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

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

TWX 710-320-6842 ASTROGRAM CAM ** Brian G. Marsden, Director
Telephone 617-495-7244/7440/7444 ** Conrad M. Bardwell, Associate Director

ERRATA.

MPC	Line		
9684	-11	Add	The identification is by T. Furuta (JAM 1507).
9688	-23	For	E. Bowell read B. A. Skiff and N. G. Thomas

* * * * *

CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Mag.	Obs.
1985 DQ	*	1985 02	16.97500	10 56 56.80	+13 41 52.3	MPC 9524	16.0	046
1985 DQ		1985 02	16.98918	10 56 56.11	+13 42 02.7	MPC 9524		046

* * * * *

DELETED OBSERVATION.

The following observation is to be deleted.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Obs.
1955 VD	*	1955 11	07.04	00 15.5	-05 39	MPC 1351	760

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 9601.

Object		Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	Obs.
1964 EE	*	1964 03	13.39	12 55.8	+06 17	845	15.1	760
1964 EE		1964 03	16.34	12 53.3	+06 26	845	15.9	760
1985 HT1	*	1985 04	25.96272	13 59 44.57	+06 13 20.2	1985 HB		054

* * * * *

IDENTIFICATIONS.

The following list of identifications with numbered minor planets continues that on MPC 9437.

	Note		Note		Note
1977 QB = (706)	1	1979 JJ = (2519)	2	1980 SV = (2244)	3
1980 TJ15= (2244)	1	1982 JM = (3205)	4		

Note 1: identification by O. Kippes. 2: by A. Lowe. 3: double designation 1980 TJ15 = 1980 SV by K. Hurukawa (MPC 9458). 4: by Hurukawa (JAM 1872).

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

043 Asiago. 1.82-m reflector and CCD. Observers C. Barbieri et al.
046 Klet. Observer Z. Vavrova.
071 Bulgarian National Observatory. Observers V. Ivanova, V. Shkodrov, T. Bonev, A. Georgieva and V. Radeva.
114 Engelhardt Observatory, Zelenchukskaya Station. 0.4-m f/5 astrograph. Observers V. N. Kitkin and I. E. Tselishchev. From Kiev Komet. Tsirk. Nos. 334, 336 and 337.
115 Zelenchukskaya. 6-m reflector. Observer Karachentsev.
188 Shokin Majdanak. Observers Novikov and Bugayenko.
330 Purple Mountain Observatory. Observers D.-c. Wang, S.-l. Wei and J.-x. Yang. Communicated by J.-x. Zhang.
372 Geisei. Observer T. Seki. 0.60-m reflector.
378 Murou. Observer T. Kumamori. Long. and Parallax 136.00, -351, -242 (see MPC 7759).
391 Sendai Observatory, Ayashi Station. Observers M. Koishikawa, K. Hozono, T. Sato and K. Kurosu. Reduced by Koishikawa and S. Kasahara.
392 JCPM Sapporo Station. Observer K. Watanabe. 0.16-m Schmidt.
397 Sapporo Science Center. Observer K. Watanabe. 0.6-m reflector.
474 Mt. John University Observatory. Observer A. C. Gilmore. Measured by P. M. Kilmartin (assisted by R. McIntosh and W. M. Kissling).
493 German-Spanish Astronomical Center, Calar Alto. 2.2-m reflector. Observers Neckel et al.
494 Stakenbridge. Observer B. Manning.
657 Victoria. Observers D. D. Balam and J. B. Tatum.
662 Lick Observatory. 0.5-m double astrograph. Observer E. A. Harlan. Measured by A. R. Klemola, B. Jones and R. Goodrich. The May 21 observations of comet 1984e were obtained by H. Spinrad, S. Djorgovski and P. McCarthy with the 3-m reflector; reduced by M. J. S. Belton.
675 Palomar. 1.5-m reflector and CCD. Observer J. