	03 02	14.88	+11 33	28.6		046
1990 VM9 *	1990 11	10.91837	03 03	09.28	+13 53	15.5	16.7	046
1990 VM9	1990 11	10.93243	03 03	08.45	+13 53	06.8		046
1990 VN9 *	1990 11	10.91837	03 03	27.39	+12 01	10.0	16.8	046
1990 VN9	1990 11	10.93243	03 03	26.55	+12 00	58.9		046
1990 VO9 *	1990 11	13.82587	01 37	50.23	+16 21	59.4		046
1990 VO9	1990 11	13.84311	01 37	49.43	+16 21	55.5		046
1990 VP9 *	1990 11	13.86765	02 43	50.52	+10 44	16.6	16.8	046
1990 VP9	1990 11	13.88177	02 43	49.50	+10 44	12.8		046
1990 VQ9 *	1990 11	13.86765	02 49	43.99	+09 49	24.8	16.8	046
1990 VQ9	1990 11	13.88177	02 49	43.17	+09 49	19.2		046
1990 VR9 *	1990 11	12.57917	03 53	00.78	+15 57	39.4	17	364
1990 VR9	1990 11	12.60069	03 54	59.49	+15 57	31.7		364
1990 VS9 *	1990 11	14.60625	03 48	58.99	+16 34	20.4	16.5	364
1990 VS9	1990 11	14.62361	03 48	57.85	+16 34	19.9		364
1990 VT9 *	1990 11	12.49608	01 39	38.67	-09 18	09.8	17.5V	413
1990 VT9	1990 11	12.54816	01 39	36.63	-09 18	06.1		413
1990 VU9 *	1990 11	11.27899	02 11	40.87	+20 48	10.7	17.8	675
1990 VU9	1990 11	11.31111	02 11	39.33	+20 48	06.5		675
1990 VV9 *	1990 11	11.27899	02 11	48.48	+21 44	09.7	17.0	675
1990 VV9	1990 11	11.31111	02 11	46.62	+21 43	58.4		675
1990 VW9 *	1990 11	11.27899	02 19	31.11	+15 49	14.8	17.8	675
1990 VW9	1990 11	11.31111	02 19	29.56	+15 49	05.0		675
1990 VX9 *	1990 11	13.26250	02 24	07.90	+16 37	07.4	18.5	675
1990 VX9	1990 11	13.30052	02 24	05.74	+16 36	56.0		675
1990 VY9 *	1990 11	13.26250	02 29	42.30	+22 41	01.1	17.8	675
1990 VY9	1990 11	13.30052	02 29	39.95	+22 40	40.1		675
1990 VZ9 *	1990 11	13.26250	02 31	26.17	+23 32	16.8	17.5	675
1990 VZ9	1990 11	13.30052	02 31	23.60	+23 32	01.1		675

1990 VA10*	1990 11 13.26250	02 32 59.67	+23 10 28.4	17.0	675
1990 VA10	1990 11 13.30052	02 32 57.09	+23 10 18.8		675
1990 VB10*	1990 11 14.49010	04 57 08.27	+20 57 14.6	17.0	675
1990 VB10	1990 11 14.52048	04 57 06.96	+20 57 02.5		675
1990 VC10*	1990 11 14.49010	05 05 26.51	+18 15 02.9	18.8	675
1990 VC10	1990 11 14.52048	05 05 24.74	+18 14 52.8		675
1990 VD10*	1990 11 14.49010	05 16 25.03	+21 50 48.3	18.2	675
1990 VD10	1990 11 14.52048	05 16 23.81	+21 50 45.7		675
1990 VE10*	1990 11 14.49010	05 24 52.64	+20 09 01.5	18.8	675
1990 VE10	1990 11 14.52048	05 24 50.72	+20 09 09.9		675
1990 VF10*	1990 11 14.49010	05 24 56.05	+19 39 26.0	18.2	675
1990 VF10	1990 11 14.52048	05 24 54.90	+19 39 24.1		675
1990 VG10*	1990 11 11.08420	02 12 47.34	+08 47 34.9	18.0	809
1990 VG10	1990 11 11.09444	02 12 46.85	+08 47 35.5		809
1990 VG10	1990 11 11.10486	02 12 46.41	+08 47 34.7		809
1990 VH10*	1990 11 11.08420	02 15 12.64	+08 28 17.2		809
1990 VH10	1990 11 11.09444	02 15 12.12	+08 28 13.7		809
1990 VH10	1990 11 11.10486	02 15 11.50	+08 28 10.8		809
1990 VJ10*	1990 11 11.21944	03 37 46.01	+08 58 23.9	18.7	809
1990 VJ10	1990 11 11.23264	03 37 45.10	+08 58 25.6		809
1990 VJ10	1990 11 11.24583	03 37 44.19	+08 58 27.2		809
1990 VK10*	1990 11 11.21944	03 38 02.98	+09 07 32.3	18.7	809
1990 VK10	1990 11 11.23264	03 38 02.11	+09 07 29.4		809
1990 VK10	1990 11 11.24583	03 38 01.37	+09 07 27.4		809
1990 VL10*	1990 11 11.21944	03 38 17.93	+11 02 11.0	19.6	809
1990 VL10	1990 11 11.23264	03 38 17.52	+11 02 08.0		809
1990 VL10	1990 11 11.24583	03 38 17.13	+11 02 05.8		809
1990 VM10*	1990 11 11.21944	03 39 18.83	+10 59 07.9	20.0	809
1990 VM10	1990 11 11.23264	03 39 18.55	+10 59 03.1		809
1990 VM10	1990 11 11.24583	03 39 18.27	+10 58 58.5		809
1990 VO10*	1990 11 11.21944	03 42 14.03	+12 09 41.9	18.8	809
1990 VO10	1990 11 11.23264	03 42 13.17	+12 09 39.0		809
1990 VO10	1990 11 11.24583	03 42 12.45	+12 09 36.9		809
1990 VP10*	1990 11 11.21944	03 42 58.92	+11 12 27.1	18.5	809
1990 VP10	1990 11 11.23264	03 42 58.04	+11 12 27.7		809
1990 VP10	1990 11 11.24583	03 42 57.08	+11 12 29.0		809
1990 VQ10*	1990 11 11.21944	03 44 10.38	+07 55 35.1	18.8	809
1990 VQ10	1990 11 11.23264	03 44 09.65	+07 55 30.6		809
1990 VQ10	1990 11 11.24583	03 44 08.96	+07 55 26.4		809
1990 VR10*	1990 11 11.21944	03 45 08.73	+12 12 44.9	18.6	809
1990 VR10	1990 11 11.23264	03 45 07.91	+12 12 44.0		809
1990 VR10	1990 11 11.24583	03 45 06.98	+12 12 43.7		809
1990 VS10*	1990 11 11.21944	03 45 09.10	+09 33 45.2	19.0	809
1990 VS10	1990 11 11.23264	03 45 08.38	+09 33 38.4		809
1990 VS10	1990 11 11.24583	03 45 07.74	+09 33 32.9		809
1990 VU10*	1990 11 11.21944	03 45 17.33	+08 47 18.7	19.3	809
1990 VU10	1990 11 11.23264	03 45 16.96	+08 47 14.8		809
1990 VU10	1990 11 11.24583	03 45 16.58	+08 47 10.8		809
1990 VV10*	1990 11 11.21944	03 46 34.79	+08 05 44.8	19.7	809
1990 VV10	1990 11 11.23264	03 46 34.11	+08 05 46.3		809
1990 VV10	1990 11 11.24583	03 46 33.38	+08 05 48.8		809
1990 VW10*	1990 11 11.21944	03 47 01.83	+09 53 30.7	19.5	809
1990 VW10	1990 11 11.23264	03 47 01.25	+09 53 28.4		809
1990 VW10	1990 11 11.24583	03 47 00.64	+09 53 24.0		809
1990 VX10*	1990 11 11.21944	03 47 08.07	+12 09 01.6	18.8	809
1990 VX10	1990 11 11.23264	03 47 07.42	+12 09 02.4		809
1990 VX10	1990 11 11.24583	03 47 06.60	+12 09 01.0		809
1990 VY10*	1990 11 11.21944	03 47 24.96	+12 06 42.8	19.0	809
1990 VY10	1990 11 11.23264	03 47 24.07	+12 06 40.9		809

1990 VY10	1990 11 11.24583	03 47 23.37	+12 06 38.6		809
1990 VZ10*	1990 11 11.21944	03 47 40.18	+12 22 27.4	18.7	809
1990 VZ10	1990 11 11.23264	03 47 39.52	+12 22 25.0		809
1990 VZ10	1990 11 11.24583	03 47 38.93	+12 22 23.2		809
1990 VA11*	1990 11 11.21944	03 48 00.76	+12 14 13.0	19.0	809
1990 VA11	1990 11 11.23264	03 47 59.88	+12 14 13.2		809
1990 VA11	1990 11 11.24583	03 47 59.01	+12 14 13.5		809
1990 VB11*	1990 11 11.21944	03 49 03.26	+09 47 24.2	19.7	809
1990 VB11	1990 11 11.23264	03 49 02.49	+09 47 22.3		809
1990 VB11	1990 11 11.24583	03 49 01.83	+09 47 19.3		809
1990 VC11*	1990 11 11.21944	03 49 30.09	+08 37 58.8	19.5	809
1990 VC11	1990 11 11.23264	03 49 29.49	+08 38 02.5		809
1990 VC11	1990 11 11.24583	03 49 28.99	+08 38 07.8		809
1990 VD11*	1990 11 11.21944	03 50 40.84	+09 07 37.5	18.8	809
1990 VD11	1990 11 11.23264	03 50 39.96	+09 07 35.9		809
1990 VD11	1990 11 11.24583	03 50 39.20	+09 07 33.8		809
1990 VE11*	1990 11 11.21944	03 51 43.55	+11 49 19.0	19.5	809
1990 VE11	1990 11 11.23264	03 51 42.87	+11 49 14.4		809
1990 VE11	1990 11 11.24583	03 51 42.30	+11 49 09.9		809
1990 VF11*	1990 11 11.21944	03 52 31.38	+11 37 56.9	18.9	809
1990 VF11	1990 11 11.23264	03 52 30.49	+11 37 55.2		809
1990 VF11	1990 11 11.24583	03 52 29.67	+11 37 52.0		809
1990 VG11*	1990 11 11.21944	03 53 01.81	+11 52 22.1	18.7	809
1990 VG11	1990 11 11.23264	03 53 01.03	+11 52 19.8		809
1990 VG11	1990 11 11.24583	03 53 00.25	+11 52 18.0		809
1990 VH11*	1990 11 11.21944	03 53 57.29	+10 37 14.1	19.1	809
1990 VH11	1990 11 11.23264	03 53 56.50	+10 37 09.3		809
1990 VH11	1990 11 11.24583	03 53 55.67	+10 37 04.5		809
1990 VJ11*	1990 11 11.21944	03 55 24.74	+12 14 15.9	18.3	809
1990 VJ11	1990 11 11.23264	03 55 23.92	+12 14 15.6		809
1990 VJ11	1990 11 11.24583	03 55 22.97	+12 14 15.6		809
1990 VK11*	1990 11 11.21944	03 56 01.43	+09 51 21.2	20.0	809
1990 VK11	1990 11 11.23264	03 56 00.70	+09 51 20.4		809
1990 VK11	1990 11 11.24583	03 55 59.88	+09 51 19.1		809
1990 VL11*	1990 11 11.21944	03 56 27.99	+09 58 21.6	18.8	809
1990 VL11	1990 11 11.23264	03 56 27.36	+09 58 18.0		809
1990 VL11	1990 11 11.24583	03 56 26.51	+09 58 15.5		809
1990 VM11*	1990 11 11.21944	03 57 00.01	+10 07 13.0	19.2	809
1990 VM11	1990 11 11.23264	03 56 59.30	+10 07 08.5		809
1990 VM11	1990 11 11.24583	03 56 58.57	+10 07 05.4		809
1990 VN11*	1990 11 11.21944	03 57 30.92	+11 58 00.0	18.7	809
1990 VN11	1990 11 11.23264	03 57 30.09	+11 58 00.8		809
1990 VN11	1990 11 11.24583	03 57 29.30	+11 58 00.8		809
1990 VO11*	1990 11 11.21944	03 57 48.26	+09 18 04.8	19.3	809
1990 VO11	1990 11 11.23264	03 57 47.45	+09 18 01.3		809
1990 VO11	1990 11 11.24583	03 57 46.74	+09 17 56.7		809
1990 VP11*	1990 11 12.12986	02 31 02.65	+15 04 39.0	18.5	809
1990 VP11	1990 11 12.14236	02 31 01.86	+15 04 37.8		809
1990 VP11	1990 11 12.15278	02 31 01.16	+15 04 35.4		809
1990 VQ11*	1990 11 12.27778	03 20 36.41	+03 12 18.0	18.5	809
1990 VQ11	1990 11 12.28958	03 20 35.93	+03 12 14.6		809
1990 VQ11	1990 11 12.30000	03 20 35.59	+03 12 11.8		809
1990 VR11*	1990 11 12.27778	03 22 29.84	+03 14 53.4	18.5	809
1990 VR11	1990 11 12.28958	03 22 29.47	+03 14 51.7		809
1990 VR11	1990 11 12.30000	03 22 28.93	+03 14 50.0		809
1990 VS11*	1990 11 14.17986	02 36 41.42	+14 22 28.9	17.9	809
1990 VS11	1990 11 14.19028	02 36 40.87	+14 22 26.4		809
1990 VS11	1990 11 14.20069	02 36 40.34	+14 22 25.0		809
1990 VT11*	1990 11 14.17986	02 38 40.83	+13 29 33.1	17.8	809

1990 VT11	1990 11 14.19028	02 38 40.33	+13 29 28.8		809
1990 VT11	1990 11 14.20069	02 38 39.84	+13 29 26.7		809
1990 VU11*	1990 11 14.17986	02 39 13.05	+14 29 59.6	17.6	809
1990 VU11	1990 11 14.19028	02 39 12.48	+14 29 58.4		809
1990 VU11	1990 11 14.20069	02 39 11.86	+14 29 56.8		809
1990 VV11*	1990 11 14.17986	02 39 57.12	+14 19 17.1	17.2	809
1990 VV11	1990 11 14.19028	02 39 56.62	+14 19 16.3		809
1990 VV11	1990 11 14.20069	02 39 56.18	+14 19 14.6		809
1990 VW11*	1990 11 14.26389	03 31 00.25	+26 09 53.9	18.3	809
1990 VW11	1990 11 14.27431	03 30 59.38	+26 09 51.3		809
1990 VW11	1990 11 14.28472	03 30 58.81	+26 09 49.5		809
1990 VX11*	1990 11 14.26389	03 35 13.05	+27 32 30.0	18.0	809
1990 VX11	1990 11 14.27431	03 35 12.48	+27 32 25.2		809
1990 VX11	1990 11 14.28472	03 35 11.91	+27 32 21.6		809
1990 VY11*	1990 11 14.26389	03 35 28.51	+25 54 31.7	18.0	809
1990 VY11	1990 11 14.27431	03 35 27.90	+25 54 30.9		809
1990 VY11	1990 11 14.28472	03 35 27.36	+25 54 29.4		809
1990 VZ11*	1990 11 14.26389	03 35 31.40	+25 52 18.2	18.2	809
1990 VZ11	1990 11 14.27431	03 35 30.84	+25 52 15.6		809
1990 VZ11	1990 11 14.28472	03 35 30.39	+25 52 14.0		809
1990 VA12*	1990 11 14.26389	03 35 42.53	+25 55 39.2	18.0	809
1990 VA12	1990 11 14.27431	03 35 41.96	+25 55 42.7		809
1990 VA12	1990 11 14.28472	03 35 41.52	+25 55 45.1		809
1990 VB12*	1990 11 15.10972	02 29 56.34	+12 54 11.3	17.0	809
1990 VB12	1990 11 15.12014	02 29 55.85	+12 54 10.1		809
1990 VB12	1990 11 15.13125	02 29 55.30	+12 54 10.8		809
1990 VC12*	1990 11 15.18750	03 15 46.97	+02 45 08.0	18.0	809
1990 VC12	1990 11 15.19792	03 15 46.28	+02 45 07.1		809
1990 VC12	1990 11 15.20833	03 15 45.72	+02 45 05.1		809
1990 VD12*	1990 11 15.19792	04 02 21.66	+10 30 46.4		809
1990 VD12	1990 11 15.21111	04 02 20.85	+10 30 45.2	19.2	809
1990 VD12	1990 11 15.22431	04 02 19.71	+10 30 44.8		809
1990 VE12*	1990 11 15.19792	04 06 51.99	+12 08 16.5		809
1990 VE12	1990 11 15.21111	04 06 51.13	+12 08 12.2	18.7	809
1990 VE12	1990 11 15.22431	04 06 50.28	+12 08 07.1		809
1990 VF12*	1990 11 15.19792	04 07 54.70	+12 16 24.4		809
1990 VF12	1990 11 15.21111	04 07 53.96	+12 16 28.1	18.7	809
1990 VF12	1990 11 15.22431	04 07 53.01	+12 16 32.7		809
1990 VG12*	1990 11 15.19792	04 08 28.69	+11 46 27.5		809
1990 VG12	1990 11 15.21111	04 08 28.10	+11 46 25.8	19.0	809
1990 VG12	1990 11 15.22431	04 08 27.16	+11 46 23.5		809
1990 VH12*	1990 11 15.19792	04 08 42.99	+11 46 40.9		809
1990 VH12	1990 11 15.21111	04 08 42.34	+11 46 36.7	19.3	809
1990 VH12	1990 11 15.22431	04 08 41.55	+11 46 30.8		809
1990 VJ12*	1990 11 15.19792	04 10 35.49	+12 39 42.9		809
1990 VJ12	1990 11 15.21111	04 10 34.74	+12 39 37.8	19.2	809
1990 VJ12	1990 11 15.22431	04 10 34.06	+12 39 31.2		809
1990 VK12*	1990 11 15.19792	04 12 43.79	+07 45 19.7		809
1990 VK12	1990 11 15.21111	04 12 43.04	+07 45 16.8	19.6	809
1990 VK12	1990 11 15.22431	04 12 42.00	+07 45 13.9		809
1990 VL12*	1990 11 15.19792	04 12 47.41	+07 52 48.7		809
1990 VL12	1990 11 15.21111	04 12 46.30	+07 52 51.8	20.0	809
1990 VL12	1990 11 15.22431	04 12 45.48	+07 52 57.1		809
1990 VM12*	1990 11 15.19792	04 16 48.06	+09 43 50.3		809
1990 VM12	1990 11 15.21111	04 16 47.08	+09 43 47.2	20.0	809
1990 VM12	1990 11 15.22431	04 16 46.25	+09 43 45.3		809
1990 VN12*	1990 11 15.26528	04 19 04.68	+12 09 09.6		809
1990 VN12	1990 11 15.27986	04 19 04.00	+12 09 10.6	19.6	809
1990 VN12	1990 11 15.29306	04 19 03.23	+12 09 09.2		809

1990	VO12*	1990	11	15.26528	04	19	33.55	+11	38	38.3		809
1990	VO12	1990	11	15.27986	04	19	33.62	+11	38	39.0	20.0	809
1990	VO12	1990	11	15.29306	04	19	32.05	+11	38	33.7		809
1990	VP12*	1990	11	15.26528	04	22	46.92	+12	43	24.3		809
1990	VP12	1990	11	15.27986	04	22	46.31	+12	43	17.7	18.6	809
1990	VP12	1990	11	15.29306	04	22	45.41	+12	43	13.9		809
1990	VQ12*	1990	11	15.26528	04	23	24.87	+10	37	39.9		809
1990	VQ12	1990	11	15.27986	04	23	24.24	+10	37	37.2	20.0	809
1990	VQ12	1990	11	15.29306	04	23	23.65	+10	37	31.3		809
1990	VR12*	1990	11	15.26528	04	29	27.20	+12	06	22.5		809
1990	VR12	1990	11	15.27986	04	29	26.38	+12	06	24.1	19.7	809
1990	VR12	1990	11	15.29306	04	29	25.38	+12	06	27.1		809
1990	VS12*	1990	11	15.26528	04	35	03.12	+12	18	01.1		809
1990	VS12	1990	11	15.27986	04	35	02.53	+12	17	56.7	20.0	809
1990	VS12	1990	11	15.29306	04	35	01.90	+12	17	52.3		809
1990	VT12*	1990	11	15.26528	04	37	34.73	+11	55	00.1		809
1990	VT12	1990	11	15.27986	04	37	34.05	+11	55	01.8	18.8	809
1990	VT12	1990	11	15.29306	04	37	33.31	+11	55	00.4		809
1990	VU12*	1990	11	11.72014	04	00	23.88	+23	40	37.2	16.5	877
1990	VU12	1990	11	11.73750	04	00	22.72	+23	40	32.8	16.5	877
1990	WL7 *	1990	11	22.90102	02	31	39.52	+12	28	11.9		D 071
1990	WL7	1990	11	22.92341	02	31	38.65	+12	28	05.4		D 071
1990	WM7 *	1990	11	19.44441	01	10	01.43	-06	17	46.8	17	V 413
1990	WM7	1990	11	19.49649	01	09	59.90	-06	17	28.7		413
1990	WN7 *	1990	11	19.44441	01	10	06.28	-08	05	51.4	17	V 413
1990	WN7	1990	11	19.49649	01	10	04.81	-08	05	34.7		413
1990	WO7 *	1990	11	20.61205	04	36	31.70	+02	16	36.8	18	V 413
1990	WO7	1990	11	20.66413	04	36	28.96	+02	16	22.4		V 413
1990	WP7 *	1990	11	20.61205	04	37	45.08	+04	19	07.4	18	V 413
1990	WP7	1990	11	20.66413	04	37	42.86	+04	18	36.0		413
1990	WQ7 *	1990	11	20.61205	04	39	11.66	+05	52	47.1	18	V 413
1990	WQ7	1990	11	20.66413	04	39	09.44	+05	52	41.1		413
1990	WR7 *	1990	11	20.61205	04	41	53.22	+02	37	01.5	18	V 413
1990	WR7	1990	11	20.66413	04	41	50.25	+02	37	00.9		413
1990	WS7 *	1990	11	20.61205	04	42	08.48	+03	12	58.9	18	V 413
1990	WS7	1990	11	20.66413	04	42	05.82	+03	12	39.3		V 413
1990	WT7 *	1990	11	20.61205	04	47	00.04	+06	24	00.8	17	V 413
1990	WT7	1990	11	20.66413	04	46	57.65	+06	23	52.6		413
1990	WU7 *	1990	11	20.61205	04	48	26.42	+07	22	16.6	17.5V	413
1990	WU7	1990	11	20.66413	04	48	23.32	+07	22	17.4		413
1990	WV7 *	1990	11	20.61205	04	51	07.35	+05	40	15.2	17.5V	413
1990	WV7	1990	11	20.66413	04	51	04.61	+05	40	21.7		413
1990	WW7 *	1990	11	20.61205	04	51	23.26	+03	18	47.3	18.5V	F 413
1990	WX7 *	1990	11	22.87569	04	02	33.44	+21	43	55.4		552
1990	WX7	1990	11	22.90625	04	02	31.93	+21	43	49.9		552
1990	WY7 *	1990	11	18.35573	04	46	57.71	+01	01	06.8	16.5	675
1990	WY7	1990	11	18.38125	04	46	56.60	+01	00	15.7		675
1990	WZ7 *	1990	11	23.45127	06	31	46.8	+04	31	40	19	V 695
1990	WZ7	1990	11	23.46428	06	31	46.3	+04	31	35		695
1990	WZ7	1990	11	23.49969	06	31	45.4	+04	31	24		695
1990	WA8 *	1990	11	16.32431	04	35	00.23	+15	41	16.6	18.7	809
1990	WB8 *	1990	11	16.32431	04	35	05.65	+14	48	09.0	19.0	809
1990	WC8 *	1990	11	16.32431	04	39	02.61	+17	34	28.0	18.5	809
1990	WD8 *	1990	11	16.32431	04	44	15.49	+17	19	32.3	18.7	809
1990	WE8 *	1990	11	16.32431	04	47	03.20	+16	19	07.5	18.7	809
1990	WF8 *	1990	11	16.32431	04	49	32.53	+13	04	30.1	18.7	809
1990	WG8 *	1990	11	16.32431	04	50	22.85	+13	55	54.4	19.0	809
1990	WH8 *	1990	11	17.15556	02	03	49.93	+07	08	49.4	18.5	809
1990	WH8	1990	11	17.16667	02	03	49.41	+07	08	45.2		809

1990	WH8		1990	11	17.17708	02	03	48.95	+07	08	43.0		809
1990	WJ8	*	1990	11	17.20007	04	38	57.68	+12	58	33.9	19.4	809
1990	WK8	*	1990	11	17.20007	04	40	57.10	+14	54	59.2	18.4	809
1990	WL8	*	1990	11	17.20007	04	41	08.10	+14	20	02.5	18.8	809
1990	WM8	*	1990	11	17.20007	04	42	50.36	+15	38	58.9	19.5	809
1990	WN8	*	1990	11	17.22153	03	09	18.57	+03	27	54.1	18.2	809
1990	WN8		1990	11	17.23194	03	09	18.09	+03	27	53.9		809
1990	WN8		1990	11	17.24236	03	09	17.65	+03	27	52.5		809
1990	WO8	*	1990	11	17.22292	04	02	59.26	+11	36	12.4		809
1990	WO8		1990	11	17.23611	04	02	58.57	+11	36	12.4	19.6	809
1990	WO8		1990	11	17.24931	04	02	57.68	+11	36	11.9		809
1990	WP8	*	1990	11	17.22292	04	18	53.93	+11	52	58.3		809
1990	WP8		1990	11	17.23611	04	18	53.48	+11	52	56.2	18.7	809
1990	WP8		1990	11	17.24931	04	18	53.07	+11	52	53.8		809
1990	WQ8	*	1990	11	18.16458	03	20	26.26	+01	56	14.5	18.0	809
1990	WQ8		1990	11	18.17500	03	20	25.73	+01	56	13.0		809
1990	WQ8		1990	11	18.18542	03	20	24.99	+01	56	12.9		809
1990	WR8	*	1990	11	18.19306	03	31	48.33	+09	33	40.7		809
1990	WR8		1990	11	18.20625	03	31	47.80	+09	33	36.9	19.4	809
1990	WR8		1990	11	18.21944	03	31	47.15	+09	33	32.4		809
1990	WS8	*	1990	11	18.19306	03	33	28.45	+07	57	59.7		809
1990	WS8		1990	11	18.20625	03	33	27.62	+07	57	57.1	19.2	809
1990	WS8		1990	11	18.21944	03	33	26.93	+07	57	55.7		809
1990	WT8	*	1990	11	18.19306	03	33	41.34	+10	45	17.3		809
1990	WT8		1990	11	18.20625	03	33	40.66	+10	45	17.3	19.4	809
1990	WT8		1990	11	18.21944	03	33	39.93	+10	45	17.2		809
1990	WU8	*	1990	11	18.19306	03	36	23.60	+06	57	40.3		809
1990	WU8		1990	11	18.20625	03	36	22.72	+06	57	34.8	19.5	809
1990	WU8		1990	11	18.21944	03	36	21.88	+06	57	33.5		809
1990	WV8	*	1990	11	18.19306	03	36	29.10	+08	11	13.1		809
1990	WV8		1990	11	18.20625	03	36	28.21	+08	11	12.3	19.6	809
1990	WV8		1990	11	18.21944	03	36	27.44	+08	11	08.6		809
1990	WW8	*	1990	11	18.19306	03	41	25.92	+06	25	38.2		809
1990	WW8		1990	11	18.20625	03	41	25.07	+06	25	43.7	18.8	809
1990	WW8		1990	11	18.21944	03	41	24.25	+06	25	50.7		809
1990	WX8	*	1990	11	18.19306	03	45	50.90	+11	20	05.5		809
1990	WX8		1990	11	18.20625	03	45	50.11	+11	20	05.1	19.5	809
1990	WX8		1990	11	18.21944	03	45	49.18	+11	20	00.9		809
1990	WY8	*	1990	11	18.19306	03	47	03.06	+06	28	48.5		809
1990	WY8		1990	11	18.20625	03	47	02.13	+06	28	47.0	19.6	809
1990	WY8		1990	11	18.21944	03	47	01.54	+06	28	45.6		809
1990	WZ8	*	1990	11	18.20625	03	41	31.07	+06	14	21.4	19.7	809
1990	WA9	*	1990	11	19.16319	03	20	59.46	+13	09	06.6	17.8	809
1990	WA9		1990	11	19.17361	03	20	58.80	+13	09	04.0		809
1990	WA9		1990	11	19.18403	03	20	58.19	+13	09	01.3		809
1990	WB9	*	1990	11	19.20208	03	52	54.37	+14	08	08.7		809
1990	WB9		1990	11	19.21250	03	52	53.75	+14	08	06.9		809
1990	WB9		1990	11	19.22292	03	52	17.88	+14	08	06.6		809
1990	WC9	*	1990	11	19.23750	03	08	31.38	+12	40	08.1	17.7	809
1990	WC9		1990	11	19.24792	03	08	30.82	+12	40	08.3		809
1990	WC9		1990	11	19.25833	03	08	30.19	+12	40	09.2		809
1990	WD9	*	1990	11	19.23750	03	09	48.04	+13	00	59.7	17.9	809
1990	WD9		1990	11	19.24792	03	09	47.54	+13	00	58.2		809
1990	WD9		1990	11	19.25833	03	09	46.94	+13	00	55.0		809
1990	WE9	*	1990	11	19.23750	03	12	48.20	+12	52	58.4	18.0	809
1990	WE9		1990	11	19.24792	03	12	47.66	+12	52	55.7		809
1990	WE9		1990	11	19.25833	03	12	46.98	+12	52	52.7		809
1990	WF9	*	1990	11	19.23750	03	15	54.80	+11	59	26.0	18.2	809
1990	WF9		1990	11	19.24792	03	15	54.18	+11	59	23.9		809

1990	WF9		1990	11	19.25833	03	15	53.54	+11	59	22.4		809
1990	WG9	*	1990	11	20.11944	03	30	21.64	+06	56	39.7		809
1990	WG9		1990	11	20.13264	03	30	21.05	+06	56	32.3	19.5	809
1990	WG9		1990	11	20.14583	03	30	20.23	+06	56	27.5		809
1990	WH9	*	1990	11	20.11944	03	42	28.98	+09	22	09.1		809
1990	WH9		1990	11	20.13264	03	42	28.31	+09	22	06.4	20.0	809
1990	WH9		1990	11	20.14583	03	42	27.85	+09	22	04.8		809
1990	WJ9	*	1990	11	20.11944	03	43	44.48	+06	02	03.0		809
1990	WJ9		1990	11	20.13264	03	43	43.75	+06	01	59.9	19.6	809
1990	WJ9		1990	11	20.14583	03	43	43.16	+06	01	57.8		809
1990	WK9	*	1990	11	20.11944	03	49	20.67	+06	32	15.9		809
1990	WK9		1990	11	20.13264	03	49	19.68	+06	32	20.9		809
1990	WK9		1990	11	20.14583	03	49	18.75	+06	32	26.0		809
1990	WL9	*	1990	11	20.12431	02	33	50.49	+12	40	26.1	17.6	809
1990	WL9		1990	11	20.13472	02	33	49.95	+12	40	23.4		809
1990	WL9		1990	11	20.14514	02	33	49.27	+12	40	24.1		809
1990	WM9	*	1990	11	20.12431	02	40	46.00	+13	01	32.1	17.4	809
1990	WM9		1990	11	20.13472	02	40	45.45	+13	01	31.0		809
1990	WM9		1990	11	20.14514	02	40	44.93	+13	01	30.0		809
1990	WN9	*	1990	11	20.12431	02	40	48.81	+12	30	26.2	17.6	809
1990	WN9		1990	11	20.13472	02	40	48.30	+12	30	24.4		809
1990	WN9		1990	11	20.14514	02	40	47.75	+12	30	22.5		809
1990	WO9	*	1990	11	21.12431	02	18	27.46	+12	47	13.2	17.0	809
1990	WO9		1990	11	21.13472	02	18	27.02	+12	47	11.0		809
1990	WO9		1990	11	21.14514	02	18	26.61	+12	47	09.3		809
1990	WP9	*	1990	11	21.14167	03	57	08.33	+10	21	26.3	19.6	809
1990	WP9		1990	11	21.15486	03	57	07.90	+10	21	23.6		809
1990	WP9		1990	11	21.16806	03	57	07.48	+10	21	21.6		809
1990	WQ9	*	1990	11	21.14167	04	01	01.69	+11	35	51.0	18.7	809
1990	WQ9		1990	11	21.15486	04	01	00.87	+11	35	47.4		809
1990	WQ9		1990	11	21.16806	04	01	00.04	+11	35	43.1		809
1990	WR9	*	1990	11	21.14167	04	01	46.01	+09	16	10.8	19.8	809
1990	WR9		1990	11	21.15486	04	01	45.07	+09	16	04.4		809
1990	WR9		1990	11	21.16806	04	01	44.32	+09	15	59.6		809
1990	WS9	*	1990	11	21.14167	04	02	17.77	+06	50	10.9	18.6	809
1990	WS9		1990	11	21.15486	04	02	16.91	+06	50	12.0		809
1990	WS9		1990	11	21.16806	04	02	15.98	+06	50	12.6		809
1990	WT9	*	1990	11	21.14167	04	02	49.72	+09	13	41.1	19.6	809
1990	WT9		1990	11	21.15486	04	02	49.04	+09	13	38.9		809
1990	WT9		1990	11	21.16806	04	02	48.32	+09	13	36.1		809
1990	WU9	*	1990	11	21.14167	04	03	17.19	+09	24	30.6	20.0	809
1990	WU9		1990	11	21.15486	04	03	16.71	+09	24	26.2		809
1990	WU9		1990	11	21.16806	04	03	16.22	+09	24	21.7		809
1990	WV9	*	1990	11	21.14167	04	03	54.18	+11	17	03.1	18.6	809
1990	WV9		1990	11	21.15486	04	03	53.48	+11	16	59.7		809
1990	WV9		1990	11	21.16806	04	03	52.71	+11	16	55.7		809
1990	WW9	*	1990	11	21.14167	04	05	05.49	+09	30	20.6	19.4	809
1990	WW9		1990	11	21.15486	04	05	05.01	+09	30	19.0		809
1990	WW9		1990	11	21.16806	04	05	04.51	+09	30	16.9		809
1990	WX9	*	1990	11	21.14167	04	05	19.51	+11	58	11.8	18.6	809
1990	WX9		1990	11	21.15486	04	05	18.72	+11	58	06.8		809
1990	WX9		1990	11	21.16806	04	05	17.81	+11	58	01.3		809
1990	WY9	*	1990	11	21.14167	04	05	25.49	+09	50	18.6	19.5	809
1990	WY9		1990	11	21.15486	04	05	24.72	+09	50	15.2		809
1990	WY9		1990	11	21.16806	04	05	23.81	+09	50	12.4		809
1990	WZ9	*	1990	11	21.14167	04	05	58.41	+07	24	05.2	19.1	809
1990	WZ9		1990	11	21.15486	04	05	57.48	+07	24	02.3		809
1990	WZ9		1990	11	21.16806	04	05	56.59	+07	24	00.5		809
1990	WA10	*	1990	11	21.14167	04	06	14.46	+08	59	15.4	19.5	809



1990	WA10	1990	11	21.15486	04	06	13.61	+08	59	10.2		809
1990	WA10	1990	11	21.16806	04	06	12.97	+08	59	05.0		809
1990	WB10*	1990	11	21.14167	04	08	37.85	+06	58	00.3	20.0	809
1990	WB10	1990	11	21.15486	04	08	37.16	+06	57	55.8		809
1990	WB10	1990	11	21.16806	04	08	36.61	+06	57	51.7		809
1990	WC10*	1990	11	21.14167	04	11	36.91	+08	55	46.2	19.6	809
1990	WC10	1990	11	21.15486	04	11	35.98	+08	55	47.6		809
1990	WC10	1990	11	21.16806	04	11	35.15	+08	55	49.3		809
1990	WD10*	1990	11	21.14167	04	11	51.06	+07	54	34.2	19.2	809
1990	WD10	1990	11	21.15486	04	11	50.28	+07	54	34.1		809
1990	WD10	1990	11	21.16806	04	11	49.72	+07	54	34.3		809
1990	WE10*	1990	11	21.14167	04	12	09.30	+08	20	59.0	19.0	809
1990	WE10	1990	11	21.15486	04	12	08.57	+08	20	56.0		809
1990	WE10	1990	11	21.16806	04	12	07.79	+08	20	51.6		809
1990	WF10*	1990	11	21.14167	04	12	57.60	+11	21	09.1	19.4	809
1990	WF10	1990	11	21.15486	04	12	56.88	+11	21	08.0		809
1990	WF10	1990	11	21.16806	04	12	56.18	+11	21	07.2		809
1990	WG10*	1990	11	21.14167	04	13	03.36	+08	56	31.5	20.0	809
1990	WG10	1990	11	21.15486	04	13	02.77	+08	56	29.4		809
1990	WG10	1990	11	21.16806	04	13	02.22	+08	56	29.9		809
1990	WH10*	1990	11	21.14167	04	13	33.66	+09	57	21.0	19.3	809
1990	WH10	1990	11	21.15486	04	13	33.37	+09	57	14.9		809
1990	WH10	1990	11	21.16806	04	13	33.14	+09	57	11.1		809
1990	WJ10*	1990	11	21.14167	04	14	42.03	+08	53	13.1	19.7	809
1990	WJ10	1990	11	21.15486	04	14	41.23	+08	53	11.0		809
1990	WJ10	1990	11	21.16806	04	14	40.53	+08	53	08.8		809
1990	WK10*	1990	11	21.14167	04	15	45.24	+09	36	16.1	19.4	809
1990	WK10	1990	11	21.15486	04	15	44.47	+09	36	15.7		809
1990	WK10	1990	11	21.16806	04	15	43.66	+09	36	15.4		809
1990	WL10*	1990	11	21.14167	04	16	51.99	+10	40	44.1	19.3	809
1990	WL10	1990	11	21.15486	04	16	51.34	+10	40	37.7		809
1990	WL10	1990	11	21.16806	04	16	50.59	+10	40	30.5		809
1990	WM10*	1990	11	21.18194	04	35	38.97	+15	56	55.3	20.0	809
1990	WM10	1990	11	21.19514	04	35	38.35	+15	56	50.8		809
1990	WM10	1990	11	21.20833	04	35	37.73	+15	56	45.4		809
1990	WN10*	1990	11	21.18194	04	38	19.66	+12	44	29.0	19.1	809
1990	WN10	1990	11	21.19514	04	38	18.93	+12	44	22.3		809
1990	WN10	1990	11	21.20833	04	38	18.35	+12	44	16.4		809
1990	WO10*	1990	11	21.18194	04	38	58.82	+15	17	18.2	20.0	809
1990	WO10	1990	11	21.19514	04	38	58.11	+15	17	13.5		809
1990	WO10	1990	11	21.20833	04	38	57.38	+15	17	10.0		809
1990	WP10*	1990	11	21.18194	04	39	25.93	+14	32	01.1	20.0	809
1990	WP10	1990	11	21.19514	04	39	25.33	+14	32	00.7		809
1990	WP10	1990	11	21.20833	04	39	24.63	+14	32	00.8		809
1990	WQ10*	1990	11	21.18194	04	39	55.74	+17	09	16.4	19.2	809
1990	WQ10	1990	11	21.19514	04	39	54.85	+17	09	12.2		809
1990	WQ10	1990	11	21.20833	04	39	53.93	+17	09	07.4		809
1990	WR10*	1990	11	21.18194	04	40	10.53	+17	12	14.3	19.5	809
1990	WR10	1990	11	21.19514	04	40	09.71	+17	12	13.7		809
1990	WR10	1990	11	21.20833	04	40	08.85	+17	12	11.9		809
1990	WS10*	1990	11	21.18194	04	41	07.46	+15	01	44.4	20.0	809
1990	WS10	1990	11	21.19514	04	41	06.77	+15	01	44.4		809
1990	WS10	1990	11	21.20833	04	41	06.34	+15	01	43.6		809
1990	WT10*	1990	11	21.18194	04	43	39.86	+17	16	10.0	19.3	809
1990	WT10	1990	11	21.19514	04	43	38.93	+17	16	11.4		809
1990	WT10	1990	11	21.20833	04	43	37.98	+17	16	12.1		809
1990	WU10*	1990	11	21.18194	04	44	08.70	+15	36	05.5	19.0	809
1990	WU10	1990	11	21.19514	04	44	07.98	+15	36	08.5		809
1990	WU10	1990	11	21.20833	04	44	06.88	+15	36	13.2		809

1990	WV10*	1990	11	21.20347	03	21	41.77	+09	10	09.3	19.0	809
1990	WW10*	1990	11	21.20347	03	22	50.04	+08	47	53.2	17.0	809
1990	WX10*	1990	11	21.20347	03	26	11.98	+09	00	17.6	18.5	809
1990	WY10*	1990	11	21.27153	05	26	33.76	+15	24	17.9	17.2	809
1990	WY10	1990	11	21.28194	05	26	32.79	+15	24	14.8		809
1990	WZ10*	1990	11	22.17014	04	29	18.12	+12	47	57.3	18.6	809
1990	WZ10	1990	11	22.18611	04	29	17.20	+12	47	57.3		809
1990	WZ10	1990	11	22.19896	04	29	16.46	+12	47	58.0		809
1990	WA11*	1990	11	22.17014	04	30	04.45	+14	48	30.4	19.4	809
1990	WA11	1990	11	22.18611	04	30	03.31	+14	48	30.1		809
1990	WA11	1990	11	22.19896	04	30	02.49	+14	48	29.7		809
1990	WB11*	1990	11	22.17014	04	31	47.31	+12	07	50.3		809
1990	WB11	1990	11	22.18611	04	31	46.10	+12	07	49.4		809
1990	WB11	1990	11	22.19896	04	31	45.12	+12	07	46.3		809
1990	WC11*	1990	11	22.17014	04	33	01.19	+16	42	07.4	18.7	809
1990	WC11	1990	11	22.18611	04	33	00.20	+16	42	03.8		809
1990	WC11	1990	11	22.19896	04	32	59.42	+16	42	01.3		809
1990	WD11*	1990	11	22.17014	04	34	07.45	+12	33	28.1	19.2	809
1990	WD11	1990	11	22.18611	04	34	06.44	+12	33	24.1		809
1990	WD11	1990	11	22.19896	04	34	05.58	+12	33	20.7		809
1990	WE11*	1990	11	22.17014	04	34	20.04	+12	27	51.8	18.6	809
1990	WE11	1990	11	22.18611	04	34	18.94	+12	27	55.2		809
1990	WE11	1990	11	22.19896	04	34	18.04	+12	27	58.8		809
1990	WF11*	1990	11	22.17014	04	34	27.24	+16	37	25.4	18.8	809
1990	WF11	1990	11	22.18611	04	34	26.35	+16	37	25.4		809
1990	WF11	1990	11	22.19896	04	34	25.44	+16	37	22.2		809
1990	WG11*	1990	11	22.17014	04	36	08.32	+16	18	27.3	19.0	809
1990	WG11	1990	11	22.18611	04	36	07.42	+16	18	21.2		809
1990	WG11	1990	11	22.19896	04	36	06.68	+16	18	14.0		809
1990	WH11*	1990	11	22.17014	04	37	47.28	+12	22	23.8		809
1990	WH11	1990	11	22.18611	04	37	45.94	+12	22	27.2		809
1990	WH11	1990	11	22.19896	04	37	45.02	+12	22	30.9		809
1990	WJ11*	1990	11	22.17014	04	39	02.83	+13	07	00.4	19.5	809
1990	WJ11	1990	11	22.18611	04	39	01.80	+13	07	04.1		809
1990	WJ11	1990	11	22.19896	04	39	00.90	+13	07	08.4		809
1990	WK11*	1990	11	22.17014	04	39	13.28	+17	10	16.1		809
1990	WK11	1990	11	22.18611	04	39	12.14	+17	10	16.5		809
1990	WK11	1990	11	22.19896	04	39	11.00	+17	10	15.2		809
1990	WL11*	1990	11	22.17014	04	41	31.09	+12	01	24.0		809
1990	WL11	1990	11	22.18611	04	41	30.28	+12	01	14.8		809
1990	WL11	1990	11	22.19896	04	41	29.39	+12	01	04.8		809
1990	WM11*	1990	11	22.17014	04	41	31.62	+12	09	30.5	19.3	809
1990	WM11	1990	11	22.18611	04	41	30.42	+12	09	28.4		809
1990	WM11	1990	11	22.19896	04	41	29.62	+12	09	26.6		809
1990	WN11*	1990	11	22.17014	04	41	36.21	+12	27	14.5	20.0	809
1990	WN11	1990	11	22.18611	04	41	35.15	+12	27	12.1		809
1990	WN11	1990	11	22.19896	04	41	34.21	+12	27	10.7		809
1990	WO11*	1990	11	22.17014	04	43	43.67	+17	05	33.5		809
1990	WO11	1990	11	22.18611	04	43	42.58	+17	05	35.2		809
1990	WO11	1990	11	22.19896	04	43	41.72	+17	05	36.1		809
1990	WP11*	1990	11	22.17014	04	43	52.89	+13	08	40.8	18.8	809
1990	WP11	1990	11	22.18611	04	43	51.86	+13	08	41.5		809
1990	WP11	1990	11	22.19896	04	43	50.96	+13	08	42.3		809
1990	WQ11*	1990	11	22.17014	04	45	04.19	+13	18	38.1	19.0	809
1990	WQ11	1990	11	22.18611	04	45	03.65	+13	18	34.3		809
1990	WQ11	1990	11	22.19896	04	45	03.17	+13	18	32.7		809
1990	WR11*	1990	11	22.17014	04	45	46.49	+13	55	32.2		809
1990	WR11	1990	11	22.18611	04	45	45.55	+13	55	31.8		809
1990	WR11	1990	11	22.19896	04	45	44.88	+13	55	32.2		809

1990	WS11*	1990	11	22.21042	03	24	33.27	+10	14	32.8	19.0	809
1990	WT11*	1990	11	22.21042	03	26	56.11	+09	06	27.6		809
1990	WU11*	1990	11	23.11736	03	07	02.88	+11	32	06.5	18.0	809
1990	WU11	1990	11	23.12778	03	07	02.33	+11	32	06.3		809
1990	WU11	1990	11	23.14028	03	07	01.71	+11	32	06.3		809
1990	WV11*	1990	11	22.61215	01	28	33.30	+12	01	12.0	17.0	877
1990	WV11	1990	11	22.63490	01	28	32.46	+12	01	04.4		877
1990	WW11*	1990	11	22.72604	04	36	36.49	+14	25	42.8	16.5	877
1990	WW11	1990	11	22.74664	04	36	34.91	+14	25	25.4		877
1990	XE1 *	1990	12	07.88194	03	27	51.80	+32	49	13.1		033
1990	XE1	1990	12	07.92466	03	27	49.43	+32	48	56.3	18.8	033
1990	XF1 *	1990	12	07.88194	03	28	35.89	+33	13	49.7		033
1990	XF1	1990	12	07.92466	03	28	32.56	+33	13	56.0	18.2	033
1990	XG1 *	1990	12	07.88194	03	32	44.70	+31	38	56.1		033
1990	XG1	1990	12	07.92466	03	32	42.56	+31	38	34.1	17.2	033
1990	XH1 *	1990	12	07.88194	03	34	58.39	+31	53	44.2		I 033
1990	XH1	1990	12	07.92466	03	34	55.58	+31	53	43.9	17.8	033
1990	XJ1 *	1990	12	07.88194	03	37	19.53	+31	31	01.1		033
1990	XJ1	1990	12	07.92466	03	37	17.06	+31	30	52.3	17.5	033
1990	XK1 *	1990	12	07.88194	03	38	53.37	+31	51	18.5		033
1990	XK1	1990	12	07.92466	03	38	51.18	+31	50	51.7	18.9	033
1990	XL1 *	1990	12	08.81471	04	46	00.35	+23	22	06.0	16.8	046
1990	XL1	1990	12	08.82756	04	45	59.81	+23	22	07.2		046
1990	XM1 *	1990	12	08.81471	04	46	02.51	+23	22	05.1	16.9	046
1990	XM1	1990	12	08.82756	04	46	01.67	+23	22	05.2		046
1990	XN1 *	1990	12	08.84631	04	46	09.06	+26	25	18.8	17.0	046
1990	XN1	1990	12	08.85916	04	46	07.88	+26	25	16.5		046
1990	XO1 *	1990	12	08.84631	04	50	15.73	+27	04	00.7		046
1990	XO1	1990	12	08.85916	04	50	14.53	+27	04	03.4		046
1990	XP1 *	1990	12	08.84631	04	54	12.53	+28	19	33.3	16.8	046
1990	XP1	1990	12	08.85916	04	54	11.58	+28	19	28.1		046
1990	XQ1 *	1990	12	08.84631	04	59	11.96	+26	36	56.5	16.8	046
1990	XQ1	1990	12	08.85916	04	59	11.05	+26	36	51.9		046
1990	XR1 *	1990	12	13.27947	07	15	19.73	+24	15	01.2	18	801
1990	XR1	1990	12	13.29985	07	15	18.88	+24	15	03.1		801
1990	XS1 *	1990	12	14.10396	02	54	55.89	+23	11	44.6	17	801
1990	XS1	1990	12	14.12737	02	54	54.99	+23	11	41.7		801
1990	XT1 *	1990	12	14.10396	02	55	17.09	+23	15	29.4	16	801
1990	XT1	1990	12	14.12737	02	55	16.49	+23	15	20.1		801
1990	XU1 *	1990	12	14.24072	05	39	01.79	+25	39	22.3	17.5	801
1990	XU1	1990	12	14.26610	05	39	00.38	+25	39	17.7		801
1990	XV1 *	1990	12	15.26453	06	40	33.72	+26	18	37.0	17.5	801
1990	XV1	1990	12	15.29056	06	40	32.22	+26	18	45.1		801
1990	XW1 *	1990	12	07.64167	04	44	33.63	+22	44	37.5	16.5	875
1990	XW1	1990	12	07.65833	04	44	33.39	+22	44	37.0		875
1990	YA1 *	1990	12	23.91667	05	47	35.87	+39	19	57.2		033
1990	YA1	1990	12	23.93611	05	47	34.69	+39	19	54.6		033
1990	YA1	1990	12	23.95486	05	47	32.98	+39	19	52.4	18.5	033
1990	YA1	1990	12	23.97431	05	47	31.58	+39	19	50.5		033
1990	YB1 *	1990	12	23.91667	05	52	36.01	+40	31	20.9		033
1990	YB1	1990	12	23.93611	05	52	34.98	+40	31	21.3		033
1990	YB1	1990	12	23.95486	05	52	33.57	+40	31	21.5	16.5	033
1990	YB1	1990	12	23.97431	05	52	32.47	+40	31	21.5		033
1990	YC1 *	1990	12	23.91667	05	52	47.83	+38	27	55.1		033
1990	YC1	1990	12	23.93611	05	52	46.78	+38	27	52.5		033
1990	YC1	1990	12	23.95486	05	52	45.12	+38	27	48.8	18.0	033
1990	YC1	1990	12	23.97431	05	52	44.09	+38	27	46.7		033
1990	YD1 *	1990	12	23.91667	05	56	12.97	+38	26	59.9		033
1990	YD1	1990	12	23.93611	05	56	11.84	+38	26	54.4		033

1990 YD1	1990 12	23.95486	05 56	10.44	+38 26	48.0	17.0	033
1990 YD1	1990 12	23.97431	05 56	09.25	+38 26	42.1		033
1990 YE1 *	1990 12	22.55374	05 39	26.10	-04 01	40.2	18 V	413
1990 YE1	1990 12	22.59888	05 39	23.97	-04 01	30.1		413
1990 YF1 *	1990 12	26.55191	04 20	55.24	+16 03	52.2	16 V F	413
1990 YG1 *	1990 12	17.42622	06 50	39.35	+03 21	04.6	16.0	675
1990 YG1	1990 12	17.45260	06 50	37.61	+03 21	30.1		675
1990 YH1 *	1990 12	20.38472	10 18	43.86	+12 34	17.9	17.5	801
1990 YH1	1990 12	20.41922	10 18	44.34	+12 34	06.3		801

\* \* \* \* \*

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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 McNaught-Russell (1991w)

T 1990 Oct. 31.38239 ET

q	(1950.0)	P	Marsden Q
6.9592138			
	Peri. 148.28225	+0.79925384	+0.34439605
	Node 149.42286	-0.49566253	-0.08571595
e 1.0	Incl. 104.48467	+0.33987050	-0.93490328

From 14 observations 1991 Sept. 3-29.

Periodic Comet Spacewatch (1991x)

T 1990 Dec. 23.11541 ET					Marsden
q 1.5805980	(1950.0)		P	Q	
n 0.18532935	Peri.	89.12375	-0.47282766	+0.87777900	
a 3.0467717	Node	152.24010	-0.85984973	-0.44051322	
e 0.4812220	Incl.	9.52306	-0.19259399	-0.18828739	
P 5.32					

From 21 observations 1991 Sept. 8-17.

Comet McNaught-Russell (1991v)

Epoch 1992 May 18.0 ET = JDE 2448760.5					Marsden
T 1992 May 3.28905 ET					
q 3.1967048	(1950.0)		P	Q	
z +0.0017130	Peri.	257.15076	+0.10254445	-0.48594670	
+/-0.0000890	Node	119.77415	+0.20666816	+0.86391969	
e 0.9945242	Incl.	90.53412	-0.97302256	+0.13228219	

From 9 observations 1991 Aug. 3-Oct. 5, mean residual 0".7.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1978 WS	14.0	781128	287.46	267.20	245.26	10.90	0.1406	3.2017	2 4	E	W	
1978 WD15	12.5	781128	46.54	302.05	75.30	2.98	0.0004	3.0854	2 3	E	W	
1978 WB16	13.0	781128	332.73	22.69	81.86	7.84	0.2219	3.1221	3 3	D	W	
1988 CC6	12.4	880229	71.74	91.97	337.38	5.10	0.1200	3.1759	32 9			E
1988 DE	13.0	880229	352.18	172.71	352.32	13.27	0.0975	2.5805	33 0			W
1989 HA	12.7	890603	335.85	125.08	142.39	15.10	0.1640	2.5814	68 8			E
1989 HD	12.9	890603	345.62	116.06	143.11	13.86	0.1480	2.6056	72 0			E
1989 KE	13.0	890603	356.15	94.52	150.87	14.01	0.1353	2.6097	42 0			W
1989 KF	12.3	890623	5.40	153.84	82.79	16.23	0.0959	2.8479	36 0			E
1990 FQ1	12.8	900419	291.46	78.84	212.75	22.68	0.1508	2.4378	62 9			E
1990 HK	12.4	900419	41.58	324.05	197.30	12.93	0.1116	2.5669	62 7			E
1990 QP5	13.0	900906	351.48	178.09	167.16	6.25	0.1168	2.4513	17 6			W
1990 QE8	13.0	900817	212.47	346.19	138.95	6.45	0.0475	2.7795	31 0			W
1990 QH8	16.0	900817	301.35	309.09	105.94	1.54	0.2173	2.2048	10 9			W
1990 QT8	15.5	900817	36.08	140.00	143.31	4.11	0.1623	2.1631	31 0			W
1990 QH9	15.0	900817	349.04	234.52	115.06	3.12	0.2012	2.4080	31 0			W
1990 QM9	14.0	900817	40.43	277.79	13.17	4.49	0.0533	2.7490	31 0			W
1990 QN9	14.0	900817	252.70	325.49	128.98	4.40	0.1154	2.2694	31 0			W
1990 QR9	15.0	900817	345.32	209.86	145.95	3.95	0.1522	2.6657	28 8			W
1990 RG	15.5	900906	334.33	25.40	357.26	6.73	0.1990	2.2357	24 7			W
1990 RW2	15.5	900906	357.91	53.23	301.37	3.74	0.2962	2.4813	5 8			W
1990 RX2	14.0	900906	352.80	29.36	334.42	9.68	0.1974	2.5708	5 8			W
1990 RH3	12.0	900926	24.89	150.96	176.30	10.29	0.1053	2.9925	38 0			W
1990 RG5	12.5	900906	212.55	285.12	229.52	5.31	0.2514	2.2646	5 5	E	W	
1990 RJ5	14.0	900906	287.63	174.75	266.91	2.76	0.1349	2.5102	5 6			W
1990 RK5	14.0	900906	14.27	114.55	210.99	3.98	0.2870	2.7207	5 6			W
1990 RW6	13.5	900817	248.84	93.57	1.30	1.62	0.0438	2.8451	19 9	E	W	
1990 RZ6	12.0	900906	219.60	330.95	163.17	1.74	0.1587	3.1181	21 0	E	W	
1990 RE7	13.0	900817	288.88	63.31	358.25	10.44	0.0965	2.9817	19 9			W
1990 RC8	14.5	900817	248.91	320.15	134.97	5.30	0.0636	2.2005	20 9			W
1990 RN8	14.0	900817	319.98	219.91	167.72	3.11	0.0870	2.7112	31 0			W
1990 RH15	13.0	900906	139.78	100.88	114.81	2.27	0.0948	3.2265	10 9			W
1990 SX13	15.0	900817	55.06	150.16	119.79	1.81	0.1364	2.2410	39 0			W
1990 SQ14	16.0	900906	343.90	14.59	353.82	18.86	0.0887	1.9697	12 8	E	W	
1990 SN16	15.0	900906	337.98	341.75	27.31	4.15	0.2192	2.3177	4 6			W
1990 TU4	13.0	900926	123.21	236.62	333.91	15.55	0.1680	2.6259	26 5			W
1990 VV5	14.0	901105	240.82	343.72	206.18	12.63	0.1177	2.9705	8 0			W
1990 WY4	15.0	901105	287.95	31.66	123.31	3.91	0.1922	2.3549	6 5			W
1991 EB	13.0	910325	55.01	209.88	256.00	2.83	0.1258	2.6184	35 8			W

1991	GZ1	14.5	910504	46.28	105.97	47.72	23.79	0.0544	1.9275	54	0	W
1991	GA2	14.0	910504	312.82	115.60	185.53	22.56	0.2539	2.4307	54	0	W
1991	GC2	13.5	910504	18.88	75.96	120.15	12.26	0.1977	2.6581	54	0	W
1991	JW1	12.0	910524	221.41	224.45	148.94	23.59	0.0406	3.0423	26	8	W
1991	KD	15.5	910524	8.28	115.69	103.27	22.98	0.2798	2.3638	22	7	W
1991	LV	13.5	910613	202.08	174.25	239.90	18.80	0.0827	1.8855	52	0	W
1991	LH1	15.5	910524	326.89	179.13	106.80	2.38	0.1042	2.3344	21	9	W
1991	LO1	15.5	910524	351.09	170.38	86.39	5.92	0.0984	2.2857	21	9	W
1991	LU1	14.0	910524	324.01	68.22	220.13	5.30	0.0731	3.0429	21	9	W
1991	LW1	14.0	910524	354.85	147.82	106.44	2.06	0.1710	3.1871	21	9	W
1991	LY1	15.0	910524	2.45	159.32	84.07	2.01	0.1875	3.1161	21	9	W
1991	LD2	14.5	910524	4.61	142.49	99.15	2.67	0.0903	2.8336	21	9	W
1991	LE2	14.5	910524	261.99	275.11	89.13	7.69	0.1758	2.4626	21	0	W
1991	LJ2	13.0	910524	306.72	217.02	90.50	6.96	0.0663	3.2375	21	9	W
1991	LK2	13.5	910524	80.78	85.88	72.01	6.62	0.0853	3.1457	21	9	W
1991	LL2	14.0	910524	321.07	86.49	211.37	1.84	0.1314	3.1729	21	9	W
1991	LP2	15.5	910524	326.53	192.98	98.91	1.97	0.1495	2.2884	21	9	W
1991	LV2	15.5	910524	305.98	219.08	101.68	3.33	0.1802	2.3896	21	9	W
1991	LJ3	16.0	910524	340.71	69.79	201.29	2.78	0.1484	2.1836	21	9	W
1991	LM3	17.0	910524	332.33	63.34	230.29	5.04	0.2843	2.1720	21	9	W
1991	LB4	14.0	910524	352.60	16.69	238.65	14.19	0.0329	2.6873	21	9	W
1991	NA	15.0	910723	348.43	40.35	277.38	11.76	0.3326	2.3835	63	0	B
1991	NO2	13.5	910723	22.81	178.36	98.11	3.74	0.1489	2.4588	31	0	D W
1991	NR2	14.0	910812	3.94	27.89	286.38	17.28	0.4045	2.6624	62	6	W
1991	OV	14.5	910723	0.42	146.45	165.43	5.17	0.1898	2.2658	25	8	W
1991	PL	14.9	910812	355.80	165.89	161.68	1.84	0.0800	2.1866	5	8	E E
1991	PC1	14.5	910812	8.10	334.15	344.99	19.29	0.0639	1.9640	21	7	W
1991	PK1	13.5	910812	328.54	252.22	135.07	14.84	0.1962	2.5463	24	7	W
1991	PV1	14.0	910723	12.05	132.83	163.02	6.51	0.1655	2.6464	29	0	D W
1991	PY1	15.0	910723	26.44	152.42	119.56	8.56	0.1253	2.5177	12	7	W
1991	PZ1	16.0	910723	42.17	162.80	79.70	1.75	0.2199	2.3674	12	7	W
1991	PA2	14.0	910723	217.18	1.45	98.81	3.04	0.1621	3.0500	12	7	W
1991	PB2	15.0	910723	55.63	120.38	111.30	6.07	0.1795	2.5836	12	7	W
1991	PE2	16.0	910723	337.82	328.97	12.05	2.05	0.2380	2.4278	12	7	W
1991	PH2	15.0	910723	350.59	234.65	82.90	1.38	0.0722	2.5643	12	7	W
1991	PL2	16.0	910723	8.89	313.64	338.22	4.10	0.1931	2.4555	12	7	W
1991	PO2	13.5	910723	249.99	349.57	79.49	2.17	0.1068	3.1488	12	7	W
1991	PR2	15.0	910723	358.28	353.60	315.16	14.30	0.0834	2.6194	12	7	W
1991	PT2	16.5	910723	343.36	223.13	110.39	3.76	0.2528	2.3793	12	7	W
1991	PU2	14.0	910723	299.48	73.39	322.12	15.01	0.2465	3.1193	12	7	W
1991	PX2	15.5	910723	355.45	340.19	332.88	4.05	0.1444	2.6516	12	7	W
1991	PY2	14.5	910723	172.23	170.14	323.94	9.12	0.1118	2.3899	12	7	W
1991	PB3	14.0	910723	324.26	30.44	318.69	20.57	0.0774	3.0991	12	7	W
1991	PC3	15.0	910723	344.72	202.44	127.59	10.20	0.1680	2.9885	12	7	W
1991	PE3	15.0	910723	290.62	290.16	109.74	3.13	0.1966	2.3889	12	7	W
1991	PF3	15.5	910723	347.36	200.11	123.22	9.64	0.0935	2.5572	12	7	W
1991	PG3	14.0	910723	66.68	133.62	91.34	2.80	0.1569	3.0474	12	7	W
1991	PJ3	14.5	910723	215.11	111.40	348.20	4.93	0.1090	2.3153	12	7	W
1991	PK3	15.0	910723	329.45	288.08	57.40	2.39	0.1072	2.5408	12	7	W
1991	PM3	16.0	910723	37.38	140.61	117.39	7.25	0.1487	2.2958	12	7	W
1991	PO3	16.0	910723	346.09	347.76	340.30	2.47	0.1994	2.4185	12	7	W
1991	PQ3	14.0	910723	44.89	265.66	354.20	3.42	0.0536	2.7971	12	7	W
1991	PE8	15.5	910723	333.34	224.22	123.02	1.96	0.2079	2.3134	9	0	W
1991	PX8	13.5	910723	264.18	167.42	251.00	4.19	0.0813	2.2984	21	6	D W
1991	PS9	14.5	910812	32.00	317.34	321.10	11.91	0.1644	2.6840	5	6	E
1991	PV9	13.0	910812	19.44	107.50	169.14	14.13	0.1792	2.5958	27	8	W
1991	PN10	14.5	910901	71.22	97.14	166.57	22.50	0.0701	1.9540	54	0	W
1991	PO10	13.0	910812	4.04	132.95	198.93	6.46	0.1421	2.3454	34	0	W
1991	PX10	14.5	910812	351.65	165.96	184.46	8.50	0.2005	2.2098	33	7	W

1991	PH11	12.0	910812	131.91	333.25	234.52	6.17	0.1167	2.6493	30	5	W
1991	PJ11	13.5	910812	7.79	90.06	240.65	2.89	0.1942	2.5732	30	5	W
1991	PK11	12.5	910812	284.86	132.30	313.39	6.88	0.1920	2.7582	30	5	W
1991	PQ11	13.5	910812	358.98	37.12	307.76	5.24	0.0817	2.5215	30	5	W
1991	PP12	15.9	910812	342.13	43.80	307.99	1.66	0.1898	2.2416	5	5	E
1991	PW12	11.0	910812	193.15	141.00	1.16	0.79	0.1926	3.1140	33	5	N
1991	PB13	11.5	910812	284.51	322.63	100.66	2.37	0.1462	3.2161	33	5	N
1991	PC13	13.1	910812	21.85	326.48	328.17	4.54	0.2090	2.4436	33	5	N
1991	PL13	14.5	910812	10.38	47.19	267.27	1.62	0.1801	2.4508	35	0	N
1991	PD15	15.5	910901	6.40	34.57	290.62	5.66	0.3046	2.2587	34	0	N
1991	PT15	14.1	910812	345.24	226.82	124.01	6.06	0.2864	2.7802	32	5	N
1991	PO16	13.0	910812	52.10	110.68	161.96	13.27	0.1576	2.6613	33	8	W
1991	PP16	13.5	910812	354.78	194.20	151.18	5.46	0.1520	2.3902	31	6	W
1991	PQ16	13.5	910812	324.14	213.23	169.23	7.34	0.0762	2.3695	31	6	W
1991	PZ16	14.5	910723	42.25	269.89	315.71	17.58	0.3718	3.1157	12	8	M
1991	QF	14.0	910901	337.03	316.35	41.60	16.92	0.3193	2.5279	30	7	W
1991	QG	14.0	910812	346.14	162.31	199.31	7.42	0.4025	3.0095	34	8	W
1991	QJ	14.7	910901	10.32	162.75	160.50	5.99	0.2066	2.2506	19	7	N
1991	RA	15.0	910901	42.96	310.76	356.25	21.24	0.0414	1.8580	10	5	W
1991	RE	15.0	910901	344.52	74.08	294.72	2.86	0.2351	2.5775	3	5	E W
1991	RF	15.0	910901	33.50	65.23	235.57	3.59	0.1394	2.4756	3	3	W
1991	RG	14.5	910901	73.89	34.27	230.59	3.53	0.0517	2.1893	3	3	W
1991	RL	14.0	910901	36.42	298.43	342.66	29.15	0.2799	2.5943	4	7	W
1991	RM	14.5	910901	355.37	192.77	156.57	12.19	0.2713	2.2554	3	6	W
1991	RP	15.0	910901	347.03	203.13	154.81	18.25	0.1774	1.9117	5	6	W
1991	RQ		910901	10.54	176.77	150.73	12.32	0.3002	2.3552	2	5	E W
1991	RR	13.0	910901	248.01	280.34	173.84	8.54	0.0749	2.5730	4	7	E W
1991	RT	13.5	910901	7.70	167.11	159.49	16.27	0.2491	2.6125	5	5	W
1991	RB1	12.9	910921	5.35	98.39	252.71	6.18	0.1716	2.8088	4	6	E N
1991	RE1	12.8	910901	186.30	196.03	316.72	5.65	0.1989	2.2389	8	6	E N
1991	RG1	13.7	910901	27.01	289.66	20.49	2.70	0.1247	2.6829	4	6	E N
1991	RJ1	14.9	910921	6.99	344.66	354.32	9.74	0.2933	2.5202	4	6	E N
1991	RM1	12.0	910901	37.24	260.10	35.57	28.28	0.2123	3.2025	10	4	W
1991	RN1	14.5	910901	341.67	188.22	184.51	2.28	0.2147	2.4673	12	0	M
1991	RR1	11.2	910921	25.20	97.04	229.09	9.57	0.1330	3.0516	8	5	N
1991	RK2	13.0	910901	345.97	216.70	145.60	6.87	0.1436	2.3639	21	8	W
1991	RM2	13.5	910901	359.86	186.89	167.39	8.71	0.2090	2.2580	9	7	W
1991	RO2	14.5	910901	11.57	126.01	205.90	5.42	0.3091	2.4782	10	0	W
1991	RP2	12.5	910901	50.44	72.94	215.31	8.48	0.1992	3.1943	5	6	E W
1991	RQ2	15.5	910901	326.50	210.49	201.02	6.17	0.2859	2.4373	5	6	E W
1991	RR2	15.5	910901	348.26	163.60	207.68	4.27	0.2267	2.3128	5	6	E W
1991	RS2	14.0	910901	31.71	103.92	213.67	5.36	0.0942	2.3091	5	6	E W
1991	RT2	16.0	910901	28.57	81.35	229.42	4.22	0.2053	2.2344	5	6	E W
1991	RU2	14.5	910901	166.99	294.08	255.47	4.41	0.0689	2.2898	5	6	E W
1991	RV2	14.5	910901	46.77	9.80	275.52	3.89	0.2435	2.5583	5	6	E W
1991	RW2		910901	357.96	110.94	250.39	3.20	0.1361	3.1547	2	4	E W
1991	RX2	13.5	910901	229.80	218.30	279.11	3.96	0.0970	2.4176	5	6	E W
1991	RY2	15.0	910901	23.26	28.59	284.11	3.76	0.2996	2.7255	4	5	E W
1991	RZ2	13.0	910901	284.86	239.43	229.60	5.54	0.2890	2.8762	5	6	E W
1991	RA3	13.5	910901	278.91	215.45	235.09	5.32	0.0779	2.8263	5	6	E W
1991	RB3	14.5	910901	337.94	127.92	256.05	2.85	0.1360	2.2133	5	6	E W
1991	RC3	14.0	910901	20.95	8.31	317.17	3.92	0.2109	2.8511	5	6	E W
1991	RD3	13.0	910901	67.36	55.41	212.09	7.37	0.2309	3.1568	5	6	E W
1991	RE3	16.5	910901	9.29	19.73	316.98	4.38	0.2298	2.2503	2	4	E W
1991	RF3	17.0	910901	11.74	68.99	259.69	2.36	0.2971	2.3800	2	4	E W
1991	RG3	14.5	910901	1.22	12.62	346.51	15.08	0.0007	2.9572	2	4	E W
1991	RH3	16.0	910901	21.36	352.16	321.73	4.83	0.2907	2.4391	2	4	E W
1991	RJ3	16.0	910901	334.50	145.22	245.45	4.17	0.1550	2.4752	2	4	E W
1991	RK3	14.5	910901	352.68	23.40	342.53	11.20	0.1570	2.4185	2	4	E W

1991 RL3	15.5	910901	2.62	15.42	335.06	7.56	0.1829	2.3186	2 4	E W
1991 RM3	17.0	910901	348.44	119.69	252.94	2.88	0.2682	2.3218	2 4	E W
1991 RO3	14.0	910901	92.85	267.42	336.02	8.46	0.2001	2.5144	2 4	E W
1991 RP3	15.0	910901	11.63	111.14	220.00	5.11	0.2844	2.5416	2 4	E W
1991 RQ3	13.5	910901	357.94	16.92	348.73	11.30	0.1440	3.1556	2 5	E W
1991 RR3		910901	355.94	28.65	334.35	6.85	0.1183	2.2226	2 5	E W
1991 RS3	13.5	910901	203.02	295.77	231.19	4.44	0.1786	2.4141	10 7	W
1991 RT3	14.0	910901	313.90	199.40	222.09	5.25	0.1745	2.2846	10 7	W
1991 RU3		910901	248.57	169.87	307.03	2.82	0.0428	2.2709	10 7	W
1991 RW3		910901	356.54	44.07	318.73	2.85	0.1898	2.4203	2 4	E W
1991 RX3	14.0	910901	358.66	53.15	310.52	3.55	0.1262	3.0978	2 5	E W
1991 RY3		910901	34.06	318.32	355.57	19.75	0.1860	3.0844	10 7	W
1991 RZ3	14.0	910901	175.09	188.49	358.36	20.42	0.1211	2.4133	2 5	E W
1991 RA4	14.0	910901	175.69	335.17	211.55	8.49	0.1215	2.4043	2 5	E W
1991 RB4	14.0	910901	172.59	205.09	344.43	6.14	0.0883	2.4817	2 5	E W
1991 RC4	12.5	910901	176.51	322.09	225.33	3.80	0.1035	2.6694	2 5	E W
1991 RD4	14.0	910901	174.92	337.42	208.96	5.55	0.1129	2.2015	2 5	E W
1991 RE4	15.5	910901	355.87	17.32	345.68	5.27	0.0899	2.1540	2 5	E W
1991 RF4	14.5	910901	176.00	292.87	254.41	2.71	0.0833	2.4879	2 5	E W
1991 RG4	14.0	910901	357.68	71.13	295.26	2.08	0.1186	3.0600	2 5	E W
1991 RH4	15.5	910901	355.95	50.46	313.04	3.62	0.0947	2.1587	2 5	E W
1991 RJ4	15.0	910901	357.47	18.26	347.18	5.97	0.1291	2.8130	2 4	E W
1991 RN4	15.0	910901	332.86	225.70	158.65	6.33	0.2287	2.3818	21 8	W
1991 RQ4	14.5	910901	277.52	151.53	319.64	4.01	0.2110	2.5200	5 7	E W
1991 RR4	15.0	910901	330.84	63.16	336.19	3.65	0.1624	2.2623	5 7	E W
1991 RS4	16.5	910901	4.35	28.91	321.77	1.75	0.2215	2.3668	5 7	E W
1991 RT4	15.5	910901	264.01	190.22	286.54	2.11	0.1637	2.1942	5 7	E W
1991 RU4	13.5	910901	28.18	116.53	205.91	7.20	0.2105	3.2173	5 7	E W
1991 RV4	15.5	910901	18.25	98.63	236.03	2.36	0.1973	2.6947	5 7	E W
1991 RW4	14.5	910901	30.15	310.17	358.80	7.10	0.2891	2.8854	2 6	E W
1991 RX4	14.0	910901	28.55	126.10	203.73	8.08	0.1188	3.0261	5 7	E W
1991 RY4	15.5	910901	14.21	121.01	216.67	2.00	0.2436	2.7999	5 7	E W
1991 RZ4	15.0	910901	29.57	81.51	226.77	1.51	0.2766	2.4513	5 7	E W
1991 RA5	15.0	910901	267.59	128.51	345.38	3.98	0.1610	2.2570	5 7	E W
1991 RB5	14.5	910901	347.70	29.38	347.93	5.96	0.1286	2.3544	5 7	E W
1991 RC5	13.5	910901	301.07	77.11	0.07	10.73	0.1060	2.9832	5 7	E W
1991 RD5	15.5	910901	90.22	292.63	326.33	2.74	0.1273	2.2118	5 7	E W
1991 RE5	17.0	910901	6.62	91.05	253.91	1.88	0.2878	2.4195	2 6	E W
1991 RF5	15.0	910901	50.00	304.57	355.64	8.66	0.1532	2.6239	5 7	E W
1991 RG5	13.5	910901	304.67	91.13	2.88	13.23	0.2737	3.2281	2 6	E W
1991 RL5	12.5	910901	344.10	358.91	21.44	9.51	0.1795	3.0216	14 6	W
1991 RC6	13.9	910921	6.74	334.06	20.37	13.34	0.2022	2.5489	4 7	E
1991 RD6	14.0	910921	358.91	237.31	129.20	4.96	0.1339	2.3264	4 8	E
1991 RN6	15.0	910901	14.73	155.86	161.32	10.29	0.2457	2.3257	23 7	W
1991 RT6	13.0	910812	81.24	280.70	320.69	20.51	0.0735	3.1730	26 5	W
1991 RG7	15.0	910901	356.80	113.53	264.89	3.61	0.2171	2.6206	2 4	E W
1991 RH7	13.5	910901	175.92	319.40	245.22	7.32	0.1501	2.3973	2 4	E W
1991 RJ7	14.0	910901	176.82	262.42	301.60	3.58	0.1098	2.4902	2 4	E W
1991 RK7	14.0	910901	175.99	270.21	292.75	4.17	0.1206	2.2474	2 4	E W
1991 RL7	13.5	910901	357.66	169.16	214.59	14.76	0.1321	3.1860	2 4	E W
1991 RN7	13.5	910901	357.15	40.41	342.79	4.89	0.0809	2.7372	2 4	E W
1991 RP7	13.0	910901	357.80	107.34	277.89	3.71	0.0775	2.9715	2 4	E W
1991 RU7	14.5	910901	316.77	242.50	176.97	8.38	0.2920	2.5429	4 3	E B
1991 SA	13.9	910921	24.74	57.01	266.75	5.69	0.2556	2.3306	12 6	N
1991 SB	13.3	910921	350.81	159.71	217.07	2.35	0.1316	2.4045	17 7	N
1991 TJ	14.5	910921	7.45	273.81	79.19	4.52	0.2420	2.3156	20 6	W
1991 TP	13.0	910921	61.46	133.46	166.20	14.13	0.0981	3.0532	20 6	W

1978 WB16 = 1978 WS14 (G. V. Williams)

1991 NO2 = 1991 PH3 (S. Nakano)



1991 PV1 = 1991 OB1 (S. Nakano)

1991 PX8 = 1991 OM (S. Nakano)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(193) Ambrosia	Obs. 45	Peri. 81.27873
H 9.68 G 0.15	M 17.71499	Node 350.31740
rms res. 0".76 (M-P)	n 0.23460810	Incl. 12.04230
	e 0.2921274	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(271) Penthesilea	Obs. 115	Peri. 53.32570
H 9.80 G 0.15	M 347.58396	Node 336.23508
rms res. 0".97 (M-P)	n 0.18904602	Incl. 3.55040
	e 0.0995866	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(412) Elisabetha	Obs. 117	Peri. 94.56838
H 9.0 G 0.15	M 226.71002	Node 106.77533
rms res. 0".82 (M-P)	n 0.21473247	Incl. 13.76075
	e 0.0442956	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(1164) Kobolda	Obs. 21	Peri. 340.60360
H 12.8 G 0.15	M 251.35193	Node 157.14300
rms res. 0".98 (M-P)	n 0.28140088	Incl. 25.17303
	e 0.1962339	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(1815) Beethoven	Obs. 30	Peri. 353.30129
H 11.36 G 0.15	M 260.92147	Node 111.39016
rms res. 0".75 (M-P)	n 0.17429980	Incl. 2.71544
	e 0.1734019	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Williams
(1932) Jansky	Obs. 29	Peri. 303.71348
H 13.6 G 0.15	M 103.39492	Node 189.21359
rms res. 0".76 (M-C)	n 0.26990479	Incl. 1.88717
	e 0.1585684	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(1969) Alain	Obs. 40	Peri. 348.05775
H 11.6 G 0.15	M 116.42564	Node 209.81169
rms res. 0".80 (M-P)	n 0.18062067	Incl. 3.32114
	e 0.1469643	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(1991) Darwin	Obs. 18	Peri. 345.15487
H 12.9 G 0.15	M 51.49991	Node 328.73721
rms res. 0".94 (M-P)	n 0.29234555	Incl. 5.92253
	e 0.2081314	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2169) Taiwan	Obs. 52	Peri. 356.17088
H 12.0 G 0.15	M 290.02951	Node 71.95452
rms res. 0".91 (M-P)	n 0.21158774	Incl. 1.53270
	e 0.0491934	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2338) Bokhan	Obs. 35	Peri. 201.67562
H 11.9 G 0.15	M 33.68867	Node 112.90363
rms res. 0".85 (M-P)	n 0.20668985	Incl. 3.20255
	e 0.0628041	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2405) Welch	Obs. 42	Peri. 353.90742
H 12.09 G 0.15	M 230.95203	Node 128.72939
rms res. 0".88 (M-P)	n 0.17066246	Incl. 2.21899
	e 0.1199551	

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2535) Hameenlinna	Obs. 42	Peri. 308.75530
H 12.5 G 0.15	M 301.37651	Node 172.99925
rms res. 0".96 (M-P)	n 0.29408184	Incl. 3.42265
	Opp. 10	
	e 0.0799664	
	1939-1989	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2563) Boyarchuk	Obs. 36	Peri. 42.52032
H 11.3 G 0.15	M 237.67297	Node 114.79562
rms res. 0".99 (M-P)	n 0.17196479	Incl. 2.03658
	Opp. 11	
	e 0.1311834	
	1959-1991	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2571) Geisei	Obs. 36	Peri. 283.94192
H 13.0 G 0.15	M 53.16877	Node 67.13067
rms res. 0".96 (M-P)	n 0.29640314	Incl. 2.87398
	Opp. 5	
	e 0.1946457	
	1931-1990	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2710) Veverka	Obs. 19	Peri. 32.51323
H 13.5 G 0.15	M 222.22426	Node 144.61361
rms res. 0".81 (M-P)	n 0.26101222	Incl. 3.11161
	Opp. 6	
	e 0.1298916	
	1974-1989	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2755) Avicenna	Obs. 15	Peri. 148.07885
H 11.7 G 0.15	M 276.65969	Node 233.10286
rms res. 0".89 (M-P)	n 0.20515389	Incl. 4.53945
	Opp. 5	
	e 0.2573579	
	1973-1989	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2807) Karl Marx	Obs. 13	Peri. 91.58183
H 12.6 G 0.15	M 190.41252	Node 28.93559
rms res. 1".04 (M-P)	n 0.21075856	Incl. 7.89568
	Opp. 6	
	e 0.1792263	
	1924-1990	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2862) Vavilov	Obs. 26	Peri. 277.51612
H 12.8 G 0.15	M 237.29388	Node 226.15503
rms res. 0".95 (M-P)	n 0.30180980	Incl. 3.47691
	Opp. 9	
	e 0.1148262	
	1931-1991	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(2907) Nekrasov	Obs. 28	Peri. 195.05596
H 11.5 G 0.15	M 41.91155	Node 173.00215
rms res. 0".75 (M-P)	n 0.18812161	Incl. 10.20394
	Opp. 9	
	e 0.0910772	
	1954-1990	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(3464) Owensby	Obs. 24	Peri. 250.96282
H 13.5 G 0.15	M 139.77971	Node 324.94657
rms res. 0".85 (M-P)	n 0.29398767	Incl. 6.77938
	Opp. 7	
	e 0.0436662	
	1931-1991	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(3569) Kumon	Obs. 15	Peri. 315.62069
H 12.8 G 0.15	M 358.71779	Node 162.11759
rms res. 1".00 (M-P)	n 0.23640499	Incl. 14.05527
	Opp. 6	
	e 0.1250956	
	1938-1988	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(3612) Peale	Obs. 16	Peri. 266.41737
H 13.5 G 0.15	M 170.04551	Node 77.65183
rms res. 1".13 (M-P)	n 0.25825818	Incl. 3.38160
	Opp. 5	
	e 0.1826192	
	1978-1988	
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	** J2000.0 **	Bowell
(3898) 1981 SF9	Obs. 19	Peri. 211.38165
H 12.4 G 0.15	M 274.28170	Node 184.70281
rms res. 1".14 (M-P)	n 0.18024245	Incl. 0.63905
	Opp. 6	
	e 0.1710014	
	1954-1990	

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (3959) 1954 UN2 Obs. 39 M 328.61323  
 H 14.0 G 0.15 Opp. 5 n 0.29026651  
 rms res. 0".81 (M-P) 1954-1991 e 0.1870127

Bowell  
 Peri. 197.60830  
 Node 211.12895  
 Incl. 3.27529

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4025) Ridley Obs. 21 M 6.86094  
 H 14.0 G 0.15 Opp. 6 n 0.29167674  
 rms res. 0".93 (M-P) 1974-1989 e 0.1667816

Bowell  
 Peri. 245.06876  
 Node 147.53345  
 Incl. 3.12613

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4027) Mitton Obs. 23 M 204.00548  
 H 13.5 G 0.15 Opp. 5 n 0.27192016  
 rms res. 0".84 (M-P) 1957-1989 e 0.1655103

Bowell  
 Peri. 15.73781  
 Node 194.11276  
 Incl. 1.77754

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4088) 1986 GG Obs. 13 M 55.05625  
 H 12.7 G 0.15 Opp. 5 n 0.25779105  
 rms res. 1".05 (M-P) 1972-1990 e 0.0578872

Bowell  
 Peri. 282.39149  
 Node 35.66430  
 Incl. 7.39672

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4095) Ishizuchisan Obs. 20 M 145.57065  
 H 14.2 G 0.15 Opp. 8 n 0.31914739  
 rms res. 0".83 (M-P) 1953-1990 e 0.1178003

Bowell  
 Peri. 89.05439  
 Node 256.32026  
 Incl. 2.51197

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4145) 1981 SJ7 Obs. 20 M 32.12717  
 H 13.6 G 0.15 Opp. 5 n 0.28784044  
 rms res. 0".91 (M-P) 1967-1991 e 0.2003444

Bowell  
 Peri. 34.91965  
 Node 293.08469  
 Incl. 4.87110

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4158) Santini Obs. 24 M 108.17025  
 H 11.3 G 0.15 Opp. 6 n 0.15737547  
 rms res. 0".90 (M-C) 1971-1990 e 0.0180738

Williams  
 Peri. 185.22428  
 Node 5.47558  
 Incl. 6.24756

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 \*\* J2000.0 \*\*  
 (4755) Nicky Obs. 25 M 151.68145  
 H 14.2 G 0.15 Opp. 5 n 0.28545033  
 rms res. 0".70 (M-P) 1931-1991 e 0.2499723

Bowell  
 Peri. 275.58994  
 Node 102.30194  
 Incl. 3.08470

(4961)\* 1958 TH1 = 1930 UU = 1969 TQ3 = 1980 RY2 = 1982 BM3 = 1988 BE2  
 = 1991 QA

Discovered 1958 Oct. 8 at the Lowell Observatory.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5  
 M 358.86437 (1950.0) P Q  
 n 0.17721955 Peri. 50.01581 +0.99103046 -0.09211235  
 a 3.1390264 Node 315.02304 +0.03413256 +0.87493954  
 e 0.2357801 Incl. 7.87302 +0.12920372 +0.47539050  
 P 5.56 H 12.0 G 0.15

Kaneda  
 Peri. 50.01581  
 Node 315.02304  
 Incl. 7.87302

Residuals in seconds of arc

301017	690	2.2-	1.1+	800903	330	1.3+	1.6+	880123	303	(6.0+	6.9-)
301019	690	1.2+	0.3-	820118	033	0.1-	0.6-	880123	303	(7.1+	6.3-)
581007	690	0.9+	0.2-	820118	033	0.5-	0.6-	910805	675	0.6-	0.5-
581008	690	2.0+	0.7-	880122	303	0.2+	1.3+	910808	675	0.4-	1.2-
581010	690	1.7+	0.9-	880122	303	0.6+	0.8+	910808	675	0.2-	1.6-
691011	095	2.5-	1.4-	880122	303	0.1+	0.8+	910809	675	0.7-	0.8-
691014	095	2.6-	0.8+	880123	303	1.3+	1.1+	910809	675	0.6-	1.0-

910816	392	0.0	2.0+	910817	392	1.5+	0.5+	910908	392	1.0+	1.1-
910816	392	0.5+	2.3+	910907	392	0.5-	1.7+				
910817	392	0.4+	0.9+	910907	392	1.5-	0.3+				

(4962)\* 1973 TP = 1973 UG3 = 1952 TF = 1969 TM6 = 1986 WC3

Discovered 1973 Oct. 1 by T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. D. W. E. Green (MPC 14944)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	129.55901		(1950.0)			P		Green		Q	
n	0.23404032	Peri.	141.30884			+0.96792736		+0.22277465			
a	2.6078079	Node	206.52306			-0.24040644		+0.95554509			
e	0.1456873	Incl.	15.07447			+0.07294779		+0.19314511			
P	4.21	H	12.3			G	0.15				

Residuals in seconds of arc

521011	012	0.5-	1.0-	730929	675	1.1+	1.3-	901014	808	0.8+	1.3-
691015	095	0.2-	2.1+	730929	675	0.3+	1.9-	901014	808	0.5-	0.0
730919	675	(5.2+	6.1+)	730930	675	0.1+	1.3-	901017	801	0.0	0.1-
730920	675	0.3-	1.1+	730930	675	0.8-	1.6-	901017	801	0.0	0.0
730920	675	0.4+	2.6+	731001	095	(5.1-	1.1-)	901107	385	0.7-	1.0+
730924	675	0.0	1.2+	731029	095	1.8-	2.5-	901107	385	0.7-	0.9+
730924	675	0.8-	1.9+	861127	033	0.7+	0.5-	901116	801	0.4-	0.3-
730925	675	1.0+	0.5-	861127	033	0.6+	0.3+	901116	801	0.2-	0.1-
730925	675	2.2+	0.9+	880124	413	0.4-	0.8-				

(4963)\* 1977 DR1 = 1973 GE1 = 1974 RC = 1981 CG = 1987 QU3

Discovered 1977 Feb. 18 by H. Kosai and K. Hurukawa at the Kiso Station of the Tokyo Astronomical Observatory.

Id. B. M. Knudsen (k, MPC 13454), B. G. Marsden (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	82.83354		(1950.0)			P		Marsden		Q	
n	0.23524506	Peri.	300.70229			+0.06067369		+0.99366442			
a	2.5988968	Node	332.29622			-0.83195154		-0.00202520			
e	0.1650848	Incl.	11.74116			-0.55152094		+0.11236955			
P	4.19	H	12.6			G	0.15				

Residuals in seconds of arc

730402	095	(3.8-	3.9+)	870830	010	(1.1+	5.8-)	910906	511	0.1+	2.0-
740911	095	0.4-	0.3+	870830	010	0.8+	1.0+	910907	801	0.2+	0.0
770218	381	1.2+	0.2+	870926	095	1.2-	1.3+	910907	801	0.2+	0.1-
770218	381	0.6-	0.7+	900329	801	0.3-	0.2-	910907	511	0.6+	2.3-
770219	381	0.1-	0.2+	900329	801	0.2-	0.3-	910908	511	0.2+	1.2-
770219	381	1.4+	0.2+	910806	801	0.2+	0.2+	910909	801	0.1-	0.0
810202	046	1.8-	1.5-	910806	801	0.1+	0.1+	910909	801	0.0	0.3+
810202	046	(0.4+	3.2-)	910809	675	0.2+	0.8+	910913	801	0.3+	0.4+
810209	046	(5.9-	1.4-)	910810	675	0.2+	0.9+	910913	801	0.0	0.3+
810209	046	(7.1+	0.9-)	910812	801	0.2-	0.3+				
870830	010	0.4-	0.5-	910812	801	0.3-	0.3+				

(4964)\* 1979 OD15 = 1986 RY6

Discovered 1979 July 21 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. S. Nakano (MPC 14781)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	178.46322		(1950.0)			P		Nakano		Q	
n	0.28962313	Peri.	204.59681			+0.97929975		-0.20149153			
a	2.2624581	Node	166.98325			+0.19699617		+0.92679586			
e	0.1240264	Incl.	4.92002			+0.04652425		+0.31693943			
P	3.40	H	13.6			G	0.15				

## Residuals in seconds of arc

790721	095	1.8-	0.7+	880317	675	1.1-	0.1-	910116	801	0.2-	0.8+
790730	095	0.4+	2.1+	880317	675	1.4+	0.9-	910116	801	0.5-	0.3+
790819	095	0.6+	0.2-	880321	675	0.3+	0.7-	910119	801	0.3+	0.1+
860906	095	(2.8-	4.5-)	880321	675	0.3-	0.7-	910119	801	0.2+	0.1+
860909	095	1.4-	2.7-	880322	675	0.5-	0.1+	910211	801	0.3+	0.5+
860929	095	2.8+	0.1+	880322	675	0.2+	0.7+	910211	801	0.5-	0.2-
861002	095	0.5-	0.8+	910114	801	0.0	0.7+				
861006	095	(2.8+	4.9+)	910114	801	0.1+	0.1+				

(4965)\* 1981 EP28

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

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Marsden	
M 278.11634 (1950.0)				P	Q
n	0.19789552	Peri.	67.21496	+0.80031956	+0.59938197
a	2.9163887	Node	255.95610	-0.55564509	+0.73194536
e	0.0612677	Incl.	0.89546	-0.22527126	+0.32403278
P	4.98	H	13.8	G	0.15

## Residuals in seconds of arc

710324	675	0.1+	1.0-	810212	413	1.7+	1.3+	810405	413	0.3-	1.0-
710325	675	1.0-	0.5+	810212	413	1.3-	1.1+	810410	413	2.7-	0.0
710325	675	0.4+	0.6-	810213	413	0.3+	0.3-	810501	413	0.6+	0.4+
710325	675	0.9-	0.3-	810306	413	2.1-	1.6+	910414	688	0.0	0.6+
710325	675	0.5-	0.4+	810306	413	(5.1-	3.0+)	910414	688	0.4+	0.7+
710326	675	0.4-	1.4-	810311	413	0.1+	0.9-	910512	688	0.0	0.0
710326	675	1.2+	0.2+	810311	413	0.3-	0.7+	910512	688	0.3+	0.1+
710327	675	0.2-	0.4+	810315	413	1.9+	0.9-	910513	688	0.2+	0.2+
781004	675	0.1-	0.1-	810315	413	1.7+	0.9-	910513	688	0.0	0.2+
781005	675	0.0	0.3+	810405	413	(3.0-	0.3+)				

(4966)\* 1981 EO34 = 1987 SO1

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

Id. E. Bowell (MPC 12444)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Marsden	
M 356.56229 (1950.0)				P	Q
n	0.23063878	Peri.	183.03482	+0.99969868	+0.02086745
a	2.6333858	Node	175.70514	-0.01726536	+0.97208543
e	0.2116132	Incl.	9.93984	-0.01744887	+0.23369736
P	4.27	H	13.7	G	0.15

## Residuals in seconds of arc

810209	413	0.3+	0.3+	870917	809	0.6-	0.1+	870927	095	1.0-	0.1+
810213	413	0.7+	1.4-	870917	809	0.7-	0.4-	870929	688	(2.6+	0.2-)
810302	413	0.2-	1.5-	870917	809	1.0+	0.2-	870929	688	0.6+	0.4+
810303	413	0.7-	0.3-	870921	688	0.6+	1.7+	871001	809	0.6-	0.5-
810303	413	1.1+	1.7-	870921	688	0.1-	0.4-	871001	809	0.5-	0.3-
810307	413	0.7-	0.5-	870921	046	(2.8-	0.1-)	871001	809	0.0	0.1-
810307	413	(2.3-	0.3+)	870921	046	(3.3-	1.0-)	871002	809	0.2-	0.4-
810311	413	1.1-	0.8+	870923	809	0.1+	0.3-	871002	809	0.0	0.8-
810316	413	(4.7+	2.9-)	870923	809	0.3+	0.5-	871002	809	0.3-	1.1-
810329	413	1.6-	0.2+	870923	809	0.5+	0.6-	871120	010	(4.1-	2.4-)
810407	413	0.3-	0.4-	870924	809	0.3+	0.0	871120	010	(2.7-	1.4+)
810408	413	(2.5-	1.8+)	870924	809	0.6+	0.4-	890204	809	0.5+	0.1+
810411	413	0.5-	0.6-	870924	809	0.7+	0.3-	890204	809	1.8+	0.4+
810411	413	1.3+	1.9-	870924	095	(1.7-	3.8+)	890204	809	1.3+	0.6+
810502	413	0.0	0.3-	870926	809	0.1+	0.1-	890302	809	0.8-	0.1+
810503	413	0.0	0.1+	870926	809	0.3+	0.5-	890302	809	0.6-	0.4-
870904	095	(2.3-	4.1+)	870926	809	0.2+	0.4-	890302	809	0.8-	0.9-

890303	809	0.2-	0.2-	910713	675	0.1+	1.0-	910906	801	0.1-	0.1-
890303	809	0.3-	1.0-	910713	675	0.5+	0.7-	910908	801	0.3+	0.1-
890303	809	1.4-	0.3-	910906	801	0.3-	0.2+	910908	801	0.2-	0.1-

(4967)\* 1983 CF1 = 1958 UQ = 1975 VD6 = 1979 ML9 = 1990 KA1

Discovered 1983 Feb. 11 by N. G. Thomas at the Anderson Mesa Station of the Lowell Observatory.

Id. A. Lowe (MPC 16696), G. V. Williams (MPC 16869)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	358.67327		(1950.0)		P		Williams		Q
n	0.17638731	Peri.	225.69820		+0.96040434		+0.14209947		
a	3.1488925	Node	124.68653		-0.08647263		+0.96970890		
e	0.0517182	Incl.	16.94444		-0.26485088		+0.19867659		
P	5.59	H	11.0		G	0.15			

Residuals in seconds of arc

581016	076	0.7+	1.6-	830219	688	(3.7+	0.5-)	900620	413	0.4-	0.9+
751105	095	1.2-	0.4+	830219	688	0.4+	1.1+	910807	801	0.3+	0.1+
790627	095	0.4+	2.3-	900521	675	0.5-	1.5-	910807	801	0.1+	0.3+
811219	413	0.6-	0.7-	900521	675	1.7-	0.9-	910812	801	0.0	0.1+
811219	413	0.0	1.5-	900523	675	1.6-	0.9-	910812	801	0.0	0.0
811219	413	0.3+	0.2+	900523	675	(3.5-	2.2-)	910906	801	0.2+	0.2+
811219	413	0.1+	2.2-	900616	808	0.3+	0.1-	910906	801	0.4+	0.0
830211	688	0.2+	0.1-	900616	808	0.7+	0.7+	910908	801	0.9+	0.2-
830211	688	1.1+	1.5-	900620	413	0.4-	0.7+	910908	801	0.3+	0.1+

(4968)\* 1986 PQ = 1988 BQ = 1990 OW3

Discovered 1986 Aug. 1 by E. F. Helin at Palomar.

Id. H. E. Holt (k, MPC 16872), G. V. Williams (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	40.62201		(1950.0)		P		Williams		Q
n	0.24573107	Peri.	281.10960		+0.59862568		-0.79792427		
a	2.5244261	Node	131.88398		+0.76688692		+0.54548365		
e	0.1100894	Incl.	5.43040		+0.23136929		+0.25644580		
P	4.01	H	12.6		G	0.15			

Residuals in seconds of arc

781121	413	0.3-	0.0	860902	809	0.4+	0.4+	860913	809	0.1-	0.1+
781122	413	0.6-	0.5-	860902	809	0.5+	0.4+	860913	809	0.0	0.1+
781123	413	0.4+	0.2-	860902	809	0.6+	0.4+	880123	552	1.0+	0.0
781124	413	0.6-	2.0+	860904	809	0.3+	0.5+	880123	552	1.0-	0.2-
860801	675	0.9+	2.2+	860904	809	0.4+	0.5+	900727	675	0.0	0.6-
860801	675	1.2-	1.5+	860904	809	0.2+	0.4+	900727	675	0.3-	0.5-
860802	675(24.5-	0.6+)		860906	809	0.3+	0.2+	900730	675	1.2-	0.0
860802	675(23.3-	1.6+)		860906	809	0.5+	0.2+	900730	675	0.0	2.3-
860804	675(23.2-	0.2+)		860906	809	0.3+	0.0	900914	675	0.1+	1.0-
860804	675(21.3-	1.6+)		860908	809	0.4+	0.6-	900914	675	0.3+	1.0-
860829	809	1.3-	0.4+	860908	809	0.2+	0.7-	900918	675	0.1-	0.8-
860829	809	1.0-	0.4+	860908	809	0.1+	0.8-	900918	675	0.6+	0.9-
860829	809	0.7-	0.4+	860910	809	0.3-	0.2-	900921	801	0.9+	0.3-
860901	809	0.4-	0.3+	860910	809	0.0	0.1-	900921	801	0.6+	0.6-
860901	809	0.3-	0.4+	860910	809	0.0	0.3-				
860901	809	0.0	0.5+	860913	809	0.0	0.1+				

(4969)\* 1986 TU = 1986 WC8 = 1977 RV4 = 1988 GB1

Discovered 1986 Oct. 4 by E. F. Helin at Palomar.

Id. B. G. Marsden (MPC 13306)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Marsden

M	5.16009		(1950.0)			P			Q		
n	0.21507740	Peri.	245.12085			+0.33455683			-0.94068337		
a	2.7589227	Node	186.20832			+0.93590207			+0.32465295		
e	0.3596470	Incl.	31.46538			-0.11026802			-0.09856597		
P	4.58	H	12.6			G	0.15				

Residuals in seconds of arc

770909	095	0.0	0.2+	861130	381	0.8+	2.2-	910811	801	0.5+	0.2-
861004	675	(2.9+	0.8-)	861130	381	0.0	1.2+	910812	801	0.2+	0.1+
861004	675	2.3+	1.9+	861201	381	0.5-	0.0	910812	801	0.1+	0.0
861005	675	(3.1-	1.6-)	861201	381	(3.5-	2.0-)	910912	801	0.2-	0.4+
861005	675	(2.5-	0.9+)	880409	054	0.4+	0.5-	910912	801	0.2-	0.1+
861006	675	1.6-	2.1-	880413	054	0.2-	0.0	910913	801	0.5-	0.0
861006	675	1.2-	0.3+	880414	054	0.0	0.1+	910913	801	0.4-	0.1-
861129	381	(2.4+	3.2+)	910811	801	0.6+	0.2-				

(4970)\* 1988 VO2 = 1951 YB

Discovered 1988 Nov. 12 by E. F. Helin at Palomar.

Id. G. V. Williams (MPC 16431)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	291.45448		(1950.0)			P			Q		
n	0.26574676	Peri.	129.83304			+0.46829540			-0.87581577		
a	2.3960216	Node	291.87504			+0.76729452			+0.46865612		
e	0.1440430	Incl.	7.23159			+0.43813073			+0.11536105		
P	3.71	H	12.8			G	0.15				

Residuals in seconds of arc

511222	711	(1.9-	3.4+)Y	881206	675	0.6+	0.5-	910711	675	1.5-	0.6-
511222	711	(3.1-	5.1-)Y	881207	675	(1.1+	4.8-)	910904	675	1.3+	1.5+
511222	711	(3.9+	1.1+)Y	890103	675	0.5-	1.0+	910904	675	1.5+	0.3+
771207	675	1.5+	0.2-	890103	675	0.3-	1.3+	910909	801	0.4+	0.3+
771207	675	0.4-	0.1-	900426	675	1.3-	0.0	910909	801	0.5+	0.1+
800804	675	1.1-	0.2+	900428	675	0.3-	0.0	910913	801	0.7+	0.1-
800805	675	1.2-	0.2+	900428	675	0.5+	1.1-	910913	801	0.1+	1.7-
881112	675	1.4-	1.8-	910710	675	0.5+	0.8+				
881113	675	0.7+	0.7-	910710	675	0.2-	1.6-				

(4971)\* 1989 BY = 1951 YX1 = 1967 EG1 = 1978 CP = 1978 EU1 = 1980 TH1

Discovered 1989 Jan. 30 by T. Fujii and K. Watanabe at Kitami.

Id. B. G. Marsden (MPC 14359, unpublished), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Marsden

M	308.21937		(1950.0)			P			Q		
n	0.26774149	Peri.	342.73057			+0.05067479			-0.99724292		
a	2.3841062	Node	104.33888			+0.92274042			+0.02598546		
e	0.1780440	Incl.	3.20750			+0.38207615			+0.06950770		
P	3.68	H	12.7			G	0.15				

Residuals in seconds of arc

511227	711	(11.6+	20.4+)Y	890106	413	0.2-	0.3-	890130	400	(2.3+	3.3+)
670308	095	0.0	1.7+	890106	413	0.7+	0.4+	890203	400	1.1-	1.0-
780202	330	0.5+	0.1-	890110	413	0.7-	0.3+	890203	400	(1.2+	3.5-)
780305	095	0.2+	0.1-	890110	413	0.6+	0.5-	890204	071	1.8-	0.8+
790815	413	0.5+	0.7+	890111	033	0.3+	1.0+	890204	071	(2.1-	3.9+)
790815	413	0.2-	0.5-	890112	413	0.8+	0.3+	890207	400	0.6+	0.4+
801005	809	0.4+	0.3-	890113	413	0.3+	1.1-	890207	400	0.0	1.7-
881229	413	0.3-	0.3+	890113	413	(2.7+	1.1-)	890207	400	0.7+	0.6-
881229	413	0.9+	1.1+	890115	413	0.6+	0.0	910807	675	0.5-	1.2-
890104	413	1.5-	0.2+	890130	400	(3.0+	2.7+)	910808	675	0.9-	0.7-
890104	413	0.0	0.7-	890130	400	(2.7+	1.0+)	910812	801	0.2+	0.5-

910812	801	0.4+	0.4-	910909	801	0.2-	0.3+	910913	400	1.9+	0.2-
910907	801	0.0	0.3+	910909	801	0.1-	0.3+				
910907	801	0.7-	0.4+	910913	400	0.8-	1.8+				

(4972)\* 1989 UE7 = 1983 RV8

Discovered 1989 Oct. 23 by F. Borngen at Tautenburg.

Id. D. W. E. Green (MPC 18119), G. V. Williams (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	158.63283		(1950.0)		P		Q
n	0.17774987	Peri.	196.75872		+0.98086697		-0.19466826
a	3.1327797	Node	174.46539		+0.18097020		+0.90783855
e	0.1802715	Incl.	1.22564		+0.07176193		+0.37139390
P	5.54	H	13.2	G	0.15		

Residuals in seconds of arc

781130	675	0.2-	0.6-	891025	033	0.7+	0.7-	910116	033	0.9-	0.2-
781201	675	0.3+	0.1-	891025	033	0.9+	0.1+	910117	033	1.2-	0.3+
830911	095	0.1+	0.0	891027	033	1.1-	0.5-	910122	675	0.2-	1.8+
890907	033	0.2-	0.8+	891204	385	(2.7+	0.3-)Y	910122	675	1.7+	1.5+
890907	033	0.7-	0.2+	891204	385	0.3-	1.5+ Y	910409	033	0.2-	0.4-
891023	033	0.3+	0.2-	910115	033	0.8+	2.2-	910410	033	0.5-	0.2-
891023	033	0.0	0.3-	910115	033	0.5+	0.6-				

(4973)\* 1990 FT = 1978 CF = 1981 WK7 = 1987 SH14

Discovered 1990 Mar. 18 by K. Endate and K. Watanabe at Kitami.

Id. H. Kaneda (MPC 16437)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	142.37808		(1950.0)		P		Q
n	0.15568660	Peri.	138.35022		-0.66110987		-0.74915160
a	3.4221725	Node	352.68587		+0.57353598		-0.46911135
e	0.0847462	Incl.	18.92923		+0.48372535		-0.46766058
P	6.33	H	11.0	G	0.15		

Residuals in seconds of arc

710324	675	1.1+	0.8-	811125	095	1.6-	1.2+	900318	400	0.4-	0.3-
710325	675	0.7-	0.4+	870922	095	1.5+	0.9-	900318	400	(0.7+	2.9+)
710325	675	0.1+	1.2+	900224	809	0.2-	0.7-	900325	400	(3.3+	1.8+)
710326	675	2.1+	0.8-	900224	809	0.6-	0.6-	900325	400	(3.4+	1.7+)
710327	675	0.6-	0.0	900224	809	0.6-	0.5-	900329	400	0.6+	1.5+
710402	675	1.2-	0.5+	900226	809	0.9-	0.4-	900329	400	1.7+	0.5+
780213	809	0.1+	1.0+	900226	809	0.5-	0.5-				
780214	809	0.4+	0.0	900226	809	0.4-	0.5-				

(4974)\* 1990 LA = 1952 HZ = 1987 SN10

Discovered 1990 June 14 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (MPC 16700, MPC 16880)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	163.98468		(1950.0)		P		Q
n	0.23448745	Peri.	24.93505		-0.93446424		+0.35562314
a	2.6044917	Node	175.77835		-0.35338142		-0.92027344
e	0.1107612	Incl.	13.80974		-0.04356786		-0.16318388
P	4.20	H	12.4	G	0.15		

Residuals in seconds of arc

520419	760	0.8-	0.6-	871001	033	1.4+	0.2+	900628	675	1.1+	2.4-
520419	760	0.3+	0.7-	871029	413	0.9-	0.1+	900628	675	0.6-	0.5-
820724	413	0.5-	0.6+	900614	413	1.8-	0.3-	900629	413	0.8+	0.6+
820724	413	1.5+	1.6+	900614	413	1.3+	1.1+	900629	413	1.2-	1.4+
870929	033	0.2+	0.2-	900615	413	0.5-	0.1+	900818	413	1.5+	0.1-
870929	033	0.8+	0.2-	900615	413	0.0	0.0	910807	675	0.1+	1.7-
870930	033	0.8+	0.1-	900626	675	1.5-	0.1-	910808	801	0.3-	0.6+
870930	033	0.3+	0.4-	900626	675	1.6+	0.8-	910808	801	0.2-	0.6+



910808	675	0.2+	0.4-	910908	801	0.8-	0.3-	910912	801	0.9-	0.0
910808	675	1.0+	2.1-	910908	801	0.7-	0.6-	910912	801	0.2-	0.3+
910812	801	0.2-	0.6+	910909	801	0.5-	0.2+				
910812	801	0.2-	0.6+	910909	801	0.5-	0.1+				

(4975)\* 1990 SZ1 = 1981 AL1 = 1985 YF = 1987 FM1

Discovered 1990 Sept. 16 by T. Fujii and K. Watanabe at Kitami.

Id. H. Kaneda (MPC 17449)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	50.69311		(1950.0)			P		Q			
n	0.18111415	Peri.	227.47596			+0.68390614		-0.72956416			
a	3.0938633	Node	179.35219			+0.72188481		+0.67611719			
e	0.2182823	Incl.	14.96624			+0.10561583		+0.10296446			
P	5.44	H	12.0			G	0.15				

Residuals in seconds of arc

710324	675	0.1+	1.3-	851217	688	0.0	0.9-	900926	392	0.1+	0.3+
710326	675	0.5-	1.8-	851217	688	0.1+	0.6-	901011	400	(0.6+	3.2+)
710326	675	0.0	1.3-	870322	033	0.4-	0.8+	901011	400	0.2-	1.0-
710327	675	1.3-	0.1+	870322	033	0.5+	0.5+	901011	400	(0.6+	4.2+)
710402	675	(3.9+	1.2-)	900915	675	2.4+	1.2-	901015	400	0.4+	0.6-
710402	675	1.0-	0.1+	900916	400	(3.5-	0.2-)	901015	400	(4.7-	3.2+)
710416	675	1.9+	2.2-	900916	400	2.4-	0.7+	901023	392	0.3-	1.3-
710416	675	1.1-	1.2-	900916	400	1.8-	0.3+	901023	392	0.8+	2.1+
710416	675	1.6+	2.0-	900917	675	1.0+	1.3-	901024	400	1.2-	1.6-
710416	675	1.1-	0.3-	900917	675	1.1+	1.4-	901024	400	1.5-	1.0-
810103	688	0.2+	0.5+	900926	392	2.4+	0.6-				
810103	688	0.3-	0.0	900926	392	(4.7+	0.2-)				

(4976)\* 1991 PM = 1949 QD2 = 1971 UL3 = 1975 PT = 1976 UN3 = 1980 NH  
= 1986 RJ10 = 1987 YZ = 1988 AS3 = 1990 MM1

Discovered 1991 Aug. 9 by K. Watanabe at JCPM Sapporo Station.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	28.47226		(1950.0)			P		Q			
n	0.18788044	Peri.	61.67475			+0.78257624		+0.60464046			
a	3.0191290	Node	260.73900			-0.61073696		+0.69944407			
e	0.1069479	Incl.	8.64022			-0.12072612		+0.38103532			
P	5.25	H	11.2			G	0.15				

Residuals in seconds of arc

490829	094	(19.8+	44.5+)	X	800712	805	0.3-	0.1-	900618	808	0.5+	1.7-
711029	095	0.8+	2.0+		800713	805	0.1-	0.1-	900623	808	0.9+	1.0+
750811	808	0.0	0.3-		800713	805	(3.8-	3.6+)	900624	808	0.5-	1.3+
750811	808	0.1-	1.3-		860908	095	0.1+	1.7+	910809	392	0.2+	0.9-
761026	095	(5.0-	2.9+)		860911	095	0.1+	0.8+	910812	392	(0.7-	3.3-)
800711	805	0.6-	0.0		871222	033	1.0-	1.2-	910812	392	0.4-	2.7-
800712	805	0.0	1.2+		880112	033	0.1-	1.0+	910907	392	0.0	0.1-
800712	805	0.2-	2.3+		880112	033	0.1-	0.9+	910908	392	1.0+	0.2+
800712	805	0.1+	1.9+		900618	808	0.1-	1.1-	910908	392	(0.4+	4.6-)

(4977)\* 2018 P-L = 1981 TH1 = 1990 EP5

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

Id. G. V. Williams (MPC 17218)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	70.84268		(1950.0)			P		Q			
n	0.28398422	Peri.	294.31041			+0.23738540		+0.97123155			
a	2.2923095	Node	349.36966			-0.84992146		+0.19823184			
e	0.1119523	Incl.	5.88244			-0.47040588		+0.13195987			
P	3.47	H	13.6			G	0.15				

## Residuals in seconds of arc

600924	675	0.9+	0.2+	900302	809	0.5+	0.7+	910808	675	0.5-	1.7+
600926	675	0.0	0.8-	900302	809	0.9+	0.5+	910808	675	1.4-	2.1+
600928	675	0.7-	0.4+	900304	809	0.3-	0.4+	910907	801	0.7+	0.8-
600929	675	1.2+	0.0	900304	809	0.1-	0.3+	910907	801	0.6+	1.0-
601017	675	1.5-	0.6+	900304	809	0.3+	0.1-	910907	399	1.0-	0.5-
601022	675	0.5-	0.5+	910805	675	1.8-	2.3+	910907	399	0.7-	0.4-
601025	675	0.8+	0.8-	910806	801	0.2+	0.2-	910909	801	0.9+	0.5-
601026	675	0.3-	0.0	910806	801	0.2+	0.2-	910909	801	1.0+	0.5-
811002	095	0.3-	1.6+	910808	801	0.3+	0.1-				
900302	809	0.2+	1.0+	910808	801	0.1+	0.1-				

(4978)\* 4069 T-2 = 1969 VA3 = 1990 QQ2

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (MPC 17026)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams			
M		(1950.0)		P		Q	
n	0.23104033	Peri.	243.06080	+0.78198842		-0.62174200	
a	2.6303337	Node	155.30589	+0.60263318		+0.73618597	
e	0.2091829	Incl.	6.03777	+0.15914570		+0.26733334	
P	4.27	H	13.4	G	0.15		

## Residuals in seconds of arc

691115	095	0.5+	1.3-	730929	675	1.7+	1.4-	900921	809	1.0-	1.2+
710324	675	(1.3-	2.9-)	730929	675	2.1+	1.5-	900921	809	0.7-	1.2+
710325	675	0.1-	0.9-	730930	675	0.5-	1.0+	900921	809	0.3-	1.0+
710325	675	0.6-	0.7-	730930	675	1.0-	0.5-	900922	809	0.2-	1.1+
710326	675	0.1-	1.4-	731004	675	0.8+	1.1-	900922	809	0.3+	1.0+
710327	675	0.2-	0.0	731004	675	1.1+	0.0	900922	809	1.0+	0.7+
710402	675	(2.0+	2.8-)	731005	675	1.0-	1.8+	901016	801	0.4-	0.2-
730919	675	0.0	0.7-	731005	675	1.3-	1.1+	901016	801	0.6-	0.4-
730919	675	0.4+	1.8-	900824	675	0.1+	1.0-	901017	801	0.6+	0.1+
730920	675	0.8-	0.7-	900824	675	0.0	1.7-	901017	801	0.2-	0.1+
730924	675	0.1-	0.1+	900829	675	0.5+	1.8-	901115	801	0.6-	0.5+
730924	675	0.7+	0.1-	900829	675	2.3+	0.5+	901115	801	0.5-	0.5+
730925	675	0.8-	0.5-	900914	675	0.1+	0.8-	901119	801	0.2-	0.9+
730925	675	0.0	0.4-	900914	675	0.7-	0.5-	901120	801	0.5-	0.7+

1930 UX = 1958 VC = 1977 DW = 1986 XQ

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Kaneda			
M		(1950.0)		P		Q	
n	0.28273100	Peri.	57.20697	+0.85782166		-0.51263424	
a	2.2990783	Node	333.57766	+0.43960213		+0.76886900	
e	0.2041911	Incl.	4.73303	+0.26625547		+0.38216043	
P	3.49	H	13.7	G	0.15		

## Residuals in seconds of arc

301015	690	0.9-	1.4-	581111	760	0.6-	1.0+	770219	381	0.8-	0.8-
301017	690	1.6+	0.6-	770218	381	0.9+	0.6-	861202	688	0.1-	0.5+
301019	690	0.6+	0.8-	770218	381	1.1-	0.6-	861202	688	0.2-	0.0
581111	760	0.4+	0.7+	770219	381	(6.5-	0.7-)				

1931 VS = 1931 XH = 1964 VU = 1989 VL

Id. K. Reinmuth (d, RI 530), T. Kobayashi (MPC 15548; unpublished); 1975 RP = 1964 VU (MPC 13584) is invalid

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kobayashi

M 180.02454	(1950.0)		P	Q
n 0.23764641	Peri. 13.03265	+0.65431801		-0.74194453
a 2.5813598	Node 36.41127	+0.66980320		+0.47883614
e 0.1772938	Incl. 14.26289	+0.35104361		+0.46929124
P 4.15	H 12.9	G 0.15		

Residuals in seconds of arc

311115 024	0.5+	2.2-	891119 888	2.8+	0.1-	891126 888	0.7-	1.0+
311212 024	1.1+	2.6-	891119 888	(4.2+	0.2-)	891129 888	0.2+	1.2+
311231 024	(5.2-	2.1-)	891121 888	1.3-	0.0	891129 888	0.9+	0.8+
641106 760	(4.8+	7.4-)	891121 888	1.5-	0.2-	891201 888	0.1+	1.0+
641106 760	0.9+	0.4-	891125 888	2.3-	0.9+	891201 888	0.7-	1.2+
891102 875	1.3+	0.8-	891125 888	1.5-	0.2+	891202 888	0.9-	0.1+
891102 875	1.1+	0.9+	891125 888	1.7-	0.7+	891202 888	1.3-	0.3+
891104 875	2.0+	1.6-	891125 888	1.1-	0.4+	891220 888	0.5-	0.0
891104 875	2.2+	2.4-	891126 888	0.5-	0.9+	891220 888	0.4-	0.0

1937 NN = 1956 AR = 1973 GK1 = 1983 FD = 1987 SN = 1990 MD2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M 178.28214	(1950.0)		P	Q
n 0.29765457	Peri. 312.44712	-0.30841081		+0.94665427
a 2.2215751	Node 299.36605	-0.83821830		-0.31688425
e 0.2226087	Incl. 6.15399	-0.44974754		-0.05856671
P 3.31	H 12.9	G 0.15		

Residuals in seconds of arc

370705 078	(44.8+	73.6-)X	830316 688	0.4-	1.1+	870919 688	0.8-	0.9+
370712 078	(38.6+	29.3-)X	830316 688	0.8-	1.2+	870923 095	1.1+	1.8-
370728 078	(10.6+	34.2-)X	830410 688	1.4-	1.6-	900630 808	0.1-	0.4+
370809 078	(31.2+	33.9-)X	830410 688	0.3+	2.5-	900630 808	0.6-	0.1-
560114 760	0.9-	0.1-	870918 095	1.3+	2.2-			
730405 095	(8.4-	0.3-)	870919 688	0.0	0.0			

1953 GN = 1991 PX1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M 137.94860	(1950.0)		P	Q
n 0.29021316	Peri. 37.74580	-0.92330422		+0.38313865
a 2.2593906	Node 164.71584	-0.37242055		-0.87612474
e 0.1309946	Incl. 5.81820	-0.09387357		-0.29259223
P 3.40	H 14.0	G 0.15		

Residuals in seconds of arc

530407 024	0.6+	0.7-	910810 809	(8.3-	3.8-)	910814 809	1.5+	0.7+
530412 024	0.5-	0.8-	910810 809	0.2-	2.2-	910814 809	0.2-	0.5-
530419 024	0.1-	1.4+	910810 809	1.5-	0.8+	910814 809	0.4+	1.0+

1953 TA1 = 1991 QH

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M 12.81889	(1950.0)		P	Q
n 0.28443268	Peri. 147.73747	+0.99825887		-0.03155048
a 2.2898993	Node 214.17791	+0.01341918		+0.94424256
e 0.2297491	Incl. 5.08977	+0.05743835		+0.32773551
P 3.47	H 14.6	G 0.15		

Residuals in seconds of arc

531008 760	0.0	1.3-	531030 760	2.7-	1.1+	910907 894	0.1+	0.9+
531008 760	2.0-	1.7-	910806 675	0.3+	1.1-	910907 894	0.5+	0.3-
531010 760	(48.0-	14.1+)X	910806 675	0.1+	1.8-	910907 894	0.6-	0.7+
531015 760	1.2+	1.2-	910831 894	0.3-	1.7+	910909 894	0.0	0.7+
531015 760	2.8+	1.3+	910831 894	0.7+	0.9+	910909 894	0.7-	0.5+
531030 760	1.1+	0.7+	910907 894	0.6-	1.1-			

1964 BF = 1955 RL = 1974 VC2 = 1983 CX = 1985 RA2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

		(1950.0)		P		Q		Kaneda	
M	214.04031								
n	0.26333985	Peri.	283.92427	+0.87051537				-0.48073149	
a	2.4105991	Node	104.89954	+0.48305133				+0.79367232	
e	0.2050413	Incl.	6.25901	+0.09415094				+0.37280220	
P	3.74	H	13.5	G	0.15				

Residuals in seconds of arc

550913	760	1.2+	1.1-	640119	033	0.2-	0.9+	830215	688	0.5+	1.4-
550913	760	1.2+	1.3-	640119	033	0.1-	1.3+	830219	688	0.5+	1.8-
550918	760	2.2-	1.1+	640120	033	(0.2+	14.4-)	830219	688	2.4-	1.3-
640118	033	0.1+	0.9+	640120	033	0.1+	0.8+	850912	688	1.1+	0.4-
640118	033	0.1-	1.0+	741115	095	0.5-	2.2-	850912	688	(7.6-	0.6-)
640118	033	1.0+	0.3+	830215	688	0.5-	1.8-				

1972 RX1 = 1972 TO3 = 1991 RT1

Id. C. M. Bardwell (d, MPC 4637), H. Kaneda

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

		(1950.0)		P		Q		Kaneda	
M	353.52047								
n	0.25865736	Peri.	221.27496	+0.77892113				-0.62711482	
a	2.4396049	Node	177.55686	+0.59212898				+0.73388522	
e	0.1792930	Incl.	4.00687	+0.20655541				+0.26103541	
P	3.81	H	13.7	G	0.15				

Residuals in seconds of arc

720911	095	0.4-	0.5-	721028	095	1.0-	1.6+	910913	400	0.3-	1.0+
721005	095	(0.5+	5.7-)	910907	400	0.6+	0.1-	910913	400	0.5-	0.1+
721013	095	1.6+	1.8-	910907	400	0.1-	0.1-				

1973 UR5 = 1991 PT6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

		(1950.0)		P		Q		Kaneda	
M	330.89849								
n	0.26914810	Peri.	14.61313	+0.71813658				-0.69547897	
a	2.3757925	Node	29.49845	+0.63339747				+0.63879366	
e	0.1949241	Incl.	2.82479	+0.28824902				+0.32901621	
P	3.66	H	13.8	G	0.15				

Residuals in seconds of arc

731027	033	0.5-	0.2+	731102	033	0.5+	0.0	910806	809	1.5-	0.7+
731028	033	0.4+	0.2+	731103	033	0.4-	0.7-	910814	809	1.7+	0.9-
731031	033	0.0	0.0	910806	809	0.4+	0.7+	910814	809	0.1-	0.5-
731101	033	0.0	0.3+	910806	809	0.1+	1.0+	910814	809	0.6-	1.1-

1975 LR = 1950 TQ3 = 1979 DB1 = 1980 KP1 = 1982 YF4 = 1985 JP2 = 1991 NB2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

		(1950.0)		P		Q		Kaneda	
M	346.73273								
n	0.18868254	Peri.	272.98180	+0.96896562				+0.15192737	
a	3.0105666	Node	78.33869	-0.05562673				+0.90261629	
e	0.1064604	Incl.	11.48470	-0.24085535				+0.40274299	
P	5.22	H	11.7	G	0.15				

Residuals in seconds of arc

501013	760	1.8-	1.3+	750617	808	0.3-	0.5+	910713	675	0.7-	0.3-
750613	808	1.1+	0.6-	790225	033	0.6-	0.3+	910713	675	0.6-	1.1-
750613	808	1.0+	1.3+	790225	033	0.7-	1.1+	910716	675	0.6-	1.2-
750615	808	0.4+	0.9+	800517	095	0.0	0.4-	910716	675	0.7+	0.5-
750615	808	0.3+	0.4+	821223	095	1.8+	0.1-				
750617	808	0.5+	0.5+	850514	675	0.3-	0.1-				

1975 TR2 = 1975 VJ10 = 1991 RY5

Id. H. Oishi (d, JAM 1274), E. Bowell

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	60.35772		(1950.0)		P		Q	
n	0.18308804	Peri.	176.25785	+0.61976128			+0.78296772	
a	3.0715864	Node	132.03168	-0.72185168			+0.59546065	
e	0.1244601	Incl.	4.12700	-0.30793848			+0.17996712	
P	5.38	H	11.9	G	0.15			

Residuals in seconds of arc

751003	095	0.1-	0.7+	910913	675	0.3+	0.3+	910916	675	0.2-	0.6-
751013	095	1.0-	0.7+	910913	675	0.4+	0.4+				
751106	095	1.0+	1.0-	910916	675	0.4-	0.5-				

1976 GN2 = 1976 HB = 1990 OC4

Id. C. M. Bardwell (d, MPC 5517), E. Bowell (MPC 16867); 1976 GN2 = 1980 FN9 (ibid.) is invalid

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	146.66243		(1950.0)		P		Q	
n	0.22439605	Peri.	93.42153	+0.01987838			+0.99976063	
a	2.6820029	Node	177.65826	-0.98292953			+0.02121444	
e	0.1559776	Incl.	12.92549	-0.18290539			-0.00535074	
P	4.39	H	13.0	G	0.15			

Residuals in seconds of arc

760401	095	1.9+	1.6+	900726	675	0.5-	0.2+	900916	801	0.6+	1.0+
760404	095	(0.6+	5.7+)	900728	675	1.7-	0.5-	900916	801	0.4+	1.0+
760423	095	(0.8-	6.2-)	900728	675	1.1-	0.6+	900916	675	0.4+	1.5-
760503	095	1.8-	0.6-	900730	675	1.6+	0.5-	900916	675	1.1+	2.2-
821209	413	0.1-	0.7+	900730	675	0.3+	0.2+	900919	801	0.1+	1.0+
900620	413	0.5+	0.3-	900914	675	0.5-	0.9+	900919	801	0.1-	1.0+
900726	675	0.4-	0.1-	900914	675	0.5-	0.0				

1976 UD4 = 1976 YC4 = 1970 EK3 = 1991 RY6

Id. H. Oishi (d, MPC 12432), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	343.97221		(1950.0)		P		Q	
n	0.25838135	Peri.	242.36262	+0.61001633			-0.79235347	
a	2.4413419	Node	170.03632	+0.74136724			+0.56737666	
e	0.1822262	Incl.	2.47989	+0.27974039			+0.22418675	
P	3.81	H	14.0	G	0.15			

Residuals in seconds of arc

700310	805	0.2+	0.7-	761028	095	0.3-	0.8+	910902	413	0.2+	0.2-
700310	805	0.3+	0.6+	761218	095	0.4-	0.5+	910902	413	0.8+	1.0-
700310	805	0.8-	0.7-	761220	095	0.7+	1.1-	910903	413	0.6-	0.2+

1977 EL = 1975 UQ = 1991 PA17

Id. H. Kaneda (MPC 16021), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	82.79268		(1950.0)		P		Q	
n	0.29820447	Peri.	121.66762	-0.30170051			+0.94991848	
a	2.2188432	Node	130.54863	-0.90696728			-0.25962532	
e	0.1479923	Incl.	6.15232	-0.29391694			-0.17392404	
P	3.31	H	14.0	G	0.15			

Residuals in seconds of arc

751030	033	0.7+	0.1+	770309	095	1.0+	0.1-	910807	809	0.5+	1.6-
751031	033	0.4-	0.6-	770313	095	0.5+	0.4+	910814	809	0.6-	1.0+
770213	675	1.9-	2.0-	910807	809	1.0+	1.9-	910814	809	0.9-	1.2+
770214	675	(5.1-	1.4-)	910807	809	0.5+	1.6-	910814	809	0.3-	1.4+

1977 EA6 = 1979 VC2 = 1990 VG8

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	93.53409		(1950.0)		P		Q	
n	0.26530730	Peri.	111.96993	+0.51524222			-0.85512975	
a	2.3986667	Node	306.88910	+0.75750524			+0.48563376	
e	0.1053040	Incl.	4.10540	+0.40088809			+0.18141928	
P	3.71	H	14.4	G	0.15			

Kaneda

Residuals in seconds of arc

770312	381	0.4-	0.5+	770315	381	0.3-	0.2-	901111	675	0.1+	0.6-
770312	381	0.4-	0.6+	770315	381	0.1+	1.0-	901113	675	0.9+	1.0+
770314	381	0.2+	0.1+	791114	095	0.0	0.0	901113	675	0.1+	0.2+
770314	381	0.8+	0.1+	901111	675	1.2-	0.6-				

1977 FN = 1991 NN1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	68.99729		(1950.0)		P		Q	
n	0.22538299	Peri.	354.57230	-0.15729545			+0.96421608	
a	2.6741676	Node	266.25102	-0.89777706			-0.22964445	
e	0.1374146	Incl.	12.34933	-0.41140550			+0.13247931	
P	4.37	H	12.8	G	0.15			

Kobayashi

Residuals in seconds of arc

770316	809	0.1-	0.1-	910713	675	0.2-	0.3-	910719	675	1.3+	0.4-
770320	809	0.2+	0.1+	910713	675	0.3+	0.2+				
770321	809	0.1-	0.0	910719	675	1.5-	0.4+				

1978 SL6 = 1978 UN = 1988 TY1

Id. T. Furuta (d, JAM 1968), T. Kobayashi (MPC 13853)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	30.17378		(1950.0)		P		Q	
n	0.29702011	Peri.	239.60570	+0.87442403			+0.48496282	
a	2.2247377	Node	91.38105	-0.44019202			+0.80510686	
e	0.1561434	Incl.	0.79763	-0.20399413			+0.34148792	
P	3.32	H	14.2	G	0.15			

Kobayashi

Residuals in seconds of arc

780928	095	0.3-	0.5-	881102	399	1.4-	0.1+	881106	372	(1.5+	5.1+)Y
781004	095	0.3-	0.2-	881102	399	1.7-	0.9-	881110	046	0.7-	0.0
781026	675	0.5+	0.1-	881102	399	2.6+	1.3+	881110	046	0.7-	0.5-
781027	675	2.1+	0.9-	881102	399	1.6+	0.9+	881111	399	0.2-	0.8-
781028	688	0.1-	1.7-	881102	372	1.0-	0.1-	881111	399	2.9-	0.7-
781028	688	0.4-	1.2- Y	881102	399	2.5+	1.5+	881111	399	1.7+	1.1+
881013	372	(2.5-	7.5+)	881102	372	1.8+	0.5+	881111	046	1.1+	1.3-
881013	372	(4.5-	8.6+)	881104	046	2.1-	0.8+	881111	046	1.6-	1.0-
881018	372	0.3+	0.3+	881104	046	1.6-	0.2+	910806	675	0.0	0.2+
881018	372	0.5-	2.4+	881105	372	(2.6+	10.1+)Y	910806	675	0.1-	0.5-
881019	372	0.4-	0.2+	881105	046	1.1+	0.5-	910810	675	0.3-	0.5+
881022	372	0.4-	0.9-	881105	046	1.0+	1.7+	910810	675	0.3+	0.2+

1978 WU = 1982 XJ2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	132.00456		(1950.0)		P		Q	
n	0.24271727	Peri.	106.63480	+0.96332057			+0.23555235	
a	2.5452802	Node	239.90307	-0.26533754			+0.90769279	
e	0.2011818	Incl.	8.54567	+0.04011814			+0.34728792	
P	4.06	H	15.0	G	0.15			

Williams

Residuals in seconds of arc

781129	675	0.4-	0.2+	781201	675	0.3-	0.6+	821214	381	0.1-	0.3+
781130	675	0.7+	0.0	821213	381	1.5-	0.1+	821214	381	0.7+	0.1-
781130	675	0.0	0.8-	821213	381	0.9+	0.2-				

1979 HH3 = 1979 GS = 1979 KK1 = 1982 BK11 = 1991 RB6

Id. K. Hurukawa (d, MPC 9678), H. E. Holt (k), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	195.94581		(1950.0)		P		Q	
n	0.27232445	Peri.	144.02274		-0.98783765		+0.13049710	
a	2.3572825	Node	43.71838		-0.15509447		-0.86565897	
e	0.0495472	Incl.	7.02639		+0.01106697		-0.48332707	
P	3.62	H	13.0	G	0.15			

Residuals in seconds of arc

790406	808	0.1-	0.0	790502	323	0.3+	0.6+	910913	675	0.3-	0.8+
790406	808	0.4+	0.3+	790517	323	0.2+	1.0+	910916	675	0.5+	0.6-
790425	095	0.5+	0.2-	790518	323	(0.0	6.9-)	910916	675	0.0	0.7-
790430	095	0.9-	1.8-	820120	095	0.1-	0.2-				
790501	323	0.5-	0.2-	910913	675	(0.9-	3.0+)				

1979 SW2 = 1990 SH17

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	72.40766		(1950.0)		P		Q	
n	0.17307810	Peri.	339.17935		+0.95198488		+0.30576839	
a	3.1889030	Node	3.13703		-0.22666644		+0.73730512	
e	0.1263131	Incl.	16.10636		-0.20578415		+0.60240090	
P	5.69	H	12.2	G	0.15			

Residuals in seconds of arc

790918	675	0.3+	0.3-	791014	095	0.9-	0.6-	900915	675	0.0	0.6+
790919	675	0.6+	0.1+	900914	675	0.2-	0.3+	900920	675	1.9-	0.7-
790922	095	0.4+	0.7+	900914	675	0.2+	0.7+	900920	675	1.1+	0.1+
790923	095	0.3-	0.1+	900915	675	0.7+	1.0-				

1980 DD1 = 1991 RG6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	133.30113		(1950.0)		P		Q	
n	0.21267466	Peri.	208.81754		-0.52067407		+0.84964395	
a	2.7796635	Node	30.03264		-0.74769970		-0.40648113	
e	0.1008893	Incl.	9.62570		-0.41212095		-0.33597359	
P	4.63	H	12.6	G	0.15			

Residuals in seconds of arc

800221	046	3.4-	0.1-	Y	800223	046	1.8+	0.9-	910913	675	0.4+	0.2-
800221	046	(6.7-	0.3-)	Y	800223	046	2.9+	0.3+	910916	675	0.5-	0.4+
800222	046	0.0	0.7+		800315	095	1.0-	0.6+	910916	675	0.6-	0.6-
800222	046	0.3-	0.6-		910913	675	0.7+	0.4+				

1980 PB1 = 1976 JN2 = 1987 QA8

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	74.14620		(1950.0)		P		Q	
n	0.28254319	Peri.	168.87977		+0.92282945		+0.38387227	
a	2.3000970	Node	168.38991		-0.36450387		+0.89711720	
e	0.1476201	Incl.	9.16674		-0.12459029		+0.21868428	
P	3.49	H	13.4	G	0.15			

Residuals in seconds of arc

760502	095	0.0	0.0	800817	046	0.6-	1.1-	870830	046	1.0-	1.6-
800815	046	0.2+	0.1+	800818	046	0.4-	0.8-	870830	046	0.8-	1.0-
800815	046	0.9-	0.4+	800818	046	0.1+	0.6-	870831	095	1.6+	2.6+
800817	046	1.6+	2.0+	870828	095	0.3+	0.1+				

1980 RL2 = 1991 PU15

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	35.24182		(1950.0)		P		Q
n	0.26532031	Peri.	8.08499		+0.74981483		+0.66124877
a	2.3985883	Node	310.49358		-0.60869803		+0.67578319
e	0.2130325	Incl.	1.73113		-0.25935386		+0.32567950
P	3.71	H	13.9	G	0.15		

Residuals in seconds of arc

800907	095	2.0+	1.0-	801012	095	0.4+	2.1+	910810	675	0.3-	0.2+
800908	095	0.8-	1.2-	910806	675	0.4+	0.5+	910810	675	0.4-	0.0
801008	095	1.3-	0.3-	910806	675	0.1+	0.0				

1980 RB8 = 1980 TO6 = 1991 RF7

Id. G. V. Williams (d, MPC 18264; unpublished)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	140.33359		(1950.0)		P		Q
n	0.27387483	Peri.	16.68191		-0.22262897		+0.97161348
a	2.3483778	Node	240.51678		-0.90458401		-0.23648256
e	0.0746458	Incl.	5.27448		-0.36354383		-0.00657683
P	3.60	H	13.5	G	0.15		

Residuals in seconds of arc

800913	675	0.4+	0.1+	910913	033	1.0-	0.1+	910915	033	0.9+	0.3-
800914	675	0.0	0.0	910913	033	0.2-	0.3+				
801008	095	0.3-	0.1-	910914	033	0.3+	0.1-				

1980 TW5 = 1988 BL4

Id. C. M. Bardwell (MPC 13464)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	95.76462		(1950.0)		P		Q
n	0.18313086	Peri.	32.71927		+0.53486035		+0.84214230
a	3.0711076	Node	269.70183		-0.78920720		+0.46888191
e	0.0322693	Incl.	3.93982		-0.30178867		+0.26635709
P	5.38	H	12.0	G	0.15		

Residuals in seconds of arc

801007	675	0.0	0.9-	880121	809	0.1+	1.6+	880128	809	0.6-	0.7-
801008	675	2.6-	1.9-	880122	809	0.3+	0.2-	880130	809	1.3-	0.2+
801009	675	2.0-	1.1-	880122	809	0.7+	0.0	880130	809	1.0-	0.1+
801010	675	0.4-	1.7-	880124	809	0.3+	0.5-	910913	033	0.1-	0.2+
801010	095	1.0+	2.0+	880124	809	0.5+	0.5-	910913	033	0.4-	0.0
801015	095	2.7+	4.1+	880124	809	0.6+	0.5-	910914	033	0.0	0.1-
801107	675	1.5+	0.7-	880126	809	0.5+	0.8-	910915	033	0.5+	0.1+
880121	809	0.2+	1.4+	880126	809	0.8+	0.9-				
880121	809	0.0	1.5+	880128	809	1.1-	0.6-				

1980 UC = 1986 WA2

Id. T. Kobayashi (MPC 13056); 1980 UC = 1966 FJ (MPC 14782) is invalid

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	33.04962		(1950.0)		P		Q
n	0.17741893	Peri.	227.91070		+0.92289146		+0.38252575
a	3.1366742	Node	109.55615		-0.33800757		+0.85965547
e	0.2250276	Incl.	2.68282		-0.18445118		+0.33862447
P	5.56	H	12.5	G	0.15		

Residuals in seconds of arc

801030	046	1.0-	0.8+	861129	046	2.3+	0.4-	910912	675	0.1+	0.0
801030	046	0.1-	2.2+	861129	046	(3.9+	0.4+)	910912	675	0.1+	0.1-
801106	688	0.8+	1.3-	861130	046	1.7-	2.2+	910914	675	0.2-	0.2-
801106	688	0.1-	2.3-	861130	046	1.0-	1.8+	910914	675	0.0	0.5+
801111	046	2.0+	0.5+	861201	046	1.2+	1.3-				
801111	046	1.5-	0.3-	861201	046	0.9-	2.0-				



1980 UL = 1991 PL1

Id. G. V. Williams, H. Kaneda

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	15.63401		(1950.0)		P		Q
n	0.26781647	Peri.	208.43124	+0.98107744			-0.01626376
a	2.3836612	Node	150.51587	+0.02696779			+0.99823109
e	0.2075443	Incl.	23.07849	-0.19172846			+0.05718547
P	3.68	H	14.5	G	0.15		

Residuals in seconds of arc

801030	809	0.2-	0.8-	910808	675	0.0	0.6+	910816	675	0.8-	0.5-
801101	809	0.2-	0.2+	910808	675	0.3-	0.7+	910904	675	1.1-	0.3+
801102	809	0.4+	0.4+	910810	675	0.1-	0.1+	910904	675	0.4+	0.3+
910807	675	0.9-	0.3-	910815	675	2.1+	0.9+				
910807	675	0.7-	0.0	910815	675	1.3+	2.1-				

1981 DB3 = 1991 RO4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	16.11242		(1950.0)		P		Q
n	0.23376855	Peri.	131.09155	+0.99342293			-0.03245560
a	2.6098286	Node	231.06188	-0.00350750			+0.94991187
e	0.2057474	Incl.	8.11564	+0.11444900			+0.31082805
P	4.22	H	13.4	G	0.15		

Residuals in seconds of arc

810209	413	0.4+	1.9+	810312	413	(5.4+	2.8-)	910907	399	0.3-	1.3+
810212	413	1.2-	0.3-	810409	413	1.5-	1.6+	910907	399	1.0-	0.9-
810228	413	0.4+	0.4-	810409	413	1.2+	0.3+	910913	399	1.0+	0.3-
810308	413	0.9+	1.7-	810501	413	0.8-	0.3+	910913	399	0.7-	0.0
810308	413	1.5+	1.2-	810503	413	1.2-	0.4-	910915	399	1.1+	0.1-

1981 GM1 = 1989 AA10 = 1991 RA7

Id. G. V. Williams, B. A. Skiff

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	199.77430		(1950.0)		P		Q
n	0.23591223	Peri.	179.52275	-0.99958199			+0.02750248
a	2.5939947	Node	2.11583	-0.02725986			-0.79388125
e	0.0972330	Incl.	13.97128	-0.00963023			-0.60745056
P	4.18	H	13.0	G	0.15		

Residuals in seconds of arc

810213	413	1.0-	1.0+	810329	413	0.7+	0.7+	810430	413	0.7-	0.3-
810308	095	1.2+	2.1+	810401	801	1.8+	1.7+	810502	413	1.1-	0.4+
810311	413	2.0-	1.5-	810407	413	0.9-	0.5-	890111	675	0.6+	0.6+
810311	413	1.6+	1.1-	810407	413	0.2+	0.3-	890111	675	0.6-	0.8-
810316	413	0.9-	0.9-	810408	413	0.9+	0.6-	910902	413	0.8-	0.3+
810316	413	0.7+	0.2-	810411	413	0.5-	0.4-	910902	413	1.1+	0.6-
810329	413	0.8-	0.4+	810411	413	0.6+	0.2-	910903	413	0.4-	0.3+

1981 QQ2 = 1991 LZ4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	340.46052		(1950.0)		P		Q
n	0.28354811	Peri.	199.09510	+0.92964896			+0.36306379
a	2.2946593	Node	139.43997	-0.32422256			+0.88701452
e	0.1088034	Incl.	5.53774	-0.17502153			+0.28528920
P	3.48	H	15.0	G	0.15		

Residuals in seconds of arc

810823	809	1.5-	0.1+	810824	809	0.6+	1.0-	810826	809	0.6+	0.1-
810823	809	1.2-	0.1+	810825	809	0.0	0.1-	810826	809	1.2+	0.3+
810823	809	1.0-	0.3+	810825	809	0.3+	0.2+	810827	809	1.1-	0.7-
810824	809	1.0-	1.3-	810825	809	0.4+	0.4+	810827	809	0.3-	0.3-
810824	809	0.4-	1.5-	810826	809	0.1+	0.3-	810827	809	1.0+	0.4-

810827	809	2.2-	0.8+	810902	809	0.4+	0.3+	810906	809	0.5-	0.6+
810827	809	1.3-	1.5+	810902	809	0.1+	0.0	810906	809	1.4-	0.3-
810827	809	0.6+	2.2+	810902	809	0.5-	0.1-	810906	809	0.9-	0.5-
810828	809	0.3+	0.9-	810902	809	0.8+	0.2+	810906	809	0.6-	0.2-
810828	809	0.7+	0.7-	810902	809	0.6+	0.0	810906	809	0.8-	1.6-
810828	809	1.1+	0.8-	810902	809	0.1+	0.5-	810906	809	0.9-	1.2-
810828	809	1.1-	0.2-	810902	675	0.6-	0.4-	810907	809	0.1-	1.0+
810828	809	0.9-	0.6-	810905	809	0.5-	0.9-	810907	809	0.6+	0.6+
810828	809	0.8-	0.9-	810905	809	0.7+	0.1-	810907	809	1.0+	0.7+
810901	809	0.1+	0.1+	810905	809	1.8+	0.9+	810907	809	0.7-	0.3-
810901	809	0.9+	0.4+	810905	809	0.6+	0.7+	810907	809	0.8-	0.3-
810901	809	0.8+	0.8+	810905	809	0.1-	0.3+	810907	809	0.3-	0.2+
810901	809	1.0+	0.9+	810905	809	1.1-	0.2-	910606	809	0.0	0.5-
810901	809	1.1+	0.9+	810905	809	0.6-	0.7-	910606	809	0.1+	0.7-
810901	675	3.0+	2.5+	810905	809	0.5-	0.1-	910606	809	0.9-	1.0-
810902	809	1.4+	0.4+	810905	809	0.6-	0.3+	910608	809	0.2+	1.1+
810902	809	2.1+	0.0	810906	809	1.3-	0.4-	910608	809	0.5+	0.4+
810902	809	2.4+	0.5-	810906	809	0.6-	0.1+	910608	809	0.0	0.8+

1981 QP3 = 1989 EB2

Id. D. W. E. Green (MPC 14472)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams	
M		(1950.0)	P	Q	
n	0.20135606	Peri.	220.11731	+0.43079477	+0.90089284
a	2.8828778	Node	75.46009	-0.81327325	+0.41300607
e	0.0500153	Incl.	3.13814	-0.39115533	+0.13348439
P	4.89	H	12.0	G	0.15

Residuals in seconds of arc

810826	809	0.8-	0.5-	810902	809	0.4-	0.4+	810907	809	0.4+	0.8+
810826	809	1.1-	0.5-	810903	809	0.4-	0.0	810907	809	0.3+	0.5+
810826	809	0.2+	0.0	810903	809	0.8-	0.0	860929	095	0.4+	0.0
810827	809	1.0-	0.5+	810903	809	0.8-	0.2-	890305	046	0.4+	2.3+
810827	809	0.2+	0.4+	810904	809	0.1+	0.5-	890305	046	0.9+	1.1-
810827	809	0.6+	0.4+	810904	809	0.4+	0.2-	890306	046	1.2+	1.0-
810828	809	1.3+	0.2-	810904	809	0.5+	0.1-	890306	046	0.4-	1.3-
810828	809	1.3+	0.5-	810905	809	0.2-	0.2+	890307	046	0.4-	0.2+
810828	809	1.7+	0.7-	810905	809	0.4-	0.5+	890307	046	1.9-	0.3+
810831	809	0.7+	1.2-	810905	809	0.6-	0.7+	910913	675	0.3-	0.1+
810831	809	1.3+	0.9-	810906	809	0.8-	0.4+	910913	675	0.1-	0.4-
810831	809	1.2+	0.8-	810906	809	0.8-	0.1+	910916	675	0.4+	0.1-
810902	809	0.6-	0.4+	810906	809	1.0-	0.1+				
810902	809	1.0-	0.4+	810907	809	0.5+	0.2+				

1982 QM = 1982 SL2 = 1942 RE1 = 1969 VU1 = 1991 RJ6

Id. T. Furuta (d, JAM 1969), H. E. Holt (k), D. W. E. Green, G. V. Williams, R. H. McNaught

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams	
M		(1950.0)	P	Q	
n	0.22199933	Peri.	210.85992	+0.99799587	-0.03567980
a	2.7012717	Node	151.04559	+0.05013138	+0.94977350
e	0.2121601	Incl.	6.19724	-0.03861454	+0.31089748
P	4.44	H	13.5	G	0.15

Residuals in seconds of arc

420911	024	1.3-	3.5+	820826	046	2.5-	1.1-	820918	809	2.3+	1.2-
691115	095	0.2-	1.8+	820826	046	0.9-	0.2-	910913	675	0.5-	0.2-
820814	095	1.0-	3.3+	820913	095	1.4-	0.2+	910913	675	0.3-	0.1-
820822	046	(4.1-	5.9-)	820918	809	2.5+	1.5-	910916	675	0.2-	1.0-
820822	046	(2.5-	5.1-)	820918	809	2.7+	1.3-	910916	675	0.8+	1.2-

1982 SL6 = 1991 RZ6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	31.58066	(1950.0)		P		Q	
n	0.21734910	Peri.	337.05981	+0.96637061		+0.25681558	
a	2.7396652	Node	8.09273	-0.21902093		+0.84883858	
e	0.0770982	Incl.	5.37049	-0.13475044		+0.46208098	
P	4.53	H	13.0	G	0.15		

Residuals in seconds of arc

820916	095	0.2-	0.4+	820928	095	0.5+	0.3+	910903	413	0.9-	0.0
820919	095	1.4+	0.8-	910902	413	0.2+	0.2+				
820921	095	1.7-	0.1+	910902	413	0.7+	0.2-				

1983 RL = 1983 RR1 = 1991 PD1 = 1991 RD

Id. F. N. Bowman (d, MPC 8463), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	17.61224	(1950.0)		P		Q	
n	0.37069629	Peri.	28.79495	+0.98074293		-0.15740240	
a	1.9192161	Node	339.27509	+0.04349601		+0.75316474	
e	0.1177336	Incl.	19.06964	+0.19039801		+0.63872322	
P	2.66	H	15.0	G	0.15		

Residuals in seconds of arc

830902	688	0.3+	1.4-	910815	675	1.6+	0.3-	910905	675	0.5+	0.5-
830902	688	1.4-	0.4-	910815	675	1.9-	0.5+	910905	675	0.1+	0.5-
830906	675	1.1+	0.0	910816	675(50.0-	11.2+)		910905	413	0.1-	0.3-
830906	675	0.0	0.7+	910904	675	0.1+	1.3-	910907	413	0.7-	0.0
830907	675	0.9+	0.2+	910904	413	0.2-	1.5+				
830907	675	0.5-	0.5+	910904	413	0.1+	1.3+				

1984 HP1 = 1932 CR = 1978 EJ2 = 1981 UP4 = 1991 PZ6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	118.49215	(1950.0)		P		Q	
n	0.17339494	Peri.	171.21419	-0.84064567		+0.54103749	
a	3.1850172	Node	41.57022	-0.49907484		-0.75641043	
e	0.1110353	Incl.	2.10375	-0.21033108		-0.36758904	
P	5.68	H	11.7	G	0.15		

Residuals in seconds of arc

320206	024	5.3+	1.0+	840429	809	0.2-	1.4+	910806	809	0.6-	0.3+
320302	024	4.5-	1.0+	840429	809	0.0	1.0+	910806	809	0.7-	0.2+
780305	095	1.2-	1.3-	840502	809	0.2+	0.4-	910814	809	1.1+	0.1-
811030	381	0.1-	0.4+	840502	809	0.2-	0.5-	910814	809	0.5-	0.4+
811030	381	0.2+	0.1-	840505	809	0.2-	0.5+	910814	809	0.4+	1.0+
840428	809	1.0+	0.1-	840505	809	0.4-	0.3-				
840428	809	0.8+	0.6-	910806	809	0.4-	0.6-				

1984 UD3 = 1991 PR11

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	354.74015	(1950.0)		P		Q	
n	0.27445307	Peri.	183.03617	+0.86460625		-0.49987672	
a	2.3450782	Node	207.14318	+0.46328053		+0.83224742	
e	0.1143476	Incl.	6.39153	+0.19449214		+0.23976552	
P	3.59	H	14.0	G	0.15		

Residuals in seconds of arc

841026	688	1.8-	1.0-	841029	046	1.3-	0.1-	910906	511	1.2-	0.9-
841026	688	0.4-	0.2+	841030	046	0.8-	0.1-	910907	511	0.2-	0.0
841028	046	0.8-	2.3+	841030	046	1.7+	1.6-	910908	511	1.4+	0.4+
841028	046	2.1+	1.2+	910809	675	0.2+	0.7+				
841029	046	1.4+	0.6-	910810	675	0.2-	0.1-				

1985 BH = 1955 DJ = 1960 XC = 1963 SG = 1979 HJ3 = 1990 KD2 = 1990 SM16

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	105.42341		(1950.0)		P		Q	
n	0.29140868	Peri.	261.64804		+0.97070894		-0.22190013	
a	2.2532069	Node	111.13371		+0.24024745		+0.90017521	
e	0.1541575	Incl.	5.66738		-0.00230643		+0.37475983	
P	3.38	H	13.2	G	0.15			

Residuals in seconds of arc

550224	760	1.0-	0.8-	850116	046	2.5-	0.4-	900915	675	0.5+	1.9-
550224	760	1.0+	1.3+	850116	046	2.7-	0.7+	900916	675	0.9-	1.0+
601214	760	1.5-	1.3-	850118	046	2.2+	1.5-	900916	675	0.2-	0.8+
601214	760	1.4+	1.7+	850118	046	3.0+	1.2-	900917	675	0.9-	0.5+
630919	760(83.0-	19.9-)	X	900529	413	1.8+	2.7-	900917	675	0.2+	0.5+
790425	095	0.2-	0.4-	900529	413	0.5-	1.7+				
841228	095	0.3-	0.4+	900915	675	1.0+	1.7-				

1985 QL4 = 1991 RK6

Id. H. E. Holt

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	94.45941		(1950.0)		P		Q	
n	0.17236004	Peri.	155.23973		+0.02717455		+0.99395910	
a	3.1977536	Node	116.16571		-0.93571041		+0.06271998	
e	0.1254781	Incl.	6.80408		-0.35172086		-0.09006390	
P	5.72	H	11.9	G	0.15			

Residuals in seconds of arc

850824	095	0.1-	0.0	850920	095	0.4-	1.4+	910916	675	0.6-	0.5-
850911	095	0.2-	0.5-	910913	675	0.6+	0.2+	910916	675	0.1-	0.6-
850919	095	0.7+	0.8-	910913	675	0.1+	0.8+				

1985 SC3 = 1991 LJ5

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	342.91395		(1950.0)		P		Q	
n	0.30463553	Peri.	129.89034		+0.98268937		+0.17058103	
a	2.1875048	Node	220.43866		-0.18480120		+0.93004296	
e	0.1993895	Incl.	6.39758		+0.01304289		+0.32545692	
P	3.24	H	15.0	G	0.15			

Residuals in seconds of arc

850919	095	1.0-	0.3-	910606	809	1.2-	0.9+	910608	809	0.3+	1.1-
850921	095	1.4+	1.3+	910606	809	0.1-	1.1+	910608	809	0.8+	2.2-
851018	095	0.4-	1.1-	910606	809	0.6+	3.0+	910608	809	0.4-	2.0-

1985 UQ = 1978 WX16

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	288.00546		(1950.0)		P		Q	
n	0.27293914	Peri.	244.42444		+0.88823364		+0.45269538	
a	2.3537419	Node	88.57391		-0.38841075		+0.83088863	
e	0.1872199	Incl.	4.48380		-0.24531222		+0.32355986	
P	3.61	H	15.4	G	0.15			

Residuals in seconds of arc

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

1985 VE = 1987 JB = 1990 BL2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	170.80492		(1950.0)		P		Q		
n	0.27775266	Peri.	341.14258	-0.82088133			-0.57062516		
a	2.3264688	Node	163.99869	+0.53419841			-0.78160421		
e	0.1016026	Incl.	4.83922	+0.20195521			-0.25195592		
P	3.55	H	13.5	G	0.15				

Kaneda

Residuals in seconds of arc

851111	095	0.6+	0.8-	870502	675	0.1-	0.8-	900124	675	0.4+	1.5-
851114	054	0.5+	0.8+	870502	675	0.1+	0.8+	900124	675	1.9+	1.2-
851115	054	0.9-	0.2+	900121	675	0.6+	0.1+	900125	889	0.9-	1.2+
851115	054	0.2-	0.2-	900121	675	0.7-	0.1-	900125	889	1.3-	1.5+

1986 TZ11 = 1991 RX6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	354.05697		(1950.0)		P		Q		
n	0.18036191	Peri.	81.31707	+0.98652694			-0.14109317		
a	3.1024598	Node	286.76269	+0.09395127			+0.90298543		
e	0.1582879	Incl.	4.96136	+0.13393194			+0.40584483		
P	5.46	H	13.0	G	0.15				

Williams

Residuals in seconds of arc

861003	095	0.2-	0.5+	861011	095	0.3+	1.1-	910903	413	0.8+	0.2+
861007	095	0.1-	0.6+	910903	413	0.5+	0.1-	910904	413	1.3-	0.1-

1986 VT = 1975 VY2 = 1989 EE2

Id. T. Kobayashi (MPC 13153), S. Nakano (MPC 14619)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	36.49283		(1950.0)		P		Q		
n	0.18074596	Peri.	129.07249	+0.81356470			+0.58144506		
a	3.0980635	Node	195.37812	-0.54003893			+0.75182855		
e	0.1690593	Incl.	1.26207	-0.21557002			+0.31092680		
P	5.45	H	11.7	G	0.15				

Bowell

Residuals in seconds of arc

751102	095	0.8-	0.9-	861107	046	0.8-	0.5+	890307	046	2.8+	1.9-
751107	095	1.9+	2.2-	861109	046	1.8+	0.3+	890307	046	1.9-	1.4-
861103	046	1.3-	0.5+	861109	046	0.3+	0.1+	910807	675	0.9+	2.5-
861103	046	0.1+	0.8-	890306	046	0.9-	0.6-	910808	675	0.9+	2.2-
861107	046	0.7-	1.6+	890306	046	2.3-	1.8-				

1986 VF5 = 1978 ED10

Id. S. J. Bus (MPC 18111)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	331.85401		(1950.0)		P		Q		
n	0.18838224	Peri.	53.76421	+0.55290625			-0.83320167		
a	3.0137652	Node	2.71033	+0.69656742			+0.45669393		
e	0.1018576	Incl.	10.16557	+0.45726197			+0.31177817		
P	5.23	H	12.0	G	0.15				

Williams

Residuals in seconds of arc

780315	675	0.1+	0.2+	861105	688	0.5+	0.5+	910909	801	0.2-	0.5+
780316	675	0.5+	0.6+	861105	688	0.3+	0.6-	910913	801	0.1-	0.3+
861003	095	(3.9-	2.1+)	910812	801	0.3-	0.5-	910913	801	0.0	0.4+
861007	095	1.2-	0.7-	910812	801	0.1-	0.4-				
861011	095	0.6+	0.5+	910909	801	0.1+	0.6+				

1986 WP8 = 1975 VT = 1988 CA6

Id. A. Lowe (k, MPC 13163), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	268.07969		(1950.0)		P		Q	
n	0.17944577	Peri.	336.71092	-0.60869886			-0.79319395	
a	3.1130104	Node	150.77494	+0.73361570			-0.57139126	
e	0.1251927	Incl.	2.12927	+0.30214848			-0.21060720	
P	5.49	H	12.5	G	0.15			

Residuals in seconds of arc

751101	095	0.1+	0.4-	880214	809	0.3-	0.1+	880321	675	0.2-	0.2-
861130	381	0.4-	0.2+	880214	809	1.0+	0.3+	880321	675	0.1-	0.4-
861130	381	0.6+	0.0	880215	809	0.1+	1.2-	880322	675	0.4+	0.5-
861201	381	0.1-	0.2-	880215	809	0.1+	0.8+	880322	675	0.6-	0.5+
861201	381	0.3-	0.4+	880317	675	0.4+	0.1-				
880214	809	2.4-	1.1+	880317	675	1.6+	0.5-				

1987 QF3 = 1991 RV5

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	71.56901		(1950.0)		P		Q	
n	0.25805116	Peri.	168.83026	+0.55337189			+0.83022177	
a	2.4434240	Node	134.72600	-0.77126652			+0.54118357	
e	0.1004207	Incl.	5.42467	-0.31452743			+0.13361196	
P	3.82	H	13.8	G	0.15			

Residuals in seconds of arc

870821	809	0.3+	0.0	870828	809	0.3-	1.5+	910913	675	1.0-	0.1+
870821	809	0.7+	0.3+	870831	809	0.7-	1.3-	910913	675	0.7-	1.9+
870828	809	(5.8+	4.7+)	870831	809	0.5+	0.1+	910916	675	0.4+	0.9-
870828	809	0.6-	0.5+	870831	809	0.1+	1.2-	910916	675	1.3+	1.0-

1987 QW7 = 1980 WP2

Id. T. Kobayashi (MPC 14620)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kobayashi

M	8.84619		(1950.0)		P		Q	
n	0.25903358	Peri.	143.31096	+0.98910718			-0.14506090	
a	2.4372421	Node	225.05034	+0.12525745			+0.91862559	
e	0.1861813	Incl.	2.02324	+0.07731460			+0.36753825	
P	3.80	H	14.1	G	0.15			

Residuals in seconds of arc

801130	095	0.6+	0.0	870825	809	0.5+	1.3+	910808	675	0.3+	0.4+
801210	095	0.7-	0.8+	870825	809	0.0	0.9+	910808	675	0.2-	0.0
870821	809	1.4+	1.3-	870825	809	0.7+	0.4+	910905	511	0.3-	0.5-
870821	809	0.6+	1.0-	870827	809	2.0-	0.2-	910906	511	0.1-	0.6-
870821	809	1.3+	1.8-	870827	809	1.8-	0.3-	910907	511	1.9+	0.1+
870822	809	1.0-	1.5+	870827	809	0.2-	0.3+				
870822	809	0.1-	1.7+	910808	675	1.5-	0.5-				

1987 SQ1 = 1973 UL1 = 1978 WN16 = 1989 AK8

Id. E. Bowell (k), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	268.85294		(1950.0)		P		Q	
n	0.20642466	Peri.	216.02735	+0.54802368			-0.83641162	
a	2.8354914	Node	200.74599	+0.77338615			+0.51088153	
e	0.0603198	Incl.	1.49700	+0.31865955			+0.19853378	
P	4.77	H	12.5	G	0.15			

Residuals in seconds of arc

731026	095	0.3-	1.0+	870921	688	1.4-	1.8+	890111	071	(2.6+	3.7-)
781130	675	0.1-	1.1-	870921	046	0.1-	0.0	890111	071	0.2+	1.2+
781201	675	0.4+	0.8-	870921	046	2.7-	1.4-				
870921	688	2.1+	1.3+	870929	688	2.0+	1.4-				

1987 UW

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bardwell

M	11.33673		(1950.0)		P		Q
n	0.23128373	Peri.	158.51720	+0.97299703			-0.00950419
a	2.6284879	Node	205.58841	+0.03469503			+0.99382211
e	0.1658420	Incl.	32.27385	+0.22819518			-0.11057702
P	4.26	H	14.0	G	0.15		

Residuals in seconds of arc

871018	675	0.6-	0.3-	871119	675	1.2+	0.6+	880113	675	0.4+	0.1+
871018	675	0.7+	1.7+	871119	675	1.4+	0.8+	910906	801	0.1-	0.3-
871019	675	0.7-	2.0-	871123	675	0.3-	0.9-	910906	801	0.0	0.1-
871019	675	1.4+	1.8-	871124	675	0.6+	0.3+	910907	801	0.0	0.0
871020	675	0.4-	0.3+	871227	675	0.1-	0.2-	910907	801	0.6-	0.3+
871020	675	0.8-	0.8+	871227	675	0.2-	0.2-	910912	801	0.2+	0.5+
871028	675	3.2-	1.4-	880113	675	0.3-	0.1-	910912	801	0.5+	0.5+
871028	675	0.1-	1.5+	880113	675	0.2-	0.1-				
871119	675	1.2+	0.6+	880113	675	0.3+	0.0				

1987 UW1 = 1991 RQ1

Id. H. Kaneda, S. Nakano

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	348.97690		(1950.0)		P		Q
n	0.23249673	Peri.	166.90570	+0.79876080			-0.59033627
a	2.6193377	Node	229.89064	+0.53738573			+0.78682090
e	0.1314993	Incl.	8.73297	+0.27055085			+0.18004435
P	4.24	H	12.5	G	0.15		

Residuals in seconds of arc

871022	095	2.2-	0.5-	871113	399	0.5-	1.2+ Y	871121	095	1.8+	1.5-
871027	095	1.8-	1.5-	871113	399	1.9-	1.1+	910907	399	0.5-	0.9-
871028	399	2.2+	1.2+ Y	871114	399	0.6+	1.0+ Y	910907	399	1.6+	0.4+
871028	399	0.7+	0.6+ Y	871114	399	0.4+	0.8+ Y	910913	399	0.7-	0.7+
871028	399	1.5+	1.4- Y	871114	399	0.8-	1.0- Y	910913	399	0.5-	0.1-

1987 WT1 = 1991 PQ7

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	212.22099		(1950.0)		P		Q
n	0.17163834	Peri.	39.92746	-0.69397455			-0.71554748
a	3.2067111	Node	94.18223	+0.63839603			-0.66286015
e	0.0921535	Incl.	4.59765	+0.33294117			-0.22047274
P	5.74	H	12.8	G	0.15		

Residuals in seconds of arc

871126	033	0.2-	0.2+	871225	033	0.4+	1.0+	910814	809	0.1-	0.3+
871126	033	0.1+	0.2-	910806	809	0.2+	0.4+	910814	809	0.0	0.6-
871222	033	0.2-	0.4-	910806	809	0.0	0.3+	910814	809	0.4-	0.7+
871225	033	0.2-	0.7-	910806	809	0.2+	1.1-				

1988 EL = 1983 EC1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	190.39868		(1950.0)		P		Q
n	0.39992958	Peri.	191.54197	-0.99781834			+0.03650023
a	1.8245133	Node	350.04507	+0.00932334			-0.74700864
e	0.0469380	Incl.	18.55528	-0.06535772			-0.66381158
P	2.46	H	14.0	G	0.15		

Residuals in seconds of arc

830306	330(24.1+ 16.0+)			880317	675	0.9-	0.3+	880409	675	0.3+	0.0
880314	675	0.1+	0.6-	880317	675	0.1-	0.7+	891130	675	1.3-	0.3-
880315	675	0.0	1.3-	880409	675	0.4+	0.4+	891130	675	0.2+	0.2+

891203	675	0.1+	0.1+	910904	675	1.1+	0.5-	910909	675	2.3-	0.6+
891203	675	1.0+	0.1-	910907	675	0.3+	0.9-	910909	675	0.2-	0.8-
910904	675	2.1+	0.5+	910907	675	0.7-	0.7+				

1988 FK = 1986 RG5

Id. C. S. Shoemaker (1991 obs.), C. M. Bardwell

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	114.92613		(1950.0)			P		Q			
n	0.36757972	Peri.	53.71728			-0.87179601		+0.45538324			
a	1.9300491	Node	152.00522			-0.47130822		-0.88020959			
e	0.0759709	Incl.	22.62166			+0.13356748		-0.13363075			
P	2.68	H	14.5			G	0.15				

Residuals in seconds of arc

860904	809	0.3+	0.6-	880412	675	0.9+	0.7-	910606	675	0.7+	0.3+
860904	809	0.0	0.2-	880414	675	1.5-	0.6+	910608	675	0.4-	0.0
860904	809	0.4-	0.2+	880509	675	1.4+	0.1+	910608	675	0.2-	0.3+
880319	675	0.3-	0.1+	880510	675	0.2-	0.0				
880322	675	0.1-	0.7-	910606	675	0.1-	0.4-				

1988 RO

Id. C. S. Shoemaker (1989, 1990 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	86.68947		(1950.0)			P		Q			
n	0.08319690	Peri.	158.16046			+0.98522770		-0.11055310			
a	5.1967437	Node	209.14493			+0.08786057		+0.98184808			
e	0.0939334	Incl.	15.57732			+0.14699285		+0.15411800			
P	11.85	H	10.0			G	0.15				

Residuals in seconds of arc

880908	054	0.5-	0.1+	880916	054	0.2+	1.1+	901113	675	0.6+	0.6+
880909	054	1.3+	1.4+	880920	054	0.0	0.8+	901114	675	0.0	0.1+
880909	054	0.3-	1.2-	880920	054	0.1+	0.2-	901114	675	0.5-	0.1-
880911	675	0.3+	1.8-	891122	675	0.6-	0.6-				
880911	675	1.2-	0.1+	891122	675	0.6+	0.1-				

1988 RS6 = 1991 LE3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kobayashi

M	5.15299		(1950.0)			P		Q			
n	0.30071886	Peri.	143.90736			+0.87245046		+0.48869684			
a	2.2064577	Node	186.83893			-0.45288163		+0.80667298			
e	0.2543730	Incl.	1.13832			-0.18365301		+0.33234635			
P	3.28	H	15.3			G	0.15				

Residuals in seconds of arc

880908	809	0.1+	0.8+	880914	809	0.2-	0.2+	881006	807	2.3+	0.4-
880908	809	0.3+	0.7+	880914	809	0.1+	0.1+	881007	807	1.2+	1.2-
880908	809	0.8+	0.9+	880914	809	0.4+	0.0	910606	809	0.6+	0.1-
880909	809	0.1+	1.1+	880915	807	1.2+	0.6+	910606	809	0.3-	0.1+
880909	809	0.4+	1.2+	880915	809	0.9-	0.2-	910606	809	0.2+	0.5-
880909	809	0.9+	1.0+	880915	809	0.5-	0.4-	910608	809	(6.6-	0.1+)
880912	809	0.6+	0.6+	880915	809	0.5-	0.6-	910608	809	2.1-	0.2-
880912	809	0.8+	0.5+	880918	809	3.3-	2.1-	910608	809	1.5+	0.2-
880912	809	1.0+	0.5+	880918	809	3.0-	2.3-				
880914	807	1.2+	0.8+	880918	809	2.9-	2.3-				

1988 RO11 = 1978 WY15

Id. S. J. Bus



Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M 194.19440	(1950.0)		P	Q
n 0.18678058	Peri. 0.77526	+0.92368578		-0.38306073
a 3.0309695	Node 21.75392	+0.35139594		+0.83828726
e 0.1854239	Incl. 1.28484	+0.15272682		+0.38799348
P 5.28	H 14.4	G 0.15		

Residuals in seconds of arc

781130 675	0.5+	0.1-	880915 807	0.2+	0.3-	881104 807	0.6-	1.5-
781201 675	0.5-	0.1+	881006 807	0.1+	0.8+	881106 807	0.8+	0.8+
880914 807	0.1-	0.1-	881007 807	0.4-	0.2+			

1988 UT = 1991 PD16

Id. H. E. Holt

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M 336.64387	(1950.0)		P	Q
n 0.30427098	Peri. 264.28819	+0.73790168		-0.67442148
a 2.1892517	Node 138.11726	+0.63339105		+0.67889746
e 0.1598985	Incl. 2.19997	+0.23305984		+0.29026522
P 3.24	H 14.8	G 0.15		

Residuals in seconds of arc

881018 046	0.4-	1.7+	881110 046	0.1-	0.4+	910810 675	0.9+	0.3-
881018 046	0.3-	0.9-	881110 046	1.6-	0.0	910810 675	0.3+	0.2+
881105 046	1.3+	1.1-	910806 675	0.4-	0.0			
881105 046	1.0+	0.0	910806 675	0.8-	0.0			

1988 VK = 1991 PH1

Id. B. G. Marsden (MPC 18814)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M 359.95794	(1950.0)		P	Q
n 0.30310350	Peri. 267.65066	+0.94911785		-0.30029767
a 2.1948697	Node 109.81302	+0.31382090		+0.87672929
e 0.1551459	Incl. 5.78631	+0.02630108		+0.37572205
P 3.25	H 14.0	G 0.15		

Residuals in seconds of arc

881103 897	(0.7-	3.8+)	881114 897	0.7+	0.3-	910816 675	0.5-	0.0
881103 897	2.1-	1.2+	881129 897	2.4-	0.3+	910816 675	0.1+	0.1-
881107 897	0.7+	2.0-	881129 897	0.5+	1.1+	910904 675	0.2-	0.8+
881107 897	2.5+	0.3-	910815 675	0.1-	0.3+	910904 675	0.0	0.4-
881114 897	(3.5+	2.1-)	910815 675	0.1+	0.3-	910905 675	0.5+	0.2-

1988 VN3

Id. R. H. McNaught (1991 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M 294.99705	(1950.0)		P	Q
n 0.28509653	Peri. 214.96534	+0.14788380		-0.98708218
a 2.2863432	Node 226.61727	+0.92559110		+0.16008984
e 0.1280352	Incl. 4.86502	+0.34844152		-0.00632608
P 3.46	H 14.5	G 0.15		

Residuals in seconds of arc

881111 888	2.2+	0.0	881114 888	0.8+	2.0-	881210 888	0.7+	0.4-
881111 888	0.8+	0.5-	881130 888	1.0-	0.4+	910903 413	0.0	0.3-
881112 888	1.2-	1.7+	881130 888	0.4-	0.5+	910903 413	0.8+	0.5+
881112 888	1.2-	1.9+	881205 888	0.9-	0.3+	910904 413	0.1+	0.2-
881114 888	0.5-	1.7-	881210 888	0.7+	0.3-	910904 413	0.9-	0.0

1988 VE7 = 1976 YH3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	273.79440	(1950.0)		P		Q	
n	0.24540739	Peri.	291.60829	+0.34043849		-0.93705141	
a	2.5266454	Node	138.23034	+0.90002458		+0.30083901	
e	0.2165315	Incl.	6.69781	+0.27213487		+0.17728660	
P	4.02	H	14.2	G	0.15		

Residuals in seconds of arc

761216	095	0.1+	0.4+	881107	092	0.1-	0.8-	881110	092	0.3+	0.2-
761220	095	0.2-	0.4-	881109	092	0.5-	0.1+	881111	092	0.5+	0.2+
881107	092	0.1+	0.2-	881110	092	0.2-	1.0+				

1988 XK = 1953 XL = 1978 WJ15 = 1990 HS3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	167.60940	(1950.0)		P		Q	
n	0.19811686	Peri.	260.78924	-0.73122481		-0.67464606	
a	2.9142162	Node	236.70824	+0.66358028		-0.66928555	
e	0.1725983	Incl.	6.92698	+0.15802369		-0.31130298	
P	4.97	H	13.0	G	0.15		

Residuals in seconds of arc

531202	024	0.8+	1.0-	881205	888	0.4-	0.2-	890101	888	2.2-	2.2+
781130	675	0.9-	0.9+	881206	888	0.4-	0.5-	890101	888	1.3-	1.3-
781201	675	1.0-	1.3+	881206	888	0.2-	0.7-	900417	046	0.8-	0.2-
881203	888	2.0+	0.4-	881214	888	0.8+	0.0	900417	046	0.7+	0.1+
881203	888	2.1+	0.6-	881214	888	0.6+	0.1+				

1989 BR1 = 1938 CJ = 1955 EG = 1968 OV = 1975 VN4 = 1991 PG

Id. H. Kaneda, K. Ichikawa

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	66.53389	(1950.0)		P		Q	
n	0.17416331	Peri.	245.94305	-0.14003690		+0.99014346	
a	3.1756425	Node	16.00750	-0.90525244		-0.12706229	
e	0.1600532	Incl.	0.49139	-0.40113301		-0.05891605	
P	5.66	H	11.5	G	0.15		

Residuals in seconds of arc

380207	024	(9.3+	5.0-)	890130	046	(14.4-	1.2+)	910806	809	1.5-	0.7+
380220	024	1.0+	0.2-	890201	046	0.1-	2.6-	910806	809	2.0-	0.9+
380223	024	0.5-	2.6+	890201	046	(1.7-	3.4-)	910806	675	1.4-	1.1+
550314	760	(43.7-	20.4-)X	890214	402	2.2-	0.1+	910806	675	0.8+	1.2+
550323	760	(9.4+	4.4+)X	890214	402	1.6-	1.8+	910808	675	0.8+	0.5-
680725	095	0.7+	0.1+	890305	033	2.4+	0.0	910808	675	0.1+	0.3+
751102	095	0.9+	1.3+	890305	033	1.4+	0.6+	910814	809	0.5+	1.3-
890129	046	(15.2-	0.1+)	910805	675	0.3+	0.2-	910814	809	0.3+	0.6-
890129	046	(14.3-	0.6+)	910805	675	0.8+	0.5-	910814	809	0.4+	1.0-
890130	046	(14.9-	1.9+)	910806	809	0.5-	1.2+				

1989 CA = 1980 XV

Id. T. Kobayashi (MPC 14359)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kobayashi

M	313.52165	(1950.0)		P		Q	
n	0.25909348	Peri.	219.13742	+0.25287467		-0.96730021	
a	2.4368664	Node	216.22706	+0.89574605		+0.24173406	
e	0.1603478	Incl.	1.90190	+0.36564109		+0.07677855	
P	3.80	H	13.4	G	0.15		

Residuals in seconds of arc

801207	330	0.5+	2.0+	890202	046	2.0-	0.2-	890204	875	0.2-	2.1+
801210	330	0.6-	1.7-	890202	046	1.3-	0.8-	890204	875	0.5-	0.3+
890202	875	2.0+	0.3+	890203	046	1.5-	1.4-	890207	046	0.9+	2.0-
890202	875	2.3+	1.9+	890203	046	0.9+	0.8-	890207	046	0.1-	1.8-

890210	875	0.4+	0.2-	910808	675	0.9-	0.0	910907	511	0.2+	1.3-
890210	875	0.9-	1.6+	910905	511	0.8+	0.2+				
910808	675	0.1+	1.8-	910906	511	0.2+	1.8+				

1989 CK2

Id. C. S. Shoemaker (1991 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	128.29059		(1950.0)			P		Q			
n	0.08305372	Peri.	342.69057	+0.07314862				-0.93816122			
a	5.2027143	Node	102.08116	+0.95105615				-0.03652356			
e	0.0845047	Incl.	20.24571	+0.30023572				+0.34426668			
P	11.87	H	10.0	G	0.15						

Residuals in seconds of arc

890110	675	0.1+	0.2+	890308	675	0.6+	0.6-	910417	675	0.4-	0.8-
890110	675	0.6+	0.7-	910312	675	0.2+	0.9-	910417	675	0.1-	0.6-
890201	675	0.1-	2.0+	910312	675	0.2+	0.4-	910513	675	2.0+	0.3-
890201	675	2.0-	1.0-	910415	675	0.6-	1.1+	910513	675	0.7-	0.2+
890307	675	0.9+	0.2+	910415	675	0.2+	0.4-	910515	675	0.7-	2.0+

1989 CJ5 = 1954 SK = 1991 RU1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	8.64821		(1950.0)			P		Q			
n	0.26653809	Peri.	54.91461	+0.93118071				-0.36425364			
a	2.3912769	Node	326.43995	+0.32507627				+0.84812996			
e	0.2260972	Incl.	1.54363	+0.16500877				+0.38470101			
P	3.70	H	14.1	G	0.15						

Residuals in seconds of arc

540923	760	0.6+	0.8-	890210	033	0.1+	0.2-	910913	400	(4.8+	0.3+)
540923	760	0.5+	1.5-	890307	033	0.2+	0.1+	910915	392	2.0-	0.4+
890202	033	0.3+	0.1+	890310	033	1.4-	0.4-	910915	392	0.1-	1.6+
890204	033	0.3+	0.4-	890310	033	0.1-	0.3+				
890210	033	0.4+	0.3+	910913	400	1.0+	0.4+				

1989 SA3 = 1984 YQ3

Id. H. Kaneda (MPC 15895)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	97.85874		(1950.0)			P		Q			
n	0.17278951	Peri.	5.40667	+0.40459198				-0.90657040			
a	3.1924526	Node	60.77682	+0.83374798				+0.31169103			
e	0.1114319	Incl.	7.91301	+0.37572547				+0.28456775			
P	5.70	H	12.4	G	0.15						

Residuals in seconds of arc

781130	675	0.1-	0.2-	890928	809	1.0+	0.7+	891008	809	0.9+	0.0
781201	675	0.0	0.4+	890928	809	0.3-	0.5+	891008	809	0.1+	0.6-
841227	095	0.3+	0.3-	891003	809	0.4-	0.1-	891008	809	0.6+	0.1-
841231	095	0.3-	0.2+	891003	809	0.6-	0.0	891008	809	(1.7+	3.8+)
890926	809	0.4-	0.0	891003	809	1.3-	0.1-	891008	809	(0.7+	4.1+)
890926	809	0.8-	0.2-	891007	809	(0.2+	3.8+)	891008	809	(0.3+	4.0+)
890926	809	0.1+	0.0	891007	809	(1.1-	3.6+)				
890928	809	1.1+	0.1-	891007	809	(1.7-	3.9+)				

1989 TN = 1978 WM15

Id. S. J. Bus

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	248.34212		(1950.0)			P		Q			
n	0.26266819	Peri.	222.45659	+0.77305319				+0.63141877			
a	2.4147067	Node	98.28647	-0.56421439				+0.72824403			
e	0.1911386	Incl.	3.52373	-0.28991531				+0.26640378			
P	3.75	H	14.9	G	0.15						

## Residuals in seconds of arc

781130	675	0.4+	0.0	890928	809	1.7+	1.3+	891003	809	(4.8+	5.0+)
781201	675	0.4-	0.3+	890928	809	0.9+	1.0+	891003	809	(3.8+	5.2+)
890926	809	0.9-	0.1-	891002	071	(6.0+	0.4+)	891007	809	0.8+	1.0-
890926	809	1.2-	0.6-	891003	071	(3.5+	3.2+)	891007	809	0.1+	0.6-
890926	809	1.0-	0.8-	891003	071	(2.9+	2.9+)	891007	809	0.6-	0.9-
890926	809	0.7+	0.4+	891003	809	(2.1+	3.3+)	891008	809	0.0	0.5-
890926	809	0.6-	0.3-	891003	809	(1.9+	3.0+)	891008	809	0.2-	0.1-
890926	809	0.3-	0.3+	891003	809	(2.3+	3.5+)	891008	809	1.6-	0.7+
890928	809	1.6+	1.5+	891003	809	(5.6+	4.7+)	891028	807	0.7+	0.3-

1989 TT1 = 1978 WQ14 = 1978 WR15

Id. S. J. Bus (k), G. V. Williams (d)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams			
M 172.37023 (1950.0)				P Q			
n	0.26430857	Peri.	205.29210	+0.37008465	-0.92699672		
a	2.4047055	Node	223.05886	+0.86675278	+0.36815403		
e	0.1031896	Incl.	5.12137	+0.33433062	+0.07169167		
P	3.73	H	13.5	G	0.15		

## Residuals in seconds of arc

781128	330	2.4+	1.3+	890926	809	0.3-	0.0	891029	877	0.4-	1.5-
781130	675	1.0-	0.9-	890926	809	0.2+	0.1+	891029	877	0.8-	0.5+
781201	675	1.4-	0.5-	891009	877	(3.8+	1.9+)Y	891101	877	0.8+	1.0+
890924	809	0.2+	0.3-	891009	877	(3.5+	2.1+)Y	891101	877	(2.5-	3.9+)
890924	809	0.9+	0.3-	891025	877	(3.1+	0.1-)	891102	877	(3.3+	3.5+)
890924	809	1.6+	0.3-	891025	877	(5.0+	0.5-)	891104	877	(3.3+	0.6-)
890925	809	1.4-	0.2+	891026	385	0.2-	0.8+	891104	877	0.8+	0.9-
890925	809	0.5-	0.2+	891026	385	(3.2-	1.9-)	891124	675	0.1-	0.1+
890925	809	0.2-	0.1+	891029	385	(1.8-	2.6+)	891124	675	0.2-	0.3+
890926	809	0.9-	0.2-	891029	385	0.4+	0.3+				

1989 TL15 = 1969 TQ5 = 1977 RV6 = 1981 SS1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Kaneda			
M 166.51883 (1950.0)				P Q			
n	0.24576319	Peri.	87.75862	+0.64722467	-0.76214591		
a	2.5242062	Node	321.89447	+0.68914069	+0.59356728		
e	0.1528317	Incl.	1.41992	+0.32586091	+0.25847920		
P	4.01	H	13.9	G	0.15		

## Residuals in seconds of arc

691015	095	3.3-	1.2+	891003	809	0.9-	0.3-	891006	809	0.6+	0.1-
691017	095	2.7+	0.9-	891003	809	0.4-	0.4-	891006	809	0.9+	0.0
770911	095	0.3-	1.3+	891005	809	0.6+	1.2-	891007	809	0.2-	0.2+
810926	688	0.0	1.9+	891005	809	1.0+	1.2-	891007	809	0.1+	0.1+
891003	809	1.2-	0.2-	891006	809	0.2+	0.2-	891007	809	0.3+	0.1+

1989 YS6 = 1969 RM = 1977 AW

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Kaneda			
M 260.68721 (1950.0)				P Q			
n	0.30207646	Peri.	286.06569	+0.87055922	-0.48471120		
a	2.1998418	Node	102.99482	+0.47813134	+0.79257816		
e	0.1332835	Incl.	4.98945	+0.11626293	+0.36996609		
P	3.26	H	13.6	G	0.15		

## Residuals in seconds of arc

690908	095	0.1+	0.1-	891229	046	1.6-	0.7-	891231	046	0.3-	0.9+
770113	095	0.3+	1.6-	891229	046	1.1-	0.6+	900101	046	1.9+	0.5-
770120	095	0.3-	1.0+	891231	046	0.2+	0.3-	900101	046	0.8+	0.6+

1990 DU3 = 1981 WT4 = 1991 PG8

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	50.39538	(1950.0)		P		Kaneda	Q
n	0.28256223	Peri.	335.42003	+0.41350033		+0.90755108	
a	2.2999937	Node	318.89771	-0.81580049		+0.33355383	
e	0.1109737	Incl.	6.39911	-0.40433530		+0.25513304	
P	3.49	H	13.0	G	0.15		

Residuals in seconds of arc

811124	095	0.1+	0.0	900226	809	0.1-	1.5+	900301	809	0.3+	1.7-
900216	399	1.5-	0.1-	900227	809	0.4+	0.9+	910805	675	0.4-	0.4+
900216	399	0.0	1.2-	900227	809	0.8+	0.9+	910805	675	0.5+	0.5+
900216	399	0.6-	0.7-	900227	809	1.4+	0.9+	910807	675	0.6+	1.4-
900226	809	0.6-	1.6+	900301	809	0.1-	2.1-	910807	675	0.5-	0.2+
900226	809	0.2-	1.6+	900301	809	0.1+	2.0-				

1990 EU = 1991 PT

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	38.59699	(1950.0)		P		Kaneda	Q
n	0.24323395	Peri.	21.53783	+0.55204690		+0.82403381	
a	2.5416745	Node	282.18008	-0.78273873		+0.45952989	
e	0.1957914	Incl.	7.48465	-0.28734003		+0.33136167	
P	4.05	H	14.0	G	0.15		

Residuals in seconds of arc

900224	809	0.9+	0.2+	900304	809	(1.4+	11.6+)	910805	675	0.5-	1.1-
900224	809	1.4+	0.6+	900304	809	(1.5+	11.0+)	910808	675	0.7-	2.0+
900224	809	0.0	0.5+	900304	809	(0.3+	11.7+)	910808	675	0.7-	1.7+
900302	809	0.6-	0.6-	910805	675	2.2-	0.7+	910809	675	2.6+	1.4-
900302	809	0.5-	0.1-	910805	675	(3.1-	1.1-)	910809	675	1.4+	1.9-
900302	809	1.1-	0.6-	910805	675	(3.1+	0.7-)				

1990 OD = 1978 WJ16

Id. S. J. Bus

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	126.27801	(1950.0)		P		Bowell	Q
n	0.23106330	Peri.	60.33373	+0.35714943		+0.92001260	
a	2.6301594	Node	231.49009	-0.91229505		+0.30653685	
e	0.2417611	Incl.	11.89669	-0.20040467		+0.24415564	
P	4.27	H	12.7	G	0.15		

Residuals in seconds of arc

781130	675	0.3+	0.3+	900720	675	(2.6+	0.1-)	900816	675	0.6-	0.1+
781201	675	0.3-	0.3-	900722	675	0.7-	0.5+	900816	675	0.2+	0.1-
900719	675	0.5-	0.4-	900722	675	0.4-	1.2-	900819	675	0.5+	0.1-
900719	675	0.5+	0.2-	900723	675	1.6+	1.1+	900819	675	0.2-	0.1-
900720	675	(0.5+	2.6-)	900723	675	0.4-	0.3+				

1990 SQ16 = 1933 XG = 1936 TD = 1958 DG1 = 1961 CD1 = 1976 KK2 = 1984 YT5  
= 1985 BU = 1987 WP1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	85.42952	(1950.0)		P		Kaneda	Q
n	0.29054524	Peri.	300.09612	+0.81076497		-0.57831907	
a	2.2576687	Node	95.38188	+0.56348675		+0.72912809	
e	0.1286079	Incl.	5.22084	+0.15856497		+0.36594983	
P	3.39	H	13.4	G	0.15		

Residuals in seconds of arc

331215	024	0.7-	1.7-	610215	033	(3.0-	1.6-)	610217	033	1.7-	0.1-
361012	053	(61.1+	43.5-)X	610215	033	1.6-	0.3+	760529	413	1.3-	0.1-
580219	330	4.1+	0.4-	610215	033	2.3+	0.4+	760529	413	0.8-	0.1-
610215	033	1.7+	1.7+	610217	033	0.1-	0.6+	760530	413	0.3-	0.8+
610215	033	0.3-	0.9+	610217	033	(7.3-	2.4-)	760530	413	0.6-	0.4+

841228	095	0.3+	0.8+	871122	688	1.6-	0.2+	900917	675	0.7+	0.5+
850118	046	(3.9-	1.2-)	900915	675	0.8+	1.0-	900920	675	0.8+	0.6+
850118	046	1.7-	2.5-	900915	675	0.2+	0.7-	900920	675	0.6+	0.7+
871122	688	(3.1+	0.2-)	900917	675	0.0	0.4+				

1990 SX16 = 1972 AS = 1975 SL = 1980 RV1 = 1980 RM4 = 1985 SS3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	77.94782		(1950.0)			P			Q		
n	0.19226857	Peri.	337.51642			+0.97922437			+0.19987697		
a	2.9730155	Node	11.11881			-0.14835687			+0.82109630		
e	0.1222527	Incl.	10.21160			-0.13823846			+0.53464948		
P	5.13	H	12.8			G	0.15				

Residuals in seconds of arc

720114	029	0.9+	0.1-	800915	511	1.5+	0.3+	900917	675	0.4-	0.3-
720115	029	0.7-	0.7+	800915	511	0.6+	0.1+	900917	675	0.3-	1.2+
750930	675	0.1-	0.5-	800915	511	0.2-	0.2-	900920	675	0.2-	0.1+
751001	675	0.2-	0.4-	850920	095	0.0	2.1+	900920	675	0.2+	0.1+
751002	675	0.4+	0.5-	900914	675	0.1-	0.6-				
800907	095	2.0-	0.1+	900914	675	0.2+	1.3-				

1991 DS = 1986 GK1 = 1986 HQ

Id. T. Urata (MPC 17972), B. G. Marsden (d, ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	78.27800		(1950.0)			P			Q		
n	0.17732569	Peri.	4.72866			-0.51473829			-0.85656480		
a	3.1377737	Node	116.25543			+0.78521666			-0.48815169		
e	0.1312200	Incl.	2.34038			+0.34420821			-0.16734600		
P	5.56	H	11.6			G	0.15				

Residuals in seconds of arc

781130	675	0.5+	0.2+	860429	675	0.5+	0.4+	910223	889	0.0	0.2-
781201	675	0.5-	0.2-	860429	675	0.5-	0.3+	910223	889	0.4+	0.2+
860414	046	1.4+	0.2+	910221	889	1.1-	0.8+	910306	887	0.4+	0.5-
860414	046	1.4-	0.9-	910221	889	0.4+	0.2-	910306	887	(2.5+	1.0-)

1991 NK1 = 1981 WJ1 = 1983 CO1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	81.36878		(1950.0)			P			Q		
n	0.17479642	Peri.	127.39574			-0.23798559			+0.96112437		
a	3.1679697	Node	128.24621			-0.93790584			-0.18995347		
e	0.0463937	Incl.	10.26932			-0.25237966			-0.20039368		
P	5.64	H	11.4			G	0.15				

Residuals in seconds of arc

811124	688	1.2-	0.1+	910714	675	0.5-	0.6+	910806	675	0.1+	0.8-
811124	688	1.2+	0.1-	910714	675	0.3-	2.5-	910806	675	0.1+	0.8-
830204	046	0.7+	0.6+	910717	675	0.0	0.6-	910810	675	0.4+	0.2+
830204	046	0.8-	1.2-	910717	675	0.8-	0.3+	910810	675	0.5-	0.5-
910712	675	0.3+	0.6+	910805	675	0.9+	1.3+				
910712	675	0.4-	0.3+	910805	675	0.8+	1.2+				

1991 NS1 = 1987 MR

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	42.80935		(1950.0)			P			Q		
n	0.25976598	Peri.	126.10122			+0.48015574			+0.87705567		
a	2.4326588	Node	172.54867			-0.83729009			+0.46333704		
e	0.1760311	Incl.	6.62441			-0.26152585			+0.12685477		
P	3.79	H	13.7			G	0.15				

## Residuals in seconds of arc

870626	675	2.4-	0.0	910713	675	0.3-	0.7-	910805	675	0.8+	2.0+
870628	675	2.5+	0.6+	910719	675	1.1-	0.9-	910805	675	0.5-	1.2+
910713	675	0.5-	0.3-	910719	675	1.7+	2.0-				

1991 NP2 = 1991 PD3 = 1977 PB2

Id. S. Nakano (d), H. Kaneda

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	38.75180		(1950.0)			P		Q			
n	0.27942652	Peri.	350.23467			+0.60557755		+0.79161039			
a	2.3171686	Node	316.97624			-0.72179464		+0.50330740			
e	0.1503512	Incl.	6.85331			-0.33509450		+0.34646017			
P	3.53	H	14.3			G	0.15				

## Residuals in seconds of arc

770814	095	0.0	0.2-	910714	675	0.5-	0.3+	910807	809	0.2+	1.0-
770909	095	0.0	0.1+	910719	675	0.8+	1.0+	910807	809	0.5-	0.4-
910714	675	0.1+	1.7-	910802	809	0.4+	2.7+	910807	809	0.6-	0.7-

1991 NS2 = 1979 SK8 = 1987 QB12 = 1987 RY3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	58.35208		(1950.0)			P		Q			
n	0.24178718	Peri.	97.38882			+0.21261458		+0.97706862			
a	2.5518034	Node	184.93163			-0.94090311		+0.20154492			
e	0.1715007	Incl.	7.67888			-0.26362165		+0.06867720			
P	4.08	H	13.5			G	0.15				

## Residuals in seconds of arc

790924	095	0.1-	0.4+	910712	675	0.5+	0.5+	910807	675	0.1-	0.9-
870827	095	0.1+	2.3-	910718	675	0.8-	0.2-	910807	675	0.1-	1.5-
870902	095	0.0	1.5+	910718	675	0.3-	0.5+	910810	675	0.7+	2.3+

1991 OW = 3121 P-L

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	77.96541		(1950.0)			P		Q			
n	0.28373621	Peri.	336.59952			-0.19986067		+0.97467652			
a	2.2936450	Node	281.75199			-0.88196170		-0.22355094			
e	0.1985048	Incl.	5.88051			-0.42684807		+0.00553795			
P	3.47	H	14.5			G	0.15				

## Residuals in seconds of arc

600924	675	1.0+	0.2-	910716	675	0.3+	1.0-	910807	675	0.4-	0.6-
600925	675	0.9-	0.1+	910718	675	0.3+	0.2+	910810	675	0.5-	0.7+
600926	675	0.1-	0.1+	910718	675	0.2+	0.7+	910810	675	0.2+	0.5+
910716	675	0.8-	0.3+	910807	675	0.7+	0.8-				

1991 OZ = 1976 MD = 1981 XW

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	112.95203		(1950.0)			P		Q			
n	0.26968148	Peri.	330.55172			-0.70853000		+0.70213966			
a	2.3726589	Node	254.22922			-0.63221963		-0.67603619			
e	0.1495836	Incl.	4.20742			-0.31350212		-0.22355084			
P	3.65	H	13.5			G	0.15				

## Residuals in seconds of arc

760620	095	0.0	1.7+	910716	675	1.0+	0.5-	910807	675	0.4-	0.9-
811204	511	0.2-	1.0+	910718	675	0.1-	0.3+	910810	675	0.4+	1.1+
811204	511	0.0	0.8+	910718	675	0.6-	0.7+	910810	675	0.5+	0.6-
910716	675	1.4-	0.1-	910807	675	0.6+	0.5-				

1991 PJ = 1978 TZ7 = 1982 QE3 = 1984 BB = 1987 UU

Id. H. Kaneda, K. Ichikawa

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	334.41196		(1950.0)		P		Q	
n	0.21912968	Peri.	261.16005	+0.84974400			-0.51043524	
a	2.7248039	Node	129.41675	+0.52535721			+0.79898914	
e	0.1631576	Incl.	9.82860	+0.04398791			+0.31791856	
P	4.50	H	12.6	G	0.15			

Residuals in seconds of arc

781002	095	2.5+	1.5-	840201	567	0.1-	0.1+	910806	809	0.3-	1.0-
820817	095	2.6-	2.6+	871020	688	0.7-	2.2+	910806	809	0.8-	0.7-
840125	567	1.5-	2.0-	871020	688	(0.7-	3.6+)	910808	675	0.1+	0.6+
840125	567	(1.3+	3.8-)	871119	688	1.3-	0.6+	910808	675	0.0	0.8+
840125	567	(0.9-	4.9-)	871119	688	0.6-	0.5-	910814	809	2.0+	1.7-
840201	552	(5.3+	0.5-)	910805	675	0.0	0.6+	910814	809	1.0+	1.4-
840201	552	(5.1+	1.6-)	910805	675	0.0	0.4+	910814	809	1.0+	0.9-
840201	567	1.9+	0.2-	910806	809	0.1-	1.0-				

1991 PK = 1978 QD2 = 1978 QM3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	7.35765		(1950.0)		P		Q	
n	0.30144820	Peri.	211.13121	+0.99677736			-0.07737376	
a	2.2028973	Node	153.28189	+0.07981007			+0.92997597	
e	0.1972050	Incl.	2.69892	+0.00807757			+0.35938559	
P	3.27	H	15.5	G	0.15			

Residuals in seconds of arc

780826	414	0.3-	0.9+	910805	675	0.7+	0.9-	910808	675	0.0	0.6+
780826	414	0.2+	0.5-	910806	675	0.5+	0.0	910810	675	0.1-	2.0-
780831	095	0.1+	0.3-	910806	675	0.3-	0.6+	910810	675	0.4+	0.7+
910805	675	0.7-	0.3+	910808	675	0.4-	0.7+				

1991 PQ1 = 1972 TR3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	15.33361		(1950.0)		P		Q	
n	0.20231498	Peri.	180.25221	+0.85243026			+0.52228750	
a	2.8737613	Node	148.22504	-0.47959358			+0.79941138	
e	0.0785176	Incl.	2.61775	-0.20821301			+0.29691279	
P	4.87	H	12.8	G	0.15			

Residuals in seconds of arc

721005	095	0.4-	0.5-	910805	809	0.5+	0.9+	910807	675	1.3-	1.8-
721013	095	0.5+	0.5+	910805	675	1.0-	0.4-	910810	809	1.2+	1.0+
910805	809	0.1-	0.1-	910805	675	0.9-	0.5-	910810	809	0.5+	0.1+
910805	809	0.5+	0.4+	910807	675	0.4-	0.5-	910810	809	1.0+	0.7+

1991 PM8 = 1975 EL2 = 1977 UR4 = 1982 BO8

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

Ichikawa

M	236.21021		(1950.0)		P		Q	
n	0.26892601	Peri.	336.93608	-0.49405905			-0.86939124	
a	2.3771051	Node	142.67027	+0.79969617			-0.45803907	
e	0.1575781	Incl.	0.75896	+0.34116226			-0.18536202	
P	3.66	H	13.3	G	0.15			

Residuals in seconds of arc

750308	095	0.3+	0.7+	910803	809	0.6-	0.9-	910805	675	1.0-	0.5+
771018	675	0.1-	0.4+	910803	809	1.3-	0.3-	910805	809	1.6+	1.1+
771019	675	0.1-	0.2+	910805	809	1.7-	0.7-	910805	809	1.4+	0.4+
820119	095	0.8-	0.3-	910805	809	0.1-	0.0	910805	675	0.0	0.9+
820120	095	0.8+	0.2-	910805	809	1.2+	0.0	910807	675	2.7+	0.2-
910803	809	1.7-	0.3-	910805	809	0.1-	0.6-	910807	675	0.6-	0.2+



1991 PR10 = 1991 RH = 1980 TK14 = 1990 DS3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				(1950.0)		P	Williams				
							Q				
M	76.68941										
n	0.25896655	Peri.	90.61702			+0.17831214				+0.98373926	
a	2.4376627	Node	189.73430			-0.94574080				+0.16531378	
e	0.1414045	Incl.	7.30220			-0.27162313				+0.07020265	
P	3.81	H	13.0			G	0.15				

Residuals in seconds of arc

801013	095	0.1-	0.5+	900226	809	0.7-	0.7+	910808	675	0.7+	1.7+
900225	809	0.3+	0.2-	900226	809	0.2-	0.4+	910904	413	0.3-	0.2+
900225	809	0.4+	0.1-	900226	809	0.0	0.0	910905	413	1.0-	0.7-
900225	809	0.5+	0.1-	910807	675	0.8+	0.7+	910907	413	0.1-	1.4-

1991 PA11 = 1927 UJ = 1959 TO = 1987 LF

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				(1950.0)		P	Williams				
							Q				
M	24.66300										
n	0.27672055	Peri.	163.13716			+0.99006644				+0.13970566	
a	2.3322501	Node	188.87714			-0.13791178				+0.94303523	
e	0.2147214	Incl.	5.88999			-0.02736392				+0.30193853	
P	3.56	H	13.5			G	0.15				

Residuals in seconds of arc

271029	094(26.0-	31.5-)X		910808	675	0.1-	1.3-	910909	894	0.5+	0.2+
591006	024	0.4+	1.3-	910809	675	1.0+	1.1+	910909	894	0.7-	1.1-
870602	413	1.1-	0.1+	910810	675	0.3+	0.1-	910910	392	1.4-	1.8+
870602	413	1.0+	0.4-	910907	400	1.3-	0.5+	910910	392	1.6+	0.0
910807	675	0.1-	1.1-	910907	400	0.2+	0.8+				

1991 PM11 = 1926 SB = 1978 LD = 1987 RR6 = 1987 SA27

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				(1950.0)		P	Nakano				
							Q				
M	18.49794										
n	0.24252681	Peri.	33.08884			+0.99892966				-0.01062321	
a	2.5466126	Node	327.42931			-0.01134673				+0.88725363	
e	0.2436795	Incl.	4.79697			+0.04484188				+0.46115956	
P	4.06	H	12.9			G	0.15				

Residuals in seconds of arc

260928	012	3.8-	0.2-	Y	870903	095	2.3+	2.5+	910907	400	1.1+	1.4-
260929	012	0.2-	6.7+	Y	870926	095	1.3-	4.1-	910910	392	2.4+	1.5-
260930	012	1.4+	1.2-	Y	910809	675	0.9-	0.2-	910910	392	0.8-	0.4+
780601	809	0.1-	0.1+		910810	675	0.8-	1.5-				
780602	809	0.5+	0.8+		910907	400	0.4+	0.8+				

1991 PN13 = 1983 XJ1 = 1987 SW14 = 1990 HX2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				(1950.0)		P	Nakano				
							Q				
M	350.60415										
n	0.22756965	Peri.	46.63444			+0.92057491				-0.37998815	
a	2.6570098	Node	335.27969			+0.26566920				+0.77867087	
e	0.1883189	Incl.	12.46762			+0.28628955				+0.49928016	
P	4.33	H	12.2			G	0.15				

Residuals in seconds of arc

831203	561	0.0	0.4-		900428	413	0.8+	0.6+	910808	675	1.2-	0.2+
831204	561	0.2-	0.5-		900429	413	0.4-	0.4+	910907	399	1.1+	1.0-
870923	095	1.2-	2.3+		900429	413(12.6-	1.5+)		910907	399	1.0+	1.4-
870925	095	0.0	0.3+		910805	675	0.0	0.3+				
900428	413	0.1-	0.1-		910808	675	0.0	0.4+				

1991 PY14 = 1978 ND6 = 1987 SA14 = 1987 UV5

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	351.59493	(1950.0)		P		Williams	Q
n	0.23081772	Peri.	75.40233	+0.93202694			-0.33208371
a	2.6320246	Node	303.79772	+0.22691351			+0.84692436
e	0.1803169	Incl.	10.05393	+0.28255271			+0.41525840
P	4.27	H	13.0	G	0.15		

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

780710	675	2.0-	0.0	Y	870926	095	1.8+	0.3+	910809	675	1.3+	1.8-
780711	675	1.9+	0.3+	Y	871025	095	(6.2-	10.4+)	910907	372	2.4-	0.9+
780713	675	(0.00+	0.17+)	Y	910806	675	0.9+	0.6+	910907	372	3.0-	1.5+
870922	095	1.6-	1.1-		910806	675	1.0+	0.2+	910909	372	0.9+	0.1+
870925	095	(4.0-	1.1+)		910809	675	1.2+	1.1-				

1991 PF15 = 1981 PR = 1981 RX2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	56.45736	(1950.0)		P		Williams	Q
n	0.29551424	Peri.	32.57830	+0.43519384			+0.89853187
a	2.2322891	Node	263.27541	-0.83780793			+0.38098352
e	0.1469140	Incl.	3.28918	-0.32967287			+0.21792669
P	3.34	H	14.0	G	0.15		

Residuals in seconds of arc

810807	046	0.8-	0.2+		910807	675	0.2-	0.9-	910809	675	0.3+	0.5-
810807	046	0.8+	0.0		910807	675	(4.1+	11.8-)	910810	675	0.6-	0.7+
810902	095	0.0	0.1-		910809	675	0.3+	0.2+	910810	675	0.3+	0.5+

1991 QB = 1930 MR = 1977 KF = 1978 TP4 = 1980 BB3 = 1980 FD9 = 1981 RR4

= 1981 SC4 = 1988 TX2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	85.45406	(1950.0)		P		Kaneda	Q
n	0.29179134	Peri.	81.16566	-0.18050723			+0.98357075
a	2.2512365	Node	178.42902	-0.93318442			-0.17049113
e	0.1318422	Incl.	5.00315	-0.31077963			-0.05934097
P	3.38	H	13.1	G	0.15		

Residuals in seconds of arc

300630	690	(4.1+	12.8-)	X	881011	046	1.2-	1.1-	910816	392	0.6-	0.2+
770519	095	1.5+	1.0-		881012	046	1.3+	0.5-	910816	392	1.0+	1.2+
770523	095	0.2-	1.3-		881014	046	1.6+	0.6-	910818	392	0.6+	0.5-
781005	095	(6.3-	0.4+)		881014	046	1.9+	0.8-	910907	392	(3.1-	1.2+)
800124	095	2.2-	0.8+		881016	046	(5.7-	1.1+)	910907	392	0.1-	0.2-
800316	095	(6.1-	6.9+)		881016	046	(2.9-	2.5+)	910908	392	0.9-	0.1-
810905	095	1.8-	0.6-		881016	046	0.4+	2.0+	910908	392	1.4-	0.1+
810925	095	(0.6-	7.1+)		881016	046	0.2-	0.4-				

1991 QC = 1987 SN17

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	60.12486	(1950.0)		P		Kaneda	Q
n	0.24081192	Peri.	58.61248	+0.29815668			+0.95333103
a	2.5586884	Node	228.81157	-0.89577749			+0.26224955
e	0.1605784	Incl.	3.62390	-0.32967452			+0.14961657
P	4.09	H	12.7	G	0.15		

Residuals in seconds of arc

870916	095	0.9-	0.6+		910817	894	0.3-	0.9-	910831	894	0.0	0.0
870917	095	1.0+	0.1-		910817	894	0.2+	0.8+	910909	894	0.4-	0.4-
870923	095	0.1-	0.4-		910831	894	0.1+	0.5+	910909	894	0.3+	0.1-

1991 QD = 1930 YN = 1962 SE = 1980 FN9  
 Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

M	3.94655	(1950.0)		P		Nakano	Q
n	0.30505433	Peri.	70.29199	+0.96480919			-0.24866236
a	2.1855022	Node	304.01820	+0.18554758			+0.87420640
e	0.1544942	Incl.	5.92081	+0.18632050			+0.41704939
P	3.23	H	13.5	G	0.15		

Residuals in seconds of arc

301224	690	2.5-	3.6-	800316	095	0.1-	0.4-	910831	894	0.4-	0.3-
301225	690	2.4+	2.3+	910817	894	0.1+	0.8-	910908	894	0.0	0.1-
620922	760	0.7+	1.9+	910817	894	0.1-	0.4-	910909	894	1.1+	0.4-
620923	760	1.7-	0.6+	910831	894	0.5+	0.8-				

1991 QE = 1981 UY20 = 1981 WO7 = 1986 TS1

Epoch	1991 Dec. 10.0	ET = JDE 2448600.5	(J-P)	Marsden	
M	0.34944	(1950.0)	P	Q	
n	0.17994474	Peri.	310.54672	+0.86047011	+0.48830366
a	3.1072591	Node	21.50051	-0.25682185	+0.66221458
e	0.2198208	Incl.	23.37861	-0.44003832	+0.56835850
P	5.48	H	12.0	G	0.15

Residuals in seconds of arc

811022	675	0.6-	0.5-	861006	688	0.5-	1.7+	910901	413	0.9+	1.4-
811022	675	0.7+	0.5-	861007	688	(4.5-	1.2+)	910906	413	0.5-	1.0-
811023	675	0.8+	0.3-	861007	688	2.0-	0.5+	910913	413	1.7-	2.8-
811023	675	2.2+	0.1-	910830	413	1.4+	0.4+				
811125	095	1.0-	1.2-	910830	413	0.2+	1.6+				

1991 RB

Epoch	1991 Sept. 1.0	ET = JDE 2448500.5		Marsden	
M	320.07877	(1950.0)	P	Q	
n	0.56441091	Peri.	68.71669	+0.37959002	-0.92513300
a	1.4501261	Node	358.91190	+0.67517051	+0.28170859
e	0.4835735	Incl.	19.53921	+0.63249995	+0.25449792
P	1.75	H	19.0	G	0.15

From 17 observations 1991 Sept. 4-27.

1991 RC

Epoch	1991 Sept. 1.0	ET = JDE 2448500.5		Marsden	
M	114.16008	(1950.0)	P	Q	
n	0.87555063	Peri.	8.16126	-0.97706053	-0.16681912
a	1.0821361	Node	160.64508	+0.16576512	-0.98598180
e	0.8287090	Incl.	23.54255	+0.13369612	+0.00335844
P	1.13	H	17.0	G	0.15

From 8 observations 1991 Sept. 3-17.

1991 RJ = 1974 QQ1 = 1974 RF = 1987 SD14

Epoch	1991 Dec. 10.0	ET = JDE 2448600.5		Williams	
M	49.78940	(1950.0)	P	Q	
n	0.23219733	Peri.	331.37951	+0.63201842	+0.76999792
a	2.6215888	Node	337.46217	-0.66035044	+0.47601905
e	0.1622557	Incl.	13.19581	-0.40557368	+0.42486358
P	4.24	H	12.5	G	0.15

Residuals in seconds of arc

740824	095	0.6-	2.1-	870925	095	0.3+	0.8+	910808	675	0.5-	0.5-
740911	095	0.9+	1.6+	870926	095	0.1-	0.9-	910904	413	0.6+	0.6+
870922	095	0.2-	0.2-	910807	675	0.6-	0.1+	910905	413	0.1+	0.3+

1991 RN = 1979 WP4 = 1983 SR = 1987 RB5

Id. S. Nakano, T. Urata

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Nakano

M	47.47305		(1950.0)		P		Q
n	0.24409188	Peri.	349.10149	+0.69852861		+0.71199469	
a	2.5357153	Node	325.13954	-0.64672346		+0.58534150	
e	0.2526254	Incl.	7.19248	-0.30627853		+0.38786453	
P	4.04	H	12.9	G	0.15		

Residuals in seconds of arc

791117	095	0.0	1.0-	910905	885	1.1-	1.7-	Y	910910	402	1.1+	0.2-
830917	095	0.8+	0.6+	910905	885	0.4-	1.8-		910910	402	2.0+	0.6-
870903	095	2.5-	3.6+	910906	885	0.8-	0.1-		910911	402	0.9+	0.2-
870923	095	0.7-	1.1+	910906	885	0.5-	0.1+		910911	402	1.2+	0.3+

1991 RA1 = 1975 WB = 1987 QL3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Nakano

M	10.89076		(1950.0)		P		Q
n	0.24218031	Peri.	48.61742	+0.96985472		-0.21018861	
a	2.5490410	Node	323.02159	+0.11221760		+0.83436798	
e	0.2062210	Incl.	11.82836	+0.21630773		+0.50955944	
P	4.07	H	13.7	G	0.15		

Residuals in seconds of arc

751127	095	0.1-	0.4+	910907	399	1.5-	1.6+		910911	402	2.1-	1.5-
870830	010	0.8+	0.1+	910907	399	1.0-	0.7+		910911	402	1.5+	0.1+
870830	010	0.2+	0.8-	910910	402	0.9+	1.0+		911002	402	0.1-	1.4-
870830	010	0.0	0.7-	910910	402	0.4+	0.0		911002	402	1.0+	0.7+

1991 RS1 = 1987 SL14 = 1987 SN14 = 1987 SS16

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Kaneda

M	318.98553		(1950.0)		P		Q
n	0.23546330	Peri.	91.30813	+0.19736244		-0.97911853	
a	2.5972907	Node	346.99686	+0.79102350		+0.18841810	
e	0.1694340	Incl.	12.50880	+0.57907676		+0.07632507	
P	4.19	H	12.0	G	0.15		

Residuals in seconds of arc

870922	095	1.1-	0.5-	910907	400	2.0-	0.2-		910913	400	1.3+	0.4+
870923	095	2.2+	0.5+	910907	400	0.6+	0.2-		910930	400	0.4-	0.8-
870925	095	1.0-	0.0	910913	400	0.3+	0.1+		910930	400	0.1+	0.7+

1991 RJ2

Epoch 1991 Sept. 21.0 ET = JDE 2448500.5

Marsden

M	11.99977		(1950.0)		P		Q
n	0.29774416	Peri.	150.34430	+0.78617463		+0.61756565	
a	2.2211295	Node	171.40155	-0.59321419		+0.76466641	
e	0.4315945	Incl.	8.95926	-0.17328117		+0.18411396	
P	3.31	H	19.0	G	0.15		

From 14 observations 1991 Sept. 8-Oct. 3.

1991 RJ5 = 1981 RW6 = 1986 QL4 = 1986 RY12 = 1990 MN1

Id. G. V. Williams; 1986 SQ2 = 1986 QL4 (MPC 17178) is invalid

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	357.64636		(1950.0)		P		Q
n	0.20227776	Peri.	295.66749	+0.90483209		-0.42172337	
a	2.8741137	Node	89.32292	+0.40860238		+0.82144553	
e	0.0731979	Incl.	3.35691	+0.11967865		+0.38389665	
P	4.87	H	12.0	G	0.15		

Residuals in seconds of arc

810903	675	1.1+	1.1-	860817	095(40.6+	7.2-)		900625	808	2.2-	0.5+
810904	675	0.9+	1.7-	860909	095	2.3-	1.0+	900625	808	0.7+	0.2+

900628	808	1.0+	0.2+	910902	413	1.7+	1.3+	910913	675	1.0-	0.3-
900628	808	0.5+	0.1+	910903	413	0.4+	1.2+	910916	675	0.9-	1.0-
910902	413	1.3+	1.2+	910913	675	0.3-	0.0	910916	675	0.7-	0.7-

1991 TM = 1957 SK = 1983 ND1 = 1986 EF4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	85.40425		(1950.0)			P		Q			
n	0.26251196	Peri.	150.19378			+0.34698042		+0.93476046			
a	2.4156647	Node	139.97096			-0.88220830		+0.35292758			
e	0.1328035	Incl.	6.81644			-0.31829719		+0.04080445			
P	3.75	H	13.0			G	0.15				

Residuals in seconds of arc

570918	760	0.3+	0.2+	830716	808	0.5+	1.6+	910914	675	0.2-	0.2+
570918	760	0.0	1.2-	860312	809	0.1+	0.4+	911001	413	0.6+	0.4+
830714	808	0.4-	0.6-	910912	675	0.1-	0.6-	911002	413	1.1-	0.1+
830714	808	0.0	0.1-	910912	675	0.2-	0.0				
830716	808	0.1-	0.3-	910914	675	0.6+	1.0+				

2702 P-L = 1978 WN15

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Bowell

M	346.53332		(1950.0)			P		Q			
n	0.17238567	Peri.	152.21968			-0.98327273		+0.18172678			
a	3.1974366	Node	38.25693			-0.17055638		-0.89505239			
e	0.1502501	Incl.	1.13378			-0.06391596		-0.40725495			
P	5.72	H	14.1			G	0.15				

Residuals in seconds of arc

600924	675	0.4-	0.5+	601017	675	0.2+	1.6-	781130	675	0.1+	0.1+
600926	675	0.3+	0.4+	601022	675	0.5-	0.1-	781201	675	0.2-	0.0
600928	675	0.3-	0.6+	601025	675	0.7+	0.2+				

6114 P-L = 1991 RN3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	163.58356		(1950.0)			P		Q			
n	0.22322399	Peri.	223.44897			-0.85064503		+0.52366771			
a	2.6913828	Node	347.87399			-0.40079316		-0.70333563			
e	0.1434872	Incl.	12.82787			-0.34024679		-0.48071939			
P	4.42	H	14.0			G	0.15				

Residuals in seconds of arc

600924	675	0.2+	0.1-	601017	675	0.3+	0.7+	910912	033	0.5-	0.2+
600925	675	0.6+	0.2+	601022	675	0.7-	0.7+	910912	033	0.1+	0.4-
600926	675	0.0	0.2-	601024	675	0.5+	0.7-	910913	033	0.7+	0.9+
600928	675	0.8-	0.1-	601026	675	0.1-	0.6-	910914	033	0.3-	0.8-

1266 T-2 = 1991 RW1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

Williams

M	53.46273		(1950.0)			P		Q			
n	0.27247699	Peri.	325.29588			+0.73519512		+0.67767925			
a	2.3564026	Node	351.98646			-0.59406674		+0.63316796			
e	0.0614924	Incl.	6.36661			-0.32645497		+0.37396413			
P	3.62	H	14.5			G	0.15				

Residuals in seconds of arc

730919	675	0.5+	0.5+	730925	675	2.6-	1.3-	731004	675	1.6+	0.2-
730919	675	2.7+	1.2-	730925	675	1.2-	0.1+	731005	675	0.3+	0.1+
730919	675	0.9-	0.4+	730929	675	0.9+	1.5-	731005	675	0.8+	0.0
730919	675	(3.6+	0.4-)	730929	675	0.2+	0.2+	910906	511	1.5+	0.5+
730920	675	1.8-	0.9+	730930	675	0.0	0.9+	910906	511	0.5-	1.6-
730924	675	2.0-	0.5+	730930	675	0.4+	1.1+	910907	511	(6.1+	14.7+)
730924	675	0.7-	0.7+	731004	675	1.6+	0.8-	910907	511	0.7-	0.7+

1324 T-2 = 1972 GQ1 = 1991 SC

Id. S. Nakano (MPC 15080), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams			
M		(1950.0)		P		Q	
n	0.27171234		Peri. 248.84313		-0.03270688		+0.99906270
a	2.3608214		Node 19.34756		-0.88225949		-0.01552945
e	0.1287760		Incl. 4.90976		-0.46962586		-0.04040497
P	3.63		H 14.0	G	0.15		

Residuals in seconds of arc

720409 805	1.7-	0.5+	730929 675	0.5-	0.6-	731004 675	0.8+	1.1+
720409 805	0.1-	0.5-	730929 675	1.0+	2.3+	731004 675	0.3-	0.8-
720410 805	0.3-	0.0	730929 675	1.2+	2.9-	731004 675	1.1+	0.7-
720410 805	1.1+	1.8-	730929 675	0.9-	0.2-	731005 675	0.4-	0.4-
730919 675	1.0-	0.0	730929 675	1.2+	2.2+	731005 675	0.5+	0.1+
730919 675	1.5-	1.0+	730929 675	0.2+	2.6-	731005 675	0.3+	0.8-
730920 675	1.1-	1.0+	730930 675	0.7+	1.4-	731005 675	0.7+	0.2+
730924 675	0.7-	0.5-	730930 675	1.4+	1.3+	910929 413	0.9+	0.3+
730924 675	0.7-	0.4-	730930 675	1.5+	0.6-	910930 413	0.9-	0.4-
730925 675	0.4-	0.5-	730930 675	1.2+	1.7+			
730925 675	1.2-	0.3-	731004 675	1.8-	0.1-			

3070 T-2 = 1975 EG6 = 1990 RU14

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams			
M		(1950.0)		P		Q	
n	0.29002390		Peri. 4.74563		-0.73439867		-0.67671780
a	2.2603734		Node 132.52366		+0.62033239		-0.70037607
e	0.0823137		Incl. 4.05165		+0.27540212		-0.22699423
P	3.40		H 14.0	G	0.15		

Residuals in seconds of arc

730919 675	(0.2+	2.8+)	730929 675	0.1-	1.2+	900914 809	0.5+	1.6+
730919 675	0.3-	0.8+	730930 675	1.0-	0.8-	900914 809	0.2-	1.3+
730920 675	0.4-	0.7+	730930 675	0.6-	0.6-	900914 809	0.1-	0.7+
730924 675	0.7-	0.9-	731004 675	0.0	1.3+	900922 809	0.9-	0.3-
730924 675	0.5+	1.2-	731004 675	0.9-	1.3+	900922 809	0.2-	0.6-
730925 675	1.0+	2.0-	731005 675	1.2+	0.3-	900922 809	0.1-	0.0
730925 675	1.9+	2.4-	731005 675	0.6+	0.1-			
730929 675	0.2-	0.6+	750315 095	0.1+	0.2+			

2041 T-3 = 1982 UL6

Id. C. M. Bardwell (MPC 12572)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5

				Williams			
M		(1950.0)		P		Q	
n	0.20994089		Peri. 331.86444		-0.81446750		+0.57784790
a	2.8037419		Node 243.52957		-0.52074470		-0.76776443
e	0.0433421		Incl. 3.34892		-0.25586646		-0.27682050
P	4.69		H 12.5	G	0.15		

Residuals in seconds of arc

771007 675	1.1+	0.1-	771017 675	1.3-	1.2+	821114 095	1.3+	0.8-
771011 675	0.8-	1.0+	771021 675	0.7+	0.7-	910905 033	0.1+	0.0
771011 675	1.4-	0.4+	771021 675	1.0+	0.2-	910905 033	0.2+	0.1-
771012 675	0.6-	0.0	771022 675	1.3+	0.4+	910912 033	0.8+	0.7+
771012 675	1.6-	0.4+	771022 675	0.2+	0.0	910912 033	1.0+	0.5+
771016 675	1.5+	2.2-	821020 095	0.3+	0.2+	910914 033	0.8-	0.5-
771016 675	0.5+	1.3-	821025 095	1.4-	0.7+	910915 033	1.4-	0.5+
771017 675	0.6-	1.1+	821109 095	0.2-	0.2+	910915 033	0.1+	1.2-

5016 T-3 = 1980 KF1 = 1981 RN6 = 1984 DO2

Id. G. V. Williams (MPC 18835, unpublished); 5016 T-3 = 1925 GC (MPC 18835) is invalid

M	221.37157		(1950.0)							
n	0.21568031	Peri.	53.58388		P	-0.96795719		Q	+0.22452931	
a	2.7537788	Node	139.05229			-0.24736696			-0.92964328	
e	0.1352233	Incl.	9.88002			+0.04322569			-0.29214716	
P	4.57	H	13.5		G	0.15				

Residuals in seconds of arc

760916	413	0.2-	0.3-	771017	675	0.4-	2.4-	810901	675	0.2-	0.6+
771011	675	0.5+	0.9-	771017	675	1.0-	0.1-	810902	675	1.1-	0.9-
771011	675	1.7+	0.2+	771021	675	0.6+	0.5+	810930	413	0.4-	0.4+
771012	675	0.1+	0.9-	771021	675	0.2-	0.4+	810930	413	1.0+	0.3+
771012	675	0.4+	1.9-	771022	675	1.7-	0.9+	821209	413	0.7+	0.9+
771016	675	0.2+	1.3-	771022	675	1.8+	0.1+	840226	095	1.0-	1.1-
771016	675	1.0-	0.5+	800517	095	0.3+	2.0-	860801	413	0.0	1.8+

\* \* \* \* \*

EPHEMERIDES.

Comet McNaught-Russell (1991v)

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	MPC	18995
1991 10 11		19 06.71	-55 36.6	3.685	3.740	85.4	15.4		16.6
1991 10 21		19 07.07	-55 56.3						
1991 10 31		19 10.44	-56 15.2	3.875	3.648	69.5	14.8		16.6
1991 11 10		19 16.60	-56 35.1						
1991 11 20		19 25.34	-56 57.0	4.017	3.562	56.1	13.3		16.5
1991 11 30		19 36.45	-57 21.7						
1991 12 10		19 49.83	-57 49.2	4.094	3.483	46.0	11.7		16.5
1991 12 20		20 05.39	-58 19.7						
1991 12 30		20 23.08	-58 52.9	4.097	3.413	40.8	10.8		16.4
1992 01 09		20 42.97	-59 28.5						
1992 01 19		21 05.11	-60 05.9	4.029	3.351	41.2	11.1		16.3
1992 01 29		21 29.62	-60 44.0						
1992 02 08		21 56.71	-61 21.6	3.902	3.299	46.3	12.5		16.1
1992 02 18		22 26.52	-61 56.9						
1992 02 28		22 59.22	-62 27.1	3.739	3.257	54.0	14.2		16.0

1991 RC a,e,i = 1.08, 0.83, 24

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	MPC	19033
1991 10 11		21 19.99	-17 30.6	1.234	1.940	120.3	26.4		20.1
1991 10 21		21 17.37	-18 24.3						
1991 10 31		21 18.87	-18 50.0	1.543	1.972	99.8	29.8		20.7
1991 11 10		21 23.59	-18 54.5						
1991 11 20		21 30.81	-18 42.3	1.848	1.978	82.5	29.7		21.1
1991 11 30		21 39.96	-18 16.6						
1991 12 10		21 50.65	-17 39.7	2.121	1.960	67.1	27.6		21.3

Comet McNaught-Russell (1991w)

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	MPC	18994
1991 10 11		21 39.34	-06 48.7	6.654	7.310	127.9	6.2		17.8
1991 10 21		21 36.92	-07 55.9						
1991 10 31		21 35.46	-08 56.2	7.004	7.350	106.7	7.4		17.9
1991 11 10		21 34.94	-09 49.3						
1991 11 20		21 35.34	-10 35.2	7.394	7.393	86.1	7.7		18.0
1991 11 30		21 36.60	-11 14.2						
1991 12 10		21 38.64	-11 47.0	7.779	7.437	66.2	7.0		18.2
1991 12 20		21 41.35	-12 14.1						
1991 12 30		21 44.65	-12 36.3	8.119	7.483	47.0	5.5		18.3

1991 RJ2		a,e,i = 2.22, 0.43, 9					Elements MPC 19034		
Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V	
1991 10 11		23 32.73	-12 10.2	0.435	1.395	151.1	20.2	18.9	
1991 10 21		23 44.58	-12 47.2						
1991 10 31		23 56.92	-12 30.7	0.596	1.484	136.6	27.4	20.0	
1991 11 10		00 09.84	-11 34.9						
1991 11 20		00 23.42	-10 11.3	0.804	1.584	123.9	31.2	20.9	
1991 11 30		00 37.58	-08 29.4						
1991 12 10		00 52.27	-06 35.7	1.053	1.691	112.1	32.7	21.6	

1991 RB		a,e,i = 1.45, 0.48, 20					Elements MPC 19033		
Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V	
1991 10 11		14 21.83	+16 40.1	0.171	0.856	30.6	143.6	22.2	
1991 10 16		14 05.18	+21 59.9						
1991 10 21		13 52.33	+24 51.8	0.256	0.801	35.3	134.1	21.7	
1991 10 26		13 42.72	+26 04.3						
1991 10 31		13 36.04	+26 06.9	0.351	0.763	41.0	121.4	21.1	
1991 11 05		13 32.04	+25 19.6						
1991 11 10		13 30.41	+23 56.4	0.452	0.749	45.8	108.6	20.7	
1991 11 15		13 30.82	+22 07.6						
1991 11 20		13 32.95	+20 01.2	0.549	0.760	49.8	96.7	20.6	
1991 11 25		13 36.47	+17 43.6						
1991 11 30		13 41.08	+15 19.7	0.637	0.794	53.5	86.4	20.6	
1991 12 05		13 46.49	+12 53.5						
1991 12 10		13 52.43	+10 27.6	0.709	0.847	57.2	78.0	20.6	
1991 12 15		13 58.69	+08 03.8						
1991 12 20		14 05.11	+05 43.3	0.764	0.913	61.4	71.2	20.7	
1991 12 25		14 11.54	+03 26.8						
1991 12 30		14 17.85	+01 14.6	0.800	0.986	66.2	65.8	20.8	

Periodic Comet Kowal 1 (1991i)							Elements MPC 17940		
Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2	
1991 11 20		13 08.48	-06 02.1	5.421	4.689	38.5	7.5	19.9	
1991 11 30		13 16.95	-06 56.6						
1991 12 10		13 24.95	-07 47.5	5.188	4.682	54.3	9.8	19.8	
1991 12 20		13 32.34	-08 34.0						
1991 12 30		13 39.02	-09 15.7	4.906	4.677	70.9	11.5	19.7	
1992 01 09		13 44.85	-09 52.0						
1992 01 19		13 49.67	-10 22.4	4.596	4.673	88.4	12.1	19.5	
1992 01 29		13 53.38	-10 46.5						
1992 02 08		13 55.83	-11 03.8	4.285	4.671	107.1	11.6	19.4	
1992 02 18		13 56.95	-11 14.1						
1992 02 28		13 56.68	-11 17.4	4.006	4.669	127.0	9.8	19.2	
1992 03 09		13 55.04	-11 13.6						
1992 03 19		13 52.15	-11 03.4	3.794	4.669	148.1	6.5	19.1	
1992 03 29		13 48.22	-10 47.8						
1992 04 08		13 43.55	-10 28.0	3.681	4.670	170.0	2.1	19.0	
1992 04 18		13 38.52	-10 06.1						
1992 04 28		13 33.53	-09 44.2	3.684	4.673	167.9	2.6	19.0	
1992 05 08		13 28.99	-09 24.4						
1992 05 18		13 25.23	-09 08.7	3.800	4.677	146.4	6.9	19.1	
1992 05 28		13 22.51	-08 58.8						
1992 06 07		13 21.00	-08 55.5	4.011	4.681	126.1	10.1	19.2	
1992 06 17		13 20.77	-08 59.4						
1992 06 27		13 21.83	-09 10.6	4.283	4.688	107.3	11.9	19.4	
1992 07 07		13 24.13	-09 28.7						
1992 07 17		13 27.61	-09 53.4	4.586	4.695	89.9	12.5	19.5	
1992 07 27		13 32.16	-10 23.8						
1992 08 06		13 37.69	-10 59.3	4.891	4.704	73.4	11.9	19.7	



Periodic Comet Grigg-Skjellerup					Elements MPC 14593				
Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2	
1991 12 10		06 02.64	-02 56.0	1.758	2.659	150.4	10.5	21.2	
1991 12 20		05 51.00	-04 12.9						
1991 12 30		05 38.23	-05 07.5	1.616	2.510	148.8	11.7	20.9	
1992 01 09		05 25.61	-05 34.6						
1992 01 19		05 14.47	-05 33.1	1.580	2.354	132.0	18.1	20.9	
1992 01 29		05 05.88	-05 05.4						
1992 02 08		05 00.54	-04 16.4	1.615	2.192	112.5	24.6	21.0	
1992 02 18		04 58.76	-03 11.9						
1992 02 28		05 00.53	-01 57.5	1.680	2.024	95.1	29.2	21.0	
1992 03 09		05 05.75	-00 37.6						
1992 03 19		05 14.20	+00 43.8	1.736	1.851	80.3	32.0	21.0	
1992 03 29		05 25.69	+02 04.0						
1992 04 08		05 40.07	+03 20.6	1.761	1.674	68.4	33.8	20.9	
1992 04 18		05 57.25	+04 31.4						
1992 04 28		06 17.18	+05 34.8	1.744	1.497	58.9	35.2	20.6	
1992 05 08		06 39.89	+06 28.8						
1992 05 18		07 05.43	+07 11.9	1.687	1.326	51.8	36.8	20.4	
1992 05 28		07 33.88	+07 42.3						
1992 06 07		08 05.34	+07 58.4	1.597	1.172	47.1	39.4	20.0	
1992 06 17		08 39.87	+07 58.8						
1992 06 27		09 17.43	+07 42.8	1.494	1.055	44.9	42.8	19.8	
1992 07 07		09 57.89	+07 09.7						
1992 07 17		10 40.89	+06 19.9	1.402	0.997	45.3	46.4	19.6	
1992 07 27		11 25.88	+05 14.3						
1992 08 06		12 12.14	+03 54.8	1.355	1.016	48.2	48.1	19.6	
1992 08 16		12 58.78	+02 24.7						
1992 08 26		13 44.92	+00 48.6	1.379	1.106	52.4	46.4	19.8	
1992 09 05		14 29.76	-00 47.9						
1992 09 15		15 12.67	-02 18.7	1.486	1.244	55.9	42.1	20.1	
1992 09 25		15 53.24	-03 38.9						
1992 10 05		16 31.31	-04 45.0	1.672	1.407	57.1	36.6	20.5	
1992 10 15		17 06.86	-05 34.9						
1992 10 25		17 39.98	-06 08.1	1.918	1.582	55.4	31.2	20.8	
1991 11 10		04 19.55	+41 37.6	2.185	3.079	149.4	9.4	17.0	
- 9.45	-0.92	+ 29.8	- 9.6 1979	SW2 19013	- 9.63	+0.87	- 28.3	- 7.6	
1991 12 10		03 47.60	+41 36.3	2.193	3.116	155.5	7.5	16.9	
1991 11 10		04 32.22	+05 02.0	2.105	3.025	153.7	8.3	17.6	
- 7.41	-0.73	- 54.1	+ 3.9 1976	GN2 19011	- 8.05	+0.54	- 15.2	+ 8.2	
1991 12 10		04 06.68	+03 10.0	2.121	3.048	156.1	7.5	17.6	
1991 11 10		04 39.52	+06 56.2	1.277	2.205	152.9	11.8	16.4	
- 8.15	-1.16	- 59.8	+ 5.3 1980	PB1 19013	- 9.13	+0.86	- 6.0	+11.1	
1991 12 10		04 09.84	+05 06.6	1.312	2.256	158.2	9.3	16.4	
1991 11 10		04 51.63	+30 06.3	1.804	2.710	150.5	10.4	17.0	
- 9.18	-1.26	- 9.7	- 6.2 1937	NN 19009	-11.40	+0.63	- 45.2	- 3.8	
1991 12 10		04 17.26	+28 39.7	1.744	2.716	168.2	4.3	16.7	
1991 11 10		05 31.15	+32 22.5	1.597	2.452	141.7	14.5	17.8	
- 6.69	-1.71	+ 28.1	- 4.3 1983	RT1 14474	-12.11	+0.19	- 12.9	- 7.7	
1991 12 10		04 59.45	+32 51.8	1.521	2.496	169.9	4.0	17.3	
1991 11 10		05 26.47	+08 20.3	1.413	2.279	142.4	15.4	17.2	
- 5.29	-1.52	- 57.5	+ 3.4 1987	SH2 17018	-10.12	+0.13	- 15.3	+ 9.9	
1991 12 10		05 00.31	+06 18.7	1.339	2.300	163.5	7.0	16.8	

1991 11 10	05 15.08	+09 36.0	4.580	5.425	145.5	5.9	17.4
- 3.78	-0.47	- 26.1	+ 1.2 1989 TO11 17208	- 5.23	+0.02	- 13.8	+ 2.8
1991 12 10	05 00.66	+08 33.3	4.475	5.435	165.8	2.6	17.2
1991 11 10	05 27.17	+37 52.9	2.086	2.921	-1.35	-0.7	16.7
- 5.62	-1.41	+ 35.5	- 4.9 1990 QO3 17639	-10.35	+0.06	- 9.1	- 8.6
1991 12 10	05 00.50	+38 39.6	1.973	2.933	-1.37	-2.2	16.2
1991 11 10	05 26.04	+07 26.1	2.075	2.922	142.3	12.0	17.9
- 5.97	-1.09	- 58.2	+ 2.6 (4564) 16859	- 9.30	+0.11	- 26.3	+ 7.6
1991 12 10	05 00.91	+05 10.1	2.006	2.960	162.4	5.8	17.6
1991 11 10	05 17.60	+21 04.4	4.068	4.923	146.3	6.4	17.1
- 4.00	-0.57	- 15.4	- 0.6 (4827) 18271	- 5.79	+0.02	- 17.0	+ 0.2
1991 12 10	05 01.83	+20 14.2	3.944	4.928	177.4	0.5	16.6
1991 11 10	05 28.24	+17 32.2	2.183	3.039	143.7	11.1	17.5
- 6.29	-1.10	- 44.3	- 0.6 1990 OD 19027	- 9.58	+0.13	- 38.9	+ 2.7
1991 12 10	05 02.17	+15 21.3	2.108	3.087	172.6	2.4	17.0
1991 11 10	05 27.94	+40 48.5	1.209	2.065	139.5	18.2	15.9
- 3.27	-2.16	+ 48.1	- 8.2 1988 CL 12946	-10.94	+0.10	- 30.0	-15.3
1991 12 10	05 02.46	+41 29.4	1.109	2.066	161.3	8.8	15.4
1991 11 10	05 34.83	+20 56.9	1.400	2.266	142.3	15.5	17.9
- 6.76	-1.73	+ 10.7	+ 0.1 1971 RA 12142	-12.20	+0.19	+ 6.6	- 0.9
1991 12 10	05 02.85	+21 24.8	1.345	2.330	178.6	0.6	17.1
1991 11 10	05 19.78	+26 45.4	4.118	4.965	145.3	6.5	16.8
- 4.43	-0.60	- 28.2	- 2.0 (4791) 18097	- 6.25	+0.04	- 38.2	- 1.0
1991 12 10	05 02.59	+25 04.0	3.982	4.966	177.7	0.5	16.4
1991 12 10	05 03.10	+11 03.4	1.062	2.036	168.3	5.6	17.1
- 9.39	-0.03	- 56.2	+ 7.9 1981 EY12 9963	- 3.36	+1.75	+ 3.5	+ 9.9
1992 01 09	04 40.69	+09 40.5	1.145	2.006	140.9	18.0	17.7
1991 12 10	05 03.21	+01 26.9	4.368	5.297	158.7	3.9	17.7
- 5.41	+0.02	- 30.3	+ 4.4 1988 QY 17960	- 3.74	+0.50	- 2.9	+ 4.3
1992 01 09	04 48.58	+00 37.3	4.536	5.310	138.2	7.1	17.9
1991 12 10	05 03.62	+09 37.3	1.903	2.871	166.8	4.5	16.1
- 8.35	+0.04	- 35.9	+ 5.7 1990 TC 18124	- 4.41	+1.13	+ 2.8	+ 6.3
1992 01 09	04 42.46	+08 46.5	2.043	2.874	140.9	12.5	16.6
1991 12 10	05 04.73	+40 32.1	2.288	3.240	162.2	5.3	16.7
-11.70	+0.04	- 16.5	- 9.0 (4603) 17006	- 6.79	+1.39	- 52.4	- 2.0
1992 01 09	04 34.50	+38 35.7	2.416	3.249	142.1	10.7	17.1
1991 12 10	05 05.19	+18 41.1	2.037	3.020	175.9	1.3	17.6
- 9.32	+0.03	- 26.2	+ 1.0 1980 KM 17427	- 5.32	+1.15	- 11.9	+ 3.5
1992 01 09	04 41.16	+17 39.3	2.180	3.028	143.6	11.1	18.3
1991 12 10	05 06.11	+13 09.5	1.292	2.269	170.3	4.2	17.2
-10.67	+0.14	- 30.7	+ 5.8 1987 SN3 14476	- 4.61	+1.59	+ 8.9	+ 6.3
1992 01 09	04 40.52	+12 35.8	1.461	2.316	141.9	15.2	18.0
1991 12 10	05 05.76	+00 57.6	1.313	2.258	158.2	9.3	16.5
- 9.30	-0.03	+ 9.1	+13.4 1987 YS1 14950	- 4.28	+1.49	+ 77.5	+ 7.8
1992 01 09	04 42.58	+03 18.0	1.415	2.248	138.4	16.9	16.9

1991 12 10	05 06.42	+09 32.6	1.162	2.132	166.7	6.1	15.8	
- 8.94	+0.07	- 13.2	+ 8.9 1982	SJ1 13583	- 3.17	+1.57	+ 36.9	+ 6.5
1992 01 09	04 45.50	+10 12.6	1.307	2.170	142.2	16.1	16.5	
1991 12 10	05 07.24	+33 11.7	1.092	2.069	169.5	5.0	15.9	
-12.62	+0.24	- 32.4	- 9.5 1984	UT3 15884	- 4.30	+2.04	- 54.9	+ 2.1
1992 01 09	04 38.56	+30 39.1	1.261	2.137	144.1	15.6	16.7	
1991 12 10	05 09.64	+06 39.0	1.958	2.917	163.8	5.4	18.2	
- 8.57	0.00	- 25.3	+ 6.9 1985	PL1 13449	- 4.90	+1.09	+ 17.0	+ 6.3
1992 01 09	04 47.42	+06 27.8	2.104	2.934	141.0	12.2	18.7	
1991 12 10	05 11.02	+17 43.5	1.567	2.549	174.6	2.1	16.3	
- 9.13	+0.04	+ 5.9	+ 1.9 1985	PC2 14019	- 4.38	+1.34	+ 19.2	+ 2.4
1992 01 09	04 48.37	+18 20.3	1.745	2.615	145.4	12.3	17.0	
1991 12 10	05 12.22	+30 04.8	1.367	2.347	172.4	3.2	16.3	
-12.66	0.00	- 1.5	- 6.7 1984	SQ3 14192	- 6.25	+1.80	- 23.7	+ 0.1
1992 01 09	04 40.54	+29 14.1	1.519	2.389	144.6	13.8	17.1	
1991 12 10	05 13.61	+31 04.2	1.473	2.451	171.4	3.5	17.6	
-12.71	+0.02	- 12.3	- 7.0 1977	RF2 12202	- 6.48	+1.72	- 34.1	+ 0.4
1992 01 09	04 41.70	+29 40.9	1.634	2.503	144.9	13.1	18.3	
1991 12 10	05 13.12	+17 18.5	1.386	2.368	174.0	2.5	16.4	
-11.19	-0.14	- 8.0	+ 2.1 1987	RM1 14352	- 6.17	+1.58	+ 10.8	+ 3.8
1992 01 09	04 43.92	+17 19.5	1.487	2.356	144.1	14.2	17.0	
1991 12 10	05 13.97	+18 36.9	1.774	2.756	175.1	1.8	16.2	
-10.62	-0.21	+ 33.6	+ 1.2 1989	LJ 17208	- 6.90	+1.30	+ 38.5	+ 0.8
1992 01 09	04 44.90	+20 25.9	1.860	2.724	145.0	11.9	16.7	
1991 12 10	05 14.38	+17 18.0	1.775	2.756	173.9	2.2	17.7	
-10.89	-0.12	+ 12.7	+ 1.6 1986	JD 16871	- 6.80	+1.31	+ 23.5	+ 2.0
1992 01 09	04 45.19	+18 11.5	1.895	2.756	144.6	11.9	18.3	
1991 12 10	05 15.09	+06 51.1	2.132	3.090	163.8	5.1	17.0	
- 9.50	-0.10	+ 22.3	+ 6.2 1989	GM 17208	- 6.34	+1.04	+ 53.7	+ 3.8
1992 01 09	04 49.23	+08 49.5	2.248	3.087	142.5	11.2	17.4	
1991 12 10	05 16.93	+33 39.6	1.785	2.758	168.7	4.0	16.8	
-12.24	-0.15	- 27.3	- 7.7 1990	QQ 17212	- 7.41	+1.52	- 54.3	- 0.3
1992 01 09	04 44.35	+31 23.5	1.876	2.742	145.3	11.8	17.3	
1991 12 10	05 18.58	+02 16.7	4.786	5.717	159.1	3.5	18.0	
- 5.01	-0.05	- 14.0	+ 3.8 3104	T-3 16243	- 3.84	+0.42	+ 8.9	+ 3.6
1992 01 09	05 04.44	+02 09.3	4.902	5.713	142.4	6.0	18.2	
1991 12 10	05 19.98	+06 43.8	1.770	2.729	163.4	5.9	15.5	
- 8.95	-0.11	- 24.7	+ 7.5 1990	OD4 17023	- 5.38	+1.16	+ 20.7	+ 6.6
1992 01 09	04 56.15	+06 39.5	1.898	2.748	143.0	12.4	15.9	
1991 12 10	05 21.18	+37 27.9	1.979	2.941	164.8	5.0	17.0	
-10.71	-0.16	+ 5.1	- 8.2 1990	SX16 19028	- 6.48	+1.37	- 31.7	- 2.9
1992 01 09	04 52.58	+36 38.1	2.111	2.978	146.0	10.6	17.5	
1991 12 10	05 21.75	+11 23.2	1.585	2.556	167.7	4.7	17.1	
-10.95	-0.10	- 6.2	+ 5.4 (4555)	16690	- 6.53	+1.37	+ 25.6	+ 4.6
1992 01 09	04 52.83	+11 53.8	1.734	2.598	144.5	12.7	17.7	

1991 12 10	05	21.09	+07	52.2	1.780	2.742	164.4	5.5	16.7
- 8.42	-0.15	- 2.6	+ 6.9	1985 QR	10403	- 5.11	+1.12	+ 36.2	+ 5.2
1992 01 09	04	58.45	+08	45.6	1.895	2.755	144.5	12.0	17.1
1991 12 10	05	23.08	+26	21.9	2.220	3.201	174.2	1.8	17.9
- 9.94	-0.14	- 13.9	- 2.7	2287 T-3	17654	- 6.65	+1.10	- 21.5	+ 0.6
1992 01 09	04	55.90	+25	22.8	2.341	3.218	148.1	9.3	18.4
1991 12 10	05	23.06	+25	22.1	1.936	2.919	174.7	1.8	16.6
- 9.55	-0.16	- 8.9	- 2.3	(4664)	17417	- 6.01	+1.19	- 14.6	+ 0.8
1992 01 09	04	57.23	+24	40.9	2.056	2.938	148.3	10.1	17.2
1991 12 10	05	24.81	+41	42.8	1.973	2.920	160.5	6.5	16.8
-11.93	-0.33	+ 1.3	-10.5	1984 EC	17630	- 7.84	+1.50	- 48.9	- 4.4
1992 01 09	04	51.77	+40	20.2	2.034	2.893	144.8	11.3	17.0
1991 12 10	05	24.90	+36	47.2	1.232	2.199	165.2	6.6	14.4
-12.04	+0.01	- 62.3	-10.8	(4369)	15866	- 5.14	+1.86	- 89.9	+ 2.1
1992 01 09	04	55.72	+32	34.5	1.386	2.277	147.5	13.4	15.0
1991 12 10	05	25.48	+18	00.6	1.308	2.289	172.8	3.1	16.0
-10.80	-0.19	- 22.6	+ 2.0	(4300)	15677	- 5.93	+1.56	- 2.3	+ 4.3
1992 01 09	04	57.17	+17	18.8	1.433	2.322	147.2	13.3	16.7
1991 12 10	05	25.34	+18	55.1	1.245	2.226	173.5	2.9	15.5
- 8.40	-0.29	+ 9.8	+ 2.0	(4915)	18782	- 4.24	+1.48	+ 22.3	+ 2.1
1992 01 09	05	03.09	+19	42.9	1.336	2.238	149.1	13.0	16.1
1991 12 10	05	27.06	+27	19.0	1.047	2.028	172.9	3.5	15.5
-11.92	-0.41	+ 50.0	- 5.2	1977 SG3	12570	- 6.16	+1.98	+ 19.3	- 3.1
1992 01 09	04	55.49	+28	58.8	1.156	2.057	147.9	14.7	16.2
1991 12 10	05	27.92	+18	47.0	1.163	2.143	172.9	3.3	17.3
-11.05	-0.15	+ 0.9	+ 1.7	1976 UG15	12438	- 5.51	+1.68	+ 14.0	+ 2.6
1992 01 09	04	59.72	+19	07.5	1.321	2.218	148.2	13.5	18.1
1991 12 10	05	27.18	+16	46.8	2.237	3.215	171.7	2.5	17.4
- 9.15	-0.12	- 20.1	+ 1.7	1989 GF4	18116	- 6.21	+0.99	- 5.2	+ 3.1
1992 01 09	05	02.10	+16	06.2	2.380	3.256	148.0	9.2	17.9
1991 12 10	05	28.45	+30	49.6	1.891	2.866	170.1	3.4	16.8
- 9.73	-0.20	+ 1.5	- 5.0	1985 VD1	16871	- 6.07	+1.25	- 19.6	- 1.2
1992 01 09	05	02.08	+30	15.5	2.027	2.915	149.2	9.9	17.3
1991 12 10	05	30.53	+35	08.0	2.004	2.969	166.3	4.5	16.6
-11.50	-0.39	+ 30.4	- 7.0	(4644)	17195	- 8.30	+1.32	- 7.8	- 4.1
1992 01 09	04	57.67	+35	36.4	2.084	2.960	147.3	10.3	16.9
1991 12 10	05	31.02	+25	05.0	1.891	2.871	173.1	2.3	16.7
- 9.72	-0.34	+ 3.9	- 2.1	1990 SP7	18123	- 6.86	+1.17	- 4.5	0.0
1992 01 09	05	03.36	+25	00.2	1.955	2.848	149.7	10.0	17.2
1991 12 10	05	34.69	+20	56.5	1.251	2.231	172.4	3.4	17.6
-11.39	-0.22	- 11.9	0.0	1987 SJ1	15558	- 6.32	+1.62	- 3.9	+ 2.6
1992 01 09	05	04.74	+20	27.9	1.406	2.308	149.6	12.5	18.3
1991 12 10	05	36.93	+15	59.1	1.512	2.486	169.5	4.2	17.4
-11.08	-0.45	- 8.5	+ 2.7	(4594)	17003	- 7.87	+1.37	+ 11.3	+ 3.7
1992 01 09	05	05.14	+16	01.6	1.575	2.468	148.7	12.0	17.9

1991 12 10	05 36.58	+20 31.9	1.492	2.471	171.8	3.2	16.7
-11.13 -0.30	- 31.4	0.0 1989	EY2 15069	- 7.14	+1.43	- 20.4	+ 3.6
1992 01 09	05 05.99	+19 07.2	1.607	2.505	149.6	11.4	17.2
1991 12 10	05 37.11	+24 50.4	1.416	2.395	171.9	3.3	16.0
-10.88 -0.59	+ 9.4 - 2.3	1989	GO 17021	- 7.77	+1.49	- 1.3	- 0.2
1992 01 09	05 05.29	+24 58.5	1.446	2.351	150.2	12.0	16.4
1991 12 10	05 35.70	+21 30.9	2.346	3.325	172.3	2.3	17.3
- 8.65 -0.20	- 7.6 - 0.3	1979	QX9 17627	- 6.21	+0.92	- 5.4	+ 1.2
1992 01 09	05 11.35	+21 08.7	2.476	3.371	151.2	8.1	17.8
1991 12 10	05 36.00	+09 08.7	1.894	2.854	164.2	5.4	16.2
- 8.39 -0.25	- 21.6 + 5.8	(4598)	17004	- 5.77	+1.02	+ 14.9	+ 5.5
1992 01 09	05 12.42	+08 59.3	2.003	2.882	147.6	10.5	16.6
1991 12 10	05 39.21	+44 13.8	1.303	2.244	157.3	9.8	16.8
-11.86 -0.57	- 7.4 -15.4	5161	T-2 16038	- 6.65	+1.96	- 79.5	- 5.7
1992 01 09	05 06.76	+41 45.0	1.375	2.263	146.8	13.7	17.1
1991 12 10	05 34.36	+10 48.2	4.869	5.829	165.8	2.4	17.3
- 5.02 -0.11	- 3.5 + 2.1	1988	TA3 15893	- 4.17	+0.38	+ 9.4	+ 2.1
1992 01 09	05 19.67	+10 57.0	4.948	5.821	150.1	4.8	17.5
1991 12 10	05 37.99	+13 03.0	1.808	2.777	167.2	4.5	16.9
-10.86 -0.29	+ 13.0 + 3.9	1990	KB1 16700	- 7.75	+1.19	+ 33.2	+ 2.6
1992 01 09	05 07.35	+14 14.5	1.932	2.818	148.6	10.5	17.3
1991 12 10	05 36.17	+07 44.5	2.193	3.147	162.9	5.3	16.5
- 7.77 -0.27	- 13.4 + 5.6	1976	GM7 15550	- 5.80	+0.86	+ 21.3	+ 5.2
1992 01 09	05 13.72	+07 57.0	2.258	3.131	147.4	9.7	16.8
1991 12 10	05 38.48	+14 52.8	1.587	2.559	168.4	4.4	17.4
- 9.33 -0.45	- 15.2 + 3.4	2092	T-2 15082	- 6.74	+1.21	+ 9.3	+ 4.3
1992 01 09	05 11.31	+14 42.1	1.630	2.528	149.7	11.3	17.8
1991 12 10	05 38.14	+25 11.4	1.728	2.706	171.6	3.1	17.2
- 8.82 -0.36	+ 4.3 - 2.0	3365	T-2 18303	- 5.96	+1.18	- 4.0	- 0.2
1992 01 09	05 13.12	+25 08.3	1.819	2.726	151.9	9.8	17.6
1991 12 10	05 39.51	+20 41.4	1.716	2.694	171.2	3.2	16.3
- 9.17 -0.37	- 7.3 + 0.2	(4651)	17412	- 6.43	+1.17	- 1.9	+ 1.8
1992 01 09	05 13.25	+20 24.7	1.796	2.702	151.6	10.0	16.8
1991 12 10	05 38.23	+24 55.0	4.593	5.569	171.6	1.5	16.9
- 5.59 -0.14	- 1.4 - 0.8	3108	T-3 15908	- 4.63	+0.44	- 4.6	- 0.2
1992 01 09	05 21.84	+24 44.9	4.676	5.576	153.9	4.4	17.2
1991 12 10	05 43.07	+31 05.1	1.041	2.015	167.8	5.9	16.1
-12.05 -0.52	- 21.0 - 8.2	1984	SR2 15244	- 6.65	+1.94	- 49.1	+ 0.2
1992 01 09	05 10.45	+29 03.9	1.147	2.064	151.2	13.3	16.6
1991 12 10	05 42.55	+29 51.7	1.140	2.114	168.6	5.3	16.4
-11.36 -0.62	+ 29.5 - 6.4	1987	ST11 18813	- 7.00	+1.80	- 5.3	- 3.2
1992 01 09	05 10.51	+30 21.7	1.233	2.146	151.0	12.8	17.0
1991 12 10	05 40.07	+17 39.1	2.210	3.185	169.9	3.1	16.7
- 8.53 -0.26	+ 3.7 + 1.5	1985	VD 18285	- 6.27	+0.92	+ 12.8	+ 1.6
1992 01 09	05 15.68	+18 03.5	2.331	3.231	151.6	8.3	17.1

1991 12 10	05 41.92	+23 42.4	1.869	2.846	171.0	3.1	16.6
- 9.50	-0.40	- 13.9	- 1.5 1988 CJ 17634	- 7.05	+1.12	- 17.0	+ 1.0
1992 01 09	05 14.28	+22 51.3	1.929	2.836	152.1	9.3	17.0
1991 12 10	05 43.35	+25 03.2	1.800	2.776	170.5	3.4	17.6
-10.69	-0.42	- 24.1	- 2.7 3083 P-L 15902	- 7.90	+1.22	- 30.5	+ 1.1
1992 01 09	05 12.43	+23 34.3	1.866	2.772	151.7	9.7	18.0
1991 12 10	05 43.80	+27 05.8	1.357	2.333	169.8	4.3	17.7
-10.79	-0.45	+ 30.2	- 4.0 1978 VG11 16022	- 6.89	+1.53	+ 7.1	- 2.3
1992 01 09	05 13.61	+27 58.4	1.488	2.401	152.0	11.1	18.3
1991 12 10	05 42.98	+24 18.2	2.413	3.388	170.7	2.7	17.4
- 8.48	-0.36	+ 2.0	- 1.3 1982 FP3 18622	- 6.86	+0.85	- 3.7	- 0.2
1992 01 09	05 17.72	+24 13.5	2.450	3.356	153.0	7.7	17.7
1991 12 10	05 44.67	+22 36.4	2.539	3.514	170.3	2.7	17.8
- 8.42	-0.27	+ 1.9	- 0.6 1978 NY7 18619	- 6.57	+0.82	- 0.2	+ 0.2
1992 01 09	05 20.15	+22 37.3	2.649	3.556	153.4	7.1	18.2
1991 12 10	05 45.59	+26 36.5	0.943	1.920	169.6	5.3	17.7
- 9.44	-0.78	+ 2.3	- 4.0 1981 ED35 10824	- 5.61	+1.82	- 14.8	- 0.4
1992 01 09	05 18.17	+26 11.0	0.993	1.922	153.1	13.4	18.2
1991 12 10	05 46.05	+07 14.8	1.329	2.283	161.3	8.0	16.0
- 8.97	-0.43	- 60.3	+ 9.1 1982 TG1 13448	- 5.90	+1.29	+ 2.1	+ 9.8
1992 01 09	05 20.55	+05 46.3	1.427	2.319	147.7	13.1	16.4
1991 12 10	05 46.58	+19 56.6	2.243	3.216	169.4	3.2	16.6
- 8.70	-0.31	+ 11.5	+ 0.5 1985 UW4 17017	- 6.68	+0.90	+ 13.9	+ 0.5
1992 01 09	05 21.27	+20 34.5	2.364	3.273	153.4	7.7	17.0
1991 12 10	05 47.26	+22 27.4	1.671	2.646	169.7	3.8	18.1
- 9.63	-0.51	- 9.5	- 0.9 4060 P-L 14960	- 7.32	+1.19	- 9.8	+ 1.2
1992 01 09	05 18.69	+21 54.6	1.720	2.635	153.0	9.7	18.4
1991 12 10	05 47.87	+28 33.9	1.600	2.572	168.3	4.4	18.2
-10.63	-0.59	- 1.8	- 4.4 1981 EB17 7768	- 8.02	+1.34	- 22.7	- 1.3
1992 01 09	05 16.32	+27 51.4	1.645	2.558	152.6	10.2	18.5
1991 12 10	05 46.72	+22 20.1	2.230	3.204	169.8	3.1	16.7
- 8.50	-0.42	- 1.3	- 0.5 1932 CY 18617	- 6.99	+0.88	- 2.5	+ 0.5
1992 01 09	05 21.08	+22 12.5	2.253	3.164	153.6	7.9	16.9
1991 12 10	05 49.89	+23 14.5	1.563	2.537	169.2	4.2	17.9
-10.39	-0.65	- 7.9	- 1.5 4247 P-L 14960	- 8.27	+1.27	- 12.1	+ 0.8
1992 01 09	05 18.34	+22 40.2	1.582	2.498	153.0	10.3	18.1
1991 12 10	05 48.60	+54 26.4	4.391	5.246	147.2	5.8	16.7
- 8.70	-0.30	+ 0.5	- 7.2 (4867) 18407	- 7.12	+0.77	- 40.0	- 5.4
1992 01 09	05 22.89	+53 23.7	4.432	5.245	142.3	6.6	16.7
1991 12 10	05 49.04	+22 36.4	1.481	2.455	169.3	4.3	15.7
- 8.52	-0.61	+ 9.3	- 0.3 (4624) 17187	- 6.44	+1.22	+ 7.4	+ 0.2
1992 01 09	05 23.21	+23 00.4	1.513	2.436	154.2	10.1	16.0
1991 12 10	05 51.21	+21 05.6	2.072	3.044	168.6	3.7	18.2
- 8.90	-0.40	+ 3.2	0.0 6726 P-L 17219	- 7.04	+0.95	+ 4.4	+ 0.6
1992 01 09	05 24.80	+21 15.9	2.157	3.073	154.3	8.0	18.6

1991 12 10	05 52.03	+20 01.7	1.917	2.888	168.2	4.0	16.6	
- 8.78	-0.48	- 0.2	+ 0.6	1990 QS2 17825	- 7.09	+0.98	+ 4.7	+ 1.2
1992 01 09	05 25.53	+20 07.2	1.967	2.885	154.3	8.5	16.9	
1991 12 10	05 53.84	+23 38.7	2.106	3.077	168.2	3.7	16.4	
- 8.90	-0.51	+ 28.4	- 0.7	1982 BQ4 13157	- 7.55	+0.92	+ 20.5	- 1.3
1992 01 09	05 26.53	+24 53.2	2.151	3.070	155.0	7.8	16.7	
1991 12 10	05 53.19	+24 14.6	2.281	3.252	168.4	3.5	16.8	
- 8.64	-0.36	+ 2.6	- 1.3	(4741) 17809	- 6.86	+0.88	- 3.4	- 0.3
1992 01 09	05 27.64	+24 11.5	2.387	3.306	155.2	7.2	17.1	
1991 12 10	05 54.46	+20 04.2	2.061	3.030	167.7	4.0	17.3	
- 8.76	-0.45	+ 0.5	+ 0.5	1985 RC4 13475	- 7.17	+0.92	+ 4.6	+ 1.0
1992 01 09	05 28.02	+20 11.0	2.124	3.044	154.9	7.9	17.6	
1991 12 10	05 56.17	+31 32.8	1.736	2.700	165.3	5.3	18.3	
-10.27	-0.63	+ 2.2	- 5.5	4004 P-L 17461	- 8.15	+1.23	- 26.9	- 2.7
1992 01 09	05 25.09	+30 50.6	1.786	2.704	154.0	9.2	18.5	
1991 12 10	05 56.32	+10 04.4	2.015	2.967	-0.97	+0.4	17.8	
- 9.92	-0.37	- 19.8	+ 5.0	1990 KL 17210	- 7.85	+0.97	+ 11.2	+ 4.7
1992 01 09	05 27.17	+09 51.9	2.131	3.031	-0.94	+0.2	18.2	
1991 12 10	05 51.62	+10 49.4	4.702	5.652	163.3	2.9	17.9	
- 5.08	-0.17	+ 0.8	+ 2.2	5191 T-3 14029	- 4.51	+0.35	+ 13.7	+ 2.0
1992 01 09	05 36.28	+11 11.4	4.773	5.673	153.9	4.4	18.1	
1991 12 10	05 54.32	+02 05.9	1.907	2.834	155.8	8.2	16.1	
- 7.67	-0.44	- 10.5	+ 9.1	1990 QG2 18821	- 6.22	+0.87	+ 42.4	+ 7.3
1992 01 09	05 31.06	+02 57.0	1.960	2.843	148.1	10.5	16.3	
1991 12 10	05 56.68	+31 06.0	2.224	3.187	165.4	4.5	17.0	
- 9.23	-0.47	+ 3.3	- 4.2	(4409) 16016	- 7.57	+0.96	- 19.4	- 2.4
1992 01 09	05 28.84	+30 38.5	2.293	3.210	154.8	7.5	17.3	
1991 12 10	05 56.66	+10 19.2	1.442	2.398	162.1	7.3	17.7	
- 8.63	-0.67	- 19.3	+ 6.5	1260 T-2 15078	- 7.05	+1.13	+ 22.7	+ 6.4
1992 01 09	05 29.81	+10 24.4	1.462	2.376	152.1	11.2	17.9	
1991 12 10	05 56.74	+03 13.6	1.490	2.425	156.5	9.3	15.9	
- 8.62	-0.66	+ 7.1	+11.0	1984 FS 12965	- 7.24	+1.08	+ 68.3	+ 7.8
1992 01 09	05 29.73	+05 12.6	1.501	2.400	149.3	12.1	16.0	
1991 12 10	05 56.44	+22 41.1	2.206	3.175	-1.02	-0.8	17.6	
- 8.60	-0.40	+ 5.1	- 0.6	1990 QP3 17640	- 6.97	+0.88	+ 2.1	0.0
1992 01 09	05 30.73	+22 50.7	2.304	3.227	-0.96	-1.3	17.9	
1991 12 10	05 58.34	+19 05.8	1.377	2.346	166.5	5.6	17.5	
- 9.66	-0.82	+ 0.5	+ 1.6	1981 EE1 10820	- 8.21	+1.26	+ 10.6	+ 2.0
1992 01 09	05 27.67	+19 21.7	1.376	2.304	154.7	10.5	17.7	
1991 12 10	06 00.03	+21 01.0	1.455	2.424	166.6	5.4	16.6	
-11.22	-0.53	- 15.7	0.0	1987 SX17 15415	- 8.18	+1.36	- 10.7	+ 2.0
1992 01 09	05 27.43	+20 17.4	1.578	2.503	154.8	9.6	17.0	
1991 12 10	05 55.01	-35 07.7	1.058	1.776	120.8	28.4	15.2	
- 5.89	-0.73	- 86.8	+35.5	(4969) 19004	- 3.44	+1.40	+113.8	+27.6
1992 01 09	05 37.07	-34 12.6	1.123	1.815	118.8	28.3	15.4	

1991 12 10	05 58.98	+19 42.0	1.787	2.755	166.6	4.8	16.9
- 9.10	-0.51 - 15.8	+ 0.7 1981	TJ 13598	- 7.28	+1.04	- 7.8	+ 2.1
1992 01 09	05 31.55	+19 04.0	1.863	2.788	155.5	8.4	17.2
1991 12 10	05 58.76	+19 58.6	2.006	2.973	166.7	4.4	17.3
- 9.24	-0.47 - 5.5	+ 0.5 1990	QU5 18296	- 7.60	+0.95	- 0.9	+ 1.3
1992 01 09	05 30.88	+19 47.6	2.082	3.005	155.5	7.8	17.5
1991 12 10	05 59.72	+36 10.3	2.058	3.010	161.8	5.9	16.7
- 9.26	-0.59 - 0.4	- 6.6 1978	RY6 17815	- 7.65	+1.05	- 36.7	- 4.0
1992 01 09	05 31.32	+35 09.7	2.095	3.010	153.9	8.3	16.9
1991 12 10	05 58.07	-01 15.1	1.713	2.626	152.4	10.0	15.5
- 7.32	-0.54 - 47.7	+11.0 1976	GK3 17815	- 6.10	+0.91	+ 23.8	+10.9
1992 01 09	05 35.27	-01 50.8	1.742	2.613	145.7	12.3	15.6
1991 12 10	05 58.38	-22 14.3	0.940	1.765	133.0	24.1	15.7
- 7.01	-0.93 - 90.3	+30.8 5119	T-3 14797	- 5.22	+1.45	+103.4	+28.2
1992 01 09	05 35.63	-21 50.0	0.945	1.745	129.6	25.7	15.8
1991 12 10	06 00.34	+06 01.5	2.003	2.941	158.2	7.1	17.4
- 8.54	-0.52 - 31.5	+ 6.5 1989	KK 15070	- 7.50	+0.84	+ 11.8	+ 6.9
1992 01 09	05 33.77	+05 31.1	2.023	2.918	150.3	9.6	17.5
1991 12 10	06 04.98	+41 01.1	1.899	2.834	157.6	7.6	17.5
-12.08	-0.83 + 9.0	- 9.8 3535	P-L 17461	-10.31	+1.33	- 48.5	- 6.8
1992 01 09	05 27.38	+39 56.1	1.915	2.816	151.1	9.7	17.6
1991 12 10	06 01.68	+16 42.2	0.988	1.955	164.9	7.6	16.0
- 8.13	-0.90 + 7.7	+ 4.8 1984	DX 13475	- 6.03	+1.48	+ 31.4	+ 2.8
1992 01 09	05 36.03	+17 44.6	1.035	1.976	156.3	11.6	16.3
1991 12 10	06 03.36	+20 54.9	2.028	2.993	165.8	4.6	16.5
- 8.24	-0.50 - 1.0	+ 0.3 (4622)	17187	- 6.95	+0.88	+ 1.4	+ 0.7
1992 01 09	05 38.04	+20 54.9	2.101	3.033	157.4	7.2	16.7
1991 12 10	06 07.89	+26 35.8	1.602	2.565	164.7	5.8	17.5
-11.74	-0.63 - 12.0	- 3.4 1987	SO 14620	- 9.24	+1.31	- 26.6	- 0.4
1992 01 09	05 32.82	+25 32.2	1.707	2.637	156.4	8.6	17.9
1991 12 10	06 07.88	+26 19.3	1.441	2.405	164.8	6.2	18.2
-10.91	-0.63 + 4.8	- 3.1 1982	SO5 13691	- 8.19	+1.36	- 11.3	- 1.2
1992 01 09	05 35.55	+26 05.9	1.573	2.508	157.0	8.8	18.6
1991 12 10	06 06.70	+30 24.5	1.668	2.628	163.8	6.0	16.5
- 9.65	-0.74 + 5.5	- 4.6 1986	UV 17958	- 8.19	+1.16	- 21.5	- 2.9
1992 01 09	05 36.41	+29 57.1	1.710	2.641	156.6	8.5	16.7
1991 12 10	06 08.57	+22 42.3	1.109	2.076	164.8	7.1	16.8
-10.77	-0.94 + 11.1	- 0.5 1971	UD1 18618	- 8.44	+1.56	+ 5.4	- 0.3
1992 01 09	05 35.10	+23 06.5	1.179	2.119	156.9	10.5	17.2
1991 12 10	06 06.32	+25 56.4	2.002	2.965	165.2	4.9	16.5
- 8.86	-0.59 - 20.3	- 2.4 1985	TS1 17631	- 7.72	+0.92	- 29.8	- 0.1
1992 01 09	05 38.64	+24 37.1	2.031	2.965	157.7	7.2	16.6
1991 12 10	06 09.43	+31 23.8	1.862	2.819	162.9	5.9	17.3
-10.69	-0.75 + 9.8	- 5.0 1974	FO 17424	- 9.45	+1.11	- 20.5	- 3.6
1992 01 09	05 35.77	+31 05.1	1.898	2.825	156.2	8.1	17.4



1991 12 10	06 07.93	+18 06.3	1.972	2.932	164.0	5.3	18.2	
- 8.30	-0.54	- 1.5	+ 1.7 1979	MW2 17426	- 7.21	+0.86	+ 8.0	+ 1.6
1992 01 09	05 42.05	+18 16.3	2.039	2.973	157.8	7.2	18.4	
1991 12 10	06 11.85	+40 51.4	2.188	3.117	156.8	7.1	17.7	
-10.98	-0.74	+ 17.9	- 8.3 1980	FV2 17427	- 9.73	+1.10	- 32.6	- 6.5
1992 01 09	05 37.38	+40 26.2	2.235	3.140	152.5	8.3	17.8	
1991 12 10	06 09.96	+15 25.1	1.231	2.191	162.5	7.8	16.9	
- 9.33	-1.08	+ 5.0	+ 4.8 1990	QC8 18297	- 9.00	+1.22	+ 31.2	+ 3.6
1992 01 09	05 38.20	+16 21.7	1.197	2.135	156.4	10.6	16.9	
1991 12 10	06 11.77	+27 38.1	1.904	2.862	163.7	5.5	17.3	
-10.14	-0.73	+ 4.5	- 3.0 1990	QY3 17214	- 9.18	+1.01	- 14.2	- 2.1
1992 01 09	05 39.58	+27 21.9	1.932	2.867	157.7	7.5	17.5	
1991 12 10	06 09.32	+12 36.9	1.834	2.784	161.2	6.5	16.3	
- 8.00	-0.62	+ 20.4	+ 4.9 1990	QV4 17214	- 7.23	+0.85	+ 43.6	+ 2.5
1992 01 09	05 43.75	+14 17.3	1.873	2.804	156.9	7.9	16.5	
1991 12 10	06 15.08	+31 46.3	1.560	2.514	161.6	7.1	18.0	
-11.76	-0.82	- 4.9	- 6.2 5482	T-2 15259	- 9.79	+1.35	- 38.1	- 2.9
1992 01 09	05 38.73	+30 35.5	1.634	2.568	156.9	8.6	18.2	
1991 12 10	06 09.92	+18 08.3	2.380	3.337	163.6	4.8	17.0	
- 8.36	-0.47	- 16.3	+ 1.1 (4665)	17418	- 7.45	+0.73	- 7.3	+ 1.9
1992 01 09	05 44.00	+17 31.5	2.445	3.377	158.0	6.3	17.2	
1991 12 10	06 13.69	+23 47.4	1.231	2.194	163.7	7.2	16.7	
- 9.95	-1.19	+ 12.7	- 0.7 1982	FA 14615	- 9.71	+1.30	+ 3.2	- 1.3
1992 01 09	05 39.58	+24 12.4	1.200	2.144	157.9	9.9	16.7	
1991 12 10	06 09.52	+32 45.7	4.454	5.400	162.2	3.2	16.7	
- 6.17	-0.31	+ 26.2	- 2.2 1990	VU1 18634	- 5.94	+0.39	+ 10.7	- 2.6
1992 01 09	05 50.06	+33 41.8	4.510	5.435	158.1	3.9	16.8	
1991 12 10	06 12.96	+22 08.4	2.424	3.380	163.8	4.7	15.8	
- 8.10	-0.58	+ 35.4	+ 0.4 (4672)	17420	- 7.87	+0.67	+ 31.1	- 1.4
1992 01 09	05 46.69	+23 51.5	2.441	3.380	159.6	5.8	15.8	
1991 12 10	06 15.59	+03 28.7	1.786	2.705	-1.14	+5.3	18.0	
-10.34	-0.62	- 76.7	+ 8.3 1990	KO 17210	- 9.11	+0.97	- 16.1	+10.2
1992 01 09	05 43.48	+01 05.8	1.859	2.750	-1.10	+5.2	18.2	
1991 12 10	06 13.32	+30 49.8	2.243	3.196	162.4	5.4	17.2	
- 8.56	-0.61	+ 13.9	- 3.6 1984	SR5 17630	- 7.81	+0.83	- 9.4	- 3.2
1992 01 09	05 46.11	+30 55.9	2.295	3.230	158.3	6.5	17.3	
1991 12 10	06 16.90	+24 35.2	1.469	2.428	162.9	6.8	16.8	
-10.33	-0.99	+ 3.6	- 1.6 1989	CW 16876	- 9.74	+1.17	- 8.2	- 1.2
1992 01 09	05 42.78	+24 27.5	1.473	2.416	158.7	8.5	16.8	
1991 12 10	06 09.02	+15 33.5	4.210	5.159	162.8	3.2	17.6	
- 5.27	-0.26	- 9.5	+ 1.4 (4829)	18272	- 5.01	+0.35	- 0.7	+ 1.5
1992 01 09	05 52.48	+15 18.0	4.239	5.170	159.2	3.9	17.7	
1991 12 10	06 13.88	+30 36.1	2.521	3.472	162.3	4.9	17.1	
- 8.34	-0.60	+ 12.1	- 3.1 1982	FX3 13856	- 8.03	+0.70	- 8.9	- 3.0
1992 01 09	05 46.91	+30 40.7	2.520	3.454	158.6	6.0	17.2	

1991 12 10	06 19.89	+33 23.1	1.066	2.020	160.0	9.6	16.3
-10.23	-1.37	+ 5.5 - 8.1	1984 WM1 12205	- 9.32	+1.62	- 45.0	- 5.5
1992 01 09	05 45.01	+32 18.9	1.073	2.018	157.6	10.7	16.4
1991 12 10	06 17.25	+13 48.7	2.447	3.390	160.2	5.6	17.8
- 8.13	-0.50	- 5.9 + 2.9	(4647) 17411	- 7.62	+0.65	+ 11.1	+ 2.5
1992 01 09	05 51.50	+13 57.1	2.504	3.437	158.4	6.0	17.9
1991 12 10	06 18.72	+09 37.2	1.874	2.810	157.6	7.7	17.0
- 8.48	-0.70	- 0.9 + 5.9	1980 DX 17627	- 8.16	+0.80	+ 32.2	+ 4.5
1992 01 09	05 51.00	+10 26.6	1.894	2.824	156.6	8.0	17.0
1991 12 10	06 20.14	+31 37.9	2.181	3.128	160.7	6.0	16.2
- 8.51	-0.79	+ 41.0 - 3.1	1977 KL1 12324	- 8.68	+0.76	+ 13.0	- 4.9
1992 01 09	05 51.48	+33 02.2	2.175	3.112	158.6	6.6	16.3
1991 12 10	06 20.24	+24 53.8	2.228	3.180	162.2	5.4	17.2
- 8.30	-0.71	+ 33.9 - 0.5	1967 GM1 16020	- 8.39	+0.70	+ 23.1	- 2.4
1992 01 09	05 52.61	+26 22.8	2.229	3.174	160.7	5.9	17.2
1991 12 10	06 14.46	-03 25.8	4.628	5.492	148.5	5.4	17.8
- 4.76	-0.25	- 5.3 + 4.9	1988 RG1 18290	- 4.69	+0.28	+ 24.5	+ 4.6
1992 01 09	05 59.32	-02 56.2	4.638	5.502	148.7	5.3	17.8
1991 12 10	06 19.74	+21 57.1	1.896	2.849	162.2	6.1	17.1
- 7.67	-0.79	+ 2.3 + 0.3	2083 T-2 14964	- 7.84	+0.76	+ 1.8	0.0
1992 01 09	05 53.60	+22 03.9	1.864	2.812	161.1	6.5	17.1
1991 12 10	06 21.15	+26 16.6	1.679	2.633	161.9	6.7	16.6
- 8.40	-0.78	+ 14.7 - 1.9	1979 SD9 15702	- 7.69	+0.97	- 0.3	- 2.2
1992 01 09	05 53.77	+26 38.7	1.749	2.698	161.0	6.8	16.8
1991 12 10	06 22.82	+28 42.5	1.729	2.680	161.1	6.9	17.3
- 9.17	-0.92	+ 12.8 - 3.1	1990 QS1 17963	- 9.06	+0.96	- 10.2	- 3.3
1992 01 09	05 51.99	+28 46.8	1.732	2.678	160.1	7.2	17.4
1991 12 10	06 23.31	+07 30.9	2.212	3.134	155.3	7.5	17.4
- 8.14	-0.64	+ 6.6 + 6.0	1989 GJ 18817	- 8.18	+0.64	+ 39.9	+ 4.4
1992 01 09	05 56.46	+08 43.7	2.217	3.144	156.7	7.1	17.4
1991 12 10	06 24.87	+25 57.4	1.865	2.815	161.1	6.5	17.0
- 8.64	-0.81	+ 8.7 - 1.6	(4623) 17187	- 8.49	+0.85	- 4.5	- 1.9
1992 01 09	05 56.10	+26 04.3	1.889	2.839	161.6	6.3	17.0
1991 12 10	06 25.99	+03 44.6	1.916	2.825	152.3	9.3	17.5
- 8.49	-0.68	- 19.1 + 8.2	(4567) 16860	- 8.23	+0.76	+ 30.2	+ 7.1
1992 01 09	05 58.25	+04 03.2	1.960	2.875	153.9	8.7	17.5
1991 12 10	06 23.91	+27 30.0	2.755	3.700	161.1	5.0	16.5
- 7.43	-0.58	+ 26.6 - 1.4	1990 WK 17647	- 7.54	+0.55	+ 12.8	- 2.6
1992 01 09	05 59.38	+28 31.2	2.775	3.722	161.8	4.7	16.5
1991 12 10	06 26.03	+23 01.9	1.891	2.840	160.8	6.5	17.3
- 7.75	-0.76	+ 6.0 - 0.1	1306 T-2 17652	- 7.72	+0.78	+ 2.0	- 0.7
1992 01 09	05 59.97	+23 15.0	1.917	2.871	162.6	5.9	17.4
1991 12 10	06 27.51	+18 24.3	1.759	2.705	159.7	7.3	17.0
- 8.09	-0.85	- 4.9 + 1.9	1986 WO9 17633	- 8.37	+0.79	+ 5.3	+ 1.5
1992 01 09	05 59.79	+18 25.6	1.752	2.704	161.9	6.5	17.0

1991 12 10	06 27.68	+23 30.8	2.058	3.004	160.5	6.3	16.5
- 7.93	-0.71	+ 6.6 - 0.4	(4592)	17002	- 7.86	+0.73	+ 1.2 - 0.9
1992 01 09	06 01.33	+23 43.4	2.098	3.052	162.9	5.4	16.6
1991 12 10	06 32.79	+26 00.7	1.722	2.666	159.3	7.5	17.6
-10.35	-1.03	+ 29.7 - 1.4	(4331)	15688	-10.74	+0.94	+ 10.9 - 3.5
1992 01 09	05 57.50	+27 05.7	1.730	2.681	161.7	6.6	17.5
1991 12 10	06 31.55	+24 04.0	1.734	2.679	159.6	7.4	17.4
- 9.42	-1.04	+ 4.2 - 0.8	1989 EM	18116	-10.23	+0.83	- 5.3 - 1.5
1992 01 09	05 58.62	+24 03.5	1.689	2.643	162.3	6.5	17.2
1991 12 10	06 30.41	+23 15.2	1.944	2.889	159.8	6.7	17.3
- 8.96	-0.83	- 5.8 - 0.6	1982 UU5	14784	- 9.13	+0.78	- 10.9 - 0.5
1992 01 09	06 00.31	+22 49.9	1.948	2.901	162.7	5.8	17.2
1991 12 10	06 32.34	+24 53.6	1.338	2.287	159.4	8.7	16.0
- 8.93	-1.28	+ 40.6 + 0.1	1989 GF	16876	- 9.96	+1.03	+ 25.5 - 3.9
1992 01 09	05 59.73	+26 40.3	1.316	2.272	162.3	7.6	15.9
1991 12 10	06 34.11	+31 12.2	1.424	2.366	158.0	9.0	17.2
- 9.44	-1.35	+ 20.4 - 4.2	1974 FJ	17424	-10.71	+1.04	- 16.7 - 6.0
1992 01 09	05 59.45	+31 21.2	1.371	2.322	160.8	8.0	17.1
1991 12 10	06 33.25	+26 26.0	1.484	2.430	159.1	8.3	16.4
- 9.55	-1.04	+ 31.7 - 1.8	1987 YK	14620	- 9.43	+1.06	+ 10.5 - 3.8
1992 01 09	06 00.88	+27 33.0	1.542	2.497	162.3	6.9	16.4
1991 12 10	06 24.19	+07 45.5	4.333	5.244	155.3	4.5	17.2
- 5.13	-0.30	- 28.1 + 2.8	1990 TV12	18124	- 5.21	+0.28	- 9.1 + 3.3
1992 01 09	06 07.62	+06 48.7	4.342	5.264	157.5	4.1	17.2
1991 12 10	06 34.96	+24 08.4	1.501	2.446	158.8	8.4	16.9
-10.12	-1.09	+ 24.8 - 0.5	1953 TS2	12784	-10.34	+1.04	+ 11.7 - 2.6
1992 01 09	06 00.31	+25 07.1	1.531	2.487	162.6	6.8	16.9
1991 12 10	06 32.34	+12 28.7	1.559	2.492	156.3	9.1	16.1
- 8.61	-1.01	- 37.2 + 4.3	(4676)	17421	- 9.32	+0.82	- 4.5 + 5.9
1992 01 09	06 02.05	+11 23.3	1.525	2.470	159.4	8.1	15.9
1991 12 10	06 33.62	+08 09.2	1.240	2.168	153.7	11.6	16.9
- 8.97	-1.05	- 52.6 + 8.6	1987 SW1	12560	- 8.84	+1.07	+ 6.8 + 9.4
1992 01 09	06 02.97	+06 59.0	1.282	2.220	156.8	10.1	16.9
1991 12 10	06 42.65	+29 51.2	0.910	1.855	156.6	12.2	15.9
-11.92	-2.38	+218.9 + 3.2	1990 KK	17021	-15.97	+1.52	+141.8 -23.0
1992 01 09	05 53.55	+39 41.9	0.914	1.854	155.4	12.7	15.9
1991 12 10	06 26.42	+24 40.1	4.233	5.174	160.8	3.6	17.1
- 5.43	-0.34	- 8.4 - 0.5	(4805)	18102	- 5.54	+0.31	- 11.9 - 0.4
1992 01 09	06 08.75	+24 09.4	4.239	5.194	164.6	2.9	17.1
1991 12 10	06 35.13	+20 19.2	1.111	2.059	158.4	10.1	16.4
- 8.90	-1.22	- 3.9 + 1.9	1987 UG	12943	- 8.79	+1.22	+ 3.6 + 1.0
1992 01 09	06 04.05	+20 20.5	1.160	2.121	163.3	7.7	16.5
1991 12 10	06 50.48	+35 42.1	1.308	2.232	153.3	11.4	17.5
-15.44	-2.54	+227.4 - 1.4	1990 MA	16880	-21.42	+1.16	+128.9 -24.7
1992 01 09	05 48.29	+45 20.8	1.310	2.221	150.9	12.4	17.6

1991 12 10	06 33.38	+20 07.0	2.124	3.063	158.8	6.7	18.1
- 7.95	-0.74	+ 6.0	+ 1.1 1985 QM5 18426	- 8.25	+0.65	+ 8.9	+ 0.1
1992 01 09	06 06.52	+20 31.2	2.145	3.102	163.9	5.0	18.0
1991 12 10	06 38.31	+24 40.8	1.450	2.392	158.1	8.8	16.3
- 9.69	-1.18	+ 38.9	- 0.3 1987 UQ3 15416	-10.34	+1.01	+ 22.6	- 3.8
1992 01 09	06 04.21	+26 19.6	1.472	2.431	163.3	6.7	16.3
1991 12 10	06 32.51	+06 25.0	2.616	3.522	152.9	7.3	16.9
- 6.89	-0.59	+ 11.4	+ 5.7 1989 NB1 15072	- 7.42	+0.45	+ 42.9	+ 4.2
1992 01 09	06 09.12	+07 49.4	2.594	3.527	158.5	5.9	16.8
1991 12 10	06 40.46	+32 51.3	1.355	2.291	156.3	10.0	15.6
- 9.88	-1.21	- 34.9	- 6.8 1988 BG4 14792	- 9.76	+1.21	- 70.5	- 2.8
1992 01 09	06 06.50	+30 05.7	1.384	2.341	162.7	7.2	15.6
1991 12 10	06 41.63	+36 14.5	2.221	3.140	154.7	7.7	18.3
-10.42	-0.97	+ 60.3	- 5.2 1990 SK4 17450	-11.07	+0.79	+ 15.3	- 7.9
1992 01 09	06 06.12	+38 13.0	2.278	3.212	158.2	6.5	18.3
1991 12 10	06 39.52	+20 35.1	1.518	2.457	157.4	8.8	16.5
- 8.72	-1.13	+ 17.2	+ 1.8 (4610) 17009	- 9.79	+0.85	+ 19.3	- 0.7
1992 01 09	06 08.10	+21 34.5	1.504	2.466	164.4	6.2	16.3
1991 12 10	06 38.55	+30 38.7	1.877	2.811	157.3	7.8	16.2
- 8.38	-0.94	- 7.1	- 3.7 1985 TA2 18284	- 8.91	+0.79	- 32.1	- 3.3
1992 01 09	06 09.40	+29 39.2	1.876	2.833	163.5	5.7	16.1
1991 12 10	06 34.76	-02 50.2	2.728	3.587	145.9	8.8	17.6
- 6.57	-0.58	- 2.1	+ 8.1 1988 JN 16233	- 7.22	+0.40	+ 47.2	+ 7.3
1992 01 09	06 12.27	-01 41.3	2.680	3.575	151.5	7.5	17.5
1991 12 10	06 37.28	+27 33.1	2.599	3.532	158.1	6.0	17.3
- 7.68	-0.71	+ 22.0	- 1.3 1972 HR 13690	- 8.38	+0.51	+ 7.5	- 2.8
1992 01 09	06 10.92	+28 20.2	2.587	3.544	164.3	4.3	17.2
1991 12 10	06 37.35	+24 12.4	1.760	2.700	158.3	7.8	16.7
- 7.43	-0.92	+ 10.6	- 0.3 2160 T-2 17464	- 8.05	+0.74	+ 3.0	- 1.6
1992 01 09	06 11.06	+24 35.3	1.775	2.737	165.1	5.3	16.7
1991 12 10	06 43.18	+21 18.7	1.544	2.480	156.7	9.0	17.5
- 9.80	-1.18	+ 16.8	+ 1.2 1984 SH 9826	-10.91	+0.88	+ 14.7	- 1.2
1992 01 09	06 08.30	+22 10.5	1.535	2.496	164.5	6.0	17.4
1991 12 10	06 43.29	+27 37.9	1.331	2.270	156.8	9.8	15.7
- 8.99	-1.46	+ 23.6	- 1.7 (4626) 17188	-10.98	+0.95	- 1.1	- 4.8
1992 01 09	06 08.85	+28 17.7	1.280	2.242	163.8	7.0	15.5
1991 12 10	06 43.30	+32 57.9	2.081	3.006	155.6	7.8	17.5
- 9.30	-1.02	+ 33.8	- 3.7 (4639) 17193	-10.45	+0.71	0.0	- 6.1
1992 01 09	06 10.48	+33 53.2	2.066	3.015	161.6	5.9	17.4
1991 12 10	06 46.25	+34 33.6	1.140	2.073	154.5	11.8	16.6
- 9.80	-1.62	+ 29.2	- 6.9 1987 QH3 14197	-10.86	+1.33	- 27.5	- 8.6
1992 01 09	06 09.75	+34 39.3	1.160	2.114	161.1	8.7	16.5
1991 12 10	06 46.50	+32 44.4	1.570	2.498	155.1	9.6	16.6
- 9.36	-1.39	+ 27.6	- 4.1 1938 DM1 17952	-11.38	+0.86	- 12.9	- 7.2
1992 01 09	06 11.22	+33 12.3	1.514	2.468	162.2	7.0	16.4

1991 12 10	06 46.47	+33 12.3	1.517	2.445	154.9	9.8	17.5	
- 9.41	-1.39	+ 24.5	- 4.7	1978 EN10 18104	-11.20	+0.93	- 18.3	- 7.3
1992 01 09	06 11.24	+33 26.5	1.477	2.431	162.0	7.2	17.3	
1991 12 10	06 46.08	+20 59.7	1.935	2.863	156.0	8.0	17.8	
- 8.45	-0.99	+ 15.3	+ 1.3	1986 QX3 14619	- 9.82	+0.61	+ 15.5	- 0.8
1992 01 09	06 15.72	+21 49.9	1.901	2.866	166.2	4.7	17.6	
1991 12 10	06 47.22	+28 57.2	1.446	2.378	155.8	9.8	16.3	
- 8.01	-1.25	+ 8.5	- 2.8	1986 TB12 16873	- 9.34	+0.88	- 16.6	- 4.1
1992 01 09	06 17.23	+28 47.6	1.445	2.409	165.4	5.9	16.2	
1991 12 10	06 39.29	+23 58.1	4.256	5.182	157.8	4.1	16.5	
- 5.09	-0.40	- 2.1	- 0.2	(4708) 17617	- 5.59	+0.25	- 4.7	- 0.5
1992 01 09	06 22.09	+23 48.6	4.229	5.194	167.7	2.3	16.4	
1991 12 10	06 42.52	+03 38.8	2.995	3.874	149.2	7.5	18.4	
- 6.57	-0.57	- 27.9	+ 5.1	1972 HL 15239	- 7.40	+0.33	+ 6.1	+ 5.6
1992 01 09	06 19.90	+03 05.0	2.943	3.865	156.5	5.8	18.2	
1991 12 10	06 48.24	-02 42.8	2.028	2.882	143.8	11.7	18.0	
- 8.50	-0.91	- 78.7	+ 8.5	(4666) 17418	- 9.91	+0.51	- 12.3	+12.0
1992 01 09	06 18.00	-05 06.0	1.981	2.870	149.2	10.1	17.9	
1991 12 10	06 50.08	+21 16.6	1.975	2.898	155.1	8.2	18.4	
- 8.83	-1.03	+ 29.5	+ 1.6	1986 JC 18427	-10.50	+0.57	+ 27.7	- 1.7
1992 01 09	06 18.12	+22 48.5	1.934	2.900	166.8	4.4	18.1	
1991 12 10	06 49.19	+14 33.7	1.134	2.063	153.5	12.3	17.6	
- 7.05	-1.53	- 5.7	+ 6.1	1982 DC2 17432	-10.01	+0.77	+ 29.0	+ 4.5
1992 01 09	06 19.36	+15 11.4	1.057	2.023	165.0	7.2	17.2	
1991 12 10	06 48.51	+06 06.1	1.303	2.209	149.5	13.1	16.6	
- 6.80	-1.34	- 2.6	+10.5	1985 FB2 17436	- 9.61	+0.61	+ 63.2	+ 9.3
1992 01 09	06 20.30	+07 39.1	1.207	2.158	160.2	8.9	16.2	
1991 12 10	06 51.44	+23 30.7	2.247	3.167	155.0	7.5	18.3	
- 9.35	-0.91	+ 1.0	- 0.4	1990 SG4 18822	-10.57	+0.57	- 6.4	- 1.4
1992 01 09	06 18.83	+23 24.5	2.218	3.184	166.9	4.0	18.1	
1991 12 10	06 51.07	+21 30.3	1.785	2.709	154.9	8.9	17.5	
- 8.36	-1.08	- 5.9	+ 0.7	1989 GU3 17443	- 9.99	+0.63	- 5.9	- 0.2
1992 01 09	06 20.38	+21 14.2	1.744	2.711	167.2	4.6	17.3	
1991 12 10	06 50.02	+06 11.8	1.382	2.285	149.3	12.7	15.7	
- 7.09	-1.26	- 17.3	+ 9.3	1989 GN 17020	- 9.47	+0.62	+ 43.0	+ 9.0
1992 01 09	06 21.70	+06 50.8	1.311	2.260	159.8	8.6	15.4	
1991 12 10	06 51.47	+06 07.3	1.721	2.615	149.0	11.2	16.0	
- 7.78	-0.92	- 17.4	+ 8.0	(4509) 16559	- 8.70	+0.65	+ 30.0	+ 6.6
1992 01 09	06 23.84	+06 28.8	1.757	2.702	159.9	7.2	15.9	
1991 12 10	06 50.18	+23 43.8	2.420	3.341	155.3	7.1	16.1	
- 7.17	-0.80	+ 26.1	+ 0.4	(4955) 18799	- 8.42	+0.44	+ 19.9	- 2.0
1992 01 09	06 24.51	+24 57.2	2.405	3.374	168.1	3.5	15.9	
1991 12 10	06 55.51	+31 42.6	1.323	2.248	153.5	11.3	15.6	
- 8.54	-1.50	- 33.0	- 5.9	1988 AF 18628	-10.56	+0.94	- 70.0	- 4.1
1992 01 09	06 22.32	+29 04.8	1.282	2.249	166.3	6.0	15.3	

1991 12 10	06 50.19	+23 06.8	2.257	3.178	155.3	7.4	16.7
- 7.18	-0.82	+ 8.3	+ 0.3 1973 UB5 17197	- 8.30	+0.49	+ 4.4	- 1.2
1992 01 09	06 24.55	+23 28.5	2.254	3.223	168.2	3.6	16.5
1991 12 10	06 53.79	+23 48.8	1.582	2.507	154.5	9.7	14.6
- 7.97	-1.26	- 37.0	- 1.6 (4628) 17189	-10.19	+0.65	- 44.7	- 0.1
1992 01 09	06 23.01	+21 43.7	1.501	2.471	167.9	4.8	14.3
1991 12 10	06 53.13	+18 59.4	1.191	2.120	154.0	11.8	16.7
- 7.36	-1.42	+ 3.8	+ 3.5 1981 EY17 9690	- 9.41	+0.86	+ 16.4	+ 0.8
1992 01 09	06 23.76	+19 34.7	1.183	2.154	167.7	5.6	16.5
1991 12 10	06 55.82	+18 06.1	1.557	2.476	153.2	10.3	18.4
- 9.02	-1.19	- 5.5	+ 2.7 1987 RV3 18288	-10.57	+0.75	+ 5.9	+ 1.3
1992 01 09	06 22.84	+18 09.4	1.556	2.524	167.0	5.0	18.2
1991 12 10	06 56.63	+17 10.5	1.684	2.599	152.7	10.0	17.7
- 8.18	-1.21	+ 12.5	+ 3.7 1990 QM4 17448	-10.60	+0.54	+ 26.5	+ 0.9
1992 01 09	06 25.23	+18 14.0	1.617	2.586	167.6	4.7	17.3
1991 12 10	07 00.41	+31 55.6	1.343	2.262	152.4	11.6	17.1
- 8.11	-1.74	+ 54.5	- 1.7 3236 T-2 14969	-12.25	+0.67	+ 14.8	- 9.6
1992 01 09	06 25.40	+33 54.4	1.253	2.215	164.0	7.0	16.7
1991 12 10	06 59.50	+25 20.2	1.937	2.851	153.3	8.9	18.3
- 8.51	-1.12	+ 12.2	- 0.4 1990 QP1 17213	-10.56	+0.54	+ 0.1	- 2.8
1992 01 09	06 27.83	+25 43.0	1.891	2.862	168.6	3.9	18.0
1991 12 10	06 57.95	+20 59.2	2.069	2.982	153.3	8.5	16.7
- 6.73	-0.92	+ 12.5	+ 1.5 1984 QJ 17630	- 8.36	+0.45	+ 14.4	- 0.7
1992 01 09	06 32.77	+21 43.5	2.056	3.030	170.1	3.2	16.5
1991 12 10	07 04.09	+31 11.2	1.975	2.881	151.8	9.3	18.0
- 8.73	-1.14	+ 35.6	- 2.5 1982 UY6 14785	-10.66	+0.59	+ 5.9	- 6.0
1992 01 09	06 31.80	+32 20.0	1.983	2.947	166.1	4.6	17.8
1991 12 10	06 57.53	+03 42.0	2.718	3.579	146.3	8.8	17.8
- 6.18	-0.69	- 33.4	+ 5.4 1984 SQ4 16696	- 7.61	+0.27	+ 3.9	+ 6.3
1992 01 09	06 35.07	+02 56.1	2.652	3.584	158.3	5.8	17.7
1991 12 10	07 03.67	+17 15.7	1.203	2.120	151.1	13.0	16.8
- 6.67	-1.60	+ 8.1	+ 5.2 1989 FA 17020	-10.49	+0.58	+ 30.0	+ 1.7
1992 01 09	06 33.91	+18 19.4	1.126	2.100	169.5	4.9	16.3
1991 12 10	07 04.98	+00 37.2	1.423	2.287	142.9	15.0	16.9
- 7.33	-1.24	- 17.4	+12.3 1983 RR4 14018	- 9.62	+0.59	+ 58.0	+10.6
1992 01 09	06 36.16	+01 41.2	1.411	2.349	157.3	9.3	16.7
1991 12 10	07 05.00	+11 08.3	1.676	2.569	148.6	11.5	17.9
- 7.04	-1.13	- 43.9	+ 5.0 3016 P-L 15902	- 9.31	+0.48	- 8.0	+ 6.2
1992 01 09	06 37.49	+09 48.0	1.637	2.598	164.5	5.8	17.6
1991 12 10	06 58.53	+12 07.3	3.592	4.476	150.5	6.2	18.0
- 5.18	-0.54	0.0	+ 2.8 1973 SK1 15698	- 6.39	+0.17	+ 15.6	+ 2.2
1992 01 09	06 39.86	+12 31.9	3.510	4.474	167.1	2.8	17.8
1991 12 10	07 07.97	+24 44.1	1.753	2.659	151.3	10.2	16.9
- 7.76	-1.34	+ 2.9	0.0 (4675) 17421	-11.15	+0.40	- 7.2	- 2.6
1992 01 09	06 36.40	+24 42.7	1.639	2.614	170.8	3.5	16.4

1991 12 10	07 08.14	+22 16.7	1.288	2.202	151.1	12.5	15.9
- 7.24	-1.53	+ 6.2	+ 1.8 1983	RD2 17629	-10.41	+0.66	+ 5.5 - 1.5
1992 01 09	06 37.60	+22 40.3	1.258	2.235	171.3	3.8	15.5
1991 12 10	07 28.42	+59 16.9	1.714	2.512	135.4	16.0	16.5
-13.91	-2.81	+ 22.7	-14.4 1988	BN 17206	-19.24	+1.50	-108.2 -23.6
1992 01 09	06 30.63	+57 26.4	1.575	2.439	143.9	13.7	16.2
1991 12 10	07 05.90	+12 39.6	2.163	3.050	149.1	9.6	17.9
- 6.76	-0.95	+ 1.4	+ 4.5 1988	BP3 17206	- 9.00	+0.31	+ 25.1 + 3.0
1992 01 09	06 39.94	+13 22.0	2.089	3.057	167.7	3.9	17.6
1991 12 10	07 06.95	+25 07.4	1.820	2.726	151.6	9.9	16.7
- 6.78	-1.19	+ 15.1	+ 0.3 1990	QP2 17447	- 9.49	+0.42	+ 5.8 - 2.8
1992 01 09	06 39.57	+25 44.6	1.760	2.736	171.1	3.2	16.3
1991 12 10	07 10.39	+16 46.8	1.546	2.446	149.4	11.8	18.1
- 8.25	-1.28	+ 9.2	+ 4.2 1929	PB 9205	-10.66	+0.60	+ 24.6 + 0.9
1992 01 09	06 38.55	+17 43.6	1.545	2.519	170.2	3.8	17.8
1991 12 10	06 58.15	+10 05.8	4.882	5.754	149.7	5.0	17.6
- 4.19	-0.38	- 2.3	+ 2.4 1988	TH1 18430	- 5.06	+0.11	+ 11.8 + 2.1
1992 01 09	06 43.37	+10 20.7	4.800	5.758	165.8	2.4	17.4
1991 12 10	07 00.93	+28 45.6	4.166	5.062	152.8	5.1	17.3
- 4.90	-0.52	+ 20.8	- 0.6 (4722)	17621	- 6.07	+0.16	+ 11.7 - 2.2
1992 01 09	06 43.23	+29 37.1	4.117	5.088	169.7	2.0	17.1
1991 12 10	07 13.37	+25 13.8	1.581	2.484	150.1	11.4	17.7
- 8.18	-1.49	+ 30.6	+ 1.0 1987	RB6 15887	-11.92	+0.47	+ 17.9 - 4.4
1992 01 09	06 39.60	+26 36.5	1.507	2.483	170.8	3.6	17.2
1991 12 10	07 09.29	+24 54.2	1.406	2.318	151.1	11.9	17.6
- 6.61	-1.44	+ 33.3	+ 1.2 4134	T-3 12802	- 9.74	+0.57	+ 21.9 - 4.1
1992 01 09	06 41.04	+26 26.8	1.388	2.364	171.2	3.7	17.2
1991 12 10	07 07.69	+17 08.8	2.118	3.012	150.2	9.4	18.1
- 6.18	-1.04	- 13.4	+ 2.3 1988	LH 15889	- 9.06	+0.22	- 0.7 + 1.8
1992 01 09	06 42.50	+16 48.8	1.972	2.947	170.5	3.2	17.6
1991 12 10	07 07.44	+13 21.8	1.825	2.717	149.0	10.8	16.2
- 5.59	-1.07	+ 3.0	+ 5.1 1987	DC6 18626	- 8.22	+0.32	+ 29.7 + 3.2
1992 01 09	06 44.14	+14 14.5	1.757	2.729	169.1	3.9	15.8
1991 12 10	07 07.81	+16 11.3	2.588	3.476	149.9	8.2	18.1
- 6.37	-0.80	- 2.9	+ 2.6 1990	UF 17454	- 8.20	+0.26	+ 9.4 + 1.4
1992 01 09	06 44.01	+16 23.2	2.533	3.507	170.5	2.6	17.8
1991 12 10	07 16.30	+37 35.1	2.097	2.977	147.8	10.2	18.0
- 8.63	-1.29	+ 22.6	- 4.5 3045	P-L 17836	-11.49	+0.48	- 20.9 - 8.2
1992 01 09	06 42.83	+37 44.7	2.049	3.003	163.1	5.5	17.8
1991 12 10	07 15.70	+22 31.9	1.700	2.596	149.4	11.1	17.9
- 8.00	-1.37	+ 15.8	+ 1.6 1983	GQ 16869	-11.50	+0.40	+ 12.8 - 2.2
1992 01 09	06 43.17	+23 22.0	1.623	2.601	172.5	2.8	17.4
1991 12 10	07 11.77	+25 50.6	2.166	3.062	150.5	9.1	16.7
- 7.07	-1.03	- 5.1	- 0.6 1990	RB 17215	- 9.37	+0.36	- 15.1 - 2.1
1992 01 09	06 44.55	+25 23.1	2.114	3.091	172.3	2.4	16.3

1991 12 10	07 05.29	+24 38.4	4.041	4.932	-0.50	+0.3	17.6
- 4.66	-0.53	+ 13.9	+ 0.2 1989 UX5 16237	- 5.99	+0.13	+ 10.7	- 1.2
1992 01 09	06 48.10	+25 18.0	3.958	4.935	-0.51	+0.1	17.3
1991 12 10	07 15.80	+18 04.1	1.680	2.572	148.5	11.5	17.9
- 7.02	-1.25	+ 2.5	+ 3.4 1978 SS5 13674	- 9.93	+0.41	+ 15.0	+ 0.7
1992 01 09	06 47.30	+18 35.2	1.645	2.623	172.4	2.8	17.5
1991 12 10	07 16.66	+32 36.2	1.637	2.532	148.9	11.6	17.3
- 6.45	-1.53	+ 21.4	- 2.3 1983 CA1 14189	-10.80	+0.33	- 12.3	- 7.6
1992 01 09	06 47.36	+32 59.9	1.520	2.489	167.7	4.8	16.8
1991 12 10	07 05.85	+10 24.8	4.267	5.130	148.1	5.8	17.2
- 4.20	-0.46	+ 1.8	+ 2.8 (4754)	17814	- 5.39	+0.10	+ 17.7
1992 01 09	06 50.43	+10 55.2	4.169	5.133	167.1	2.4	16.9
1991 12 10	07 16.92	+22 02.0	1.173	2.080	149.1	14.1	15.4
- 6.24	-1.69	+ 36.7	+ 3.6 1979 SP13 18415	-10.32	+0.57	+ 36.0	- 3.4
1992 01 09	06 47.90	+24 04.3	1.153	2.133	173.5	3.0	15.0
1991 12 10	07 07.67	+06 43.1	4.350	5.195	145.9	6.1	16.2
- 4.55	-0.45	- 31.5	+ 2.9 (4709)	17617	- 5.70	+0.10	- 11.7
1992 01 09	06 51.27	+05 37.2	4.254	5.199	162.3	3.3	16.0
1991 12 10	07 17.76	+18 27.9	1.584	2.476	148.2	12.1	18.7
- 6.22	-1.43	+ 2.4	+ 3.6 1981 FP 10825	-10.59	+0.21	+ 16.4	+ 0.9
1992 01 09	06 49.52	+19 01.1	1.451	2.430	173.1	2.8	18.0
1991 12 10	07 10.70	+33 58.4	4.625	5.499	149.9	5.2	17.5
- 5.09	-0.52	+ 7.0	- 1.6 1988 RA1 17960	- 6.37	+0.13	- 7.5	- 2.9
1992 01 09	06 52.32	+33 59.9	4.555	5.519	167.3	2.3	17.3
1991 12 10	07 18.00	+25 40.5	1.226	2.132	149.1	13.7	16.4
- 5.39	-1.69	+ 17.0	+ 1.0 1988 BO5 16874	- 9.92	+0.45	+ 5.2	- 4.2
1992 01 09	06 51.06	+26 23.3	1.169	2.148	173.1	3.1	15.8
1991 12 10	07 25.44	+35 40.3	2.096	2.967	146.5	10.5	18.0
- 8.76	-1.48	+ 98.2	- 1.4 1990 SL 17640	-13.24	+0.24	+ 56.6	-11.0
1992 01 09	06 49.28	+39 50.4	2.047	2.996	161.6	5.9	17.8
1991 12 10	07 23.71	+33 11.1	1.778	2.661	147.4	11.5	16.4
- 8.29	-1.43	+ 2.2	- 3.5 1988 AW1 16873	-11.59	+0.49	- 32.6	- 6.5
1992 01 09	06 50.33	+32 31.2	1.734	2.704	168.4	4.2	16.0
1991 12 10	07 19.55	+14 32.7	1.736	2.616	146.7	11.9	16.5
- 6.66	-1.25	+ 44.6	+ 6.3 1990 OE2 17023	-10.07	+0.28	+ 67.3	+ 0.6
1992 01 09	06 51.61	+17 31.2	1.679	2.657	172.6	2.7	16.0
1991 12 10	07 20.71	+20 48.9	2.218	3.098	148.0	9.7	18.3
- 6.03	-1.00	+ 9.0	+ 1.9 1125 T-2 17652	- 8.67	+0.23	+ 12.5	- 0.6
1992 01 09	06 56.38	+21 25.8	2.168	3.149	175.5	1.4	17.9
1991 12 10	07 18.13	+18 51.6	3.061	3.933	148.2	7.6	17.9
- 4.87	-0.75	+ 4.7	+ 1.9 1973 SJ1 13164	- 7.13	+0.07	+ 11.8	+ 0.4
1992 01 09	06 58.63	+19 19.0	2.920	3.901	175.1	1.2	17.5
1991 12 10	07 29.71	+23 23.5	1.572	2.453	146.3	12.9	17.7
- 7.37	-1.47	+ 10.2	+ 1.6 1979 TA 8402	-11.19	+0.39	+ 5.7	- 2.5
1992 01 09	06 58.44	+23 55.0	1.541	2.523	175.8	1.6	17.2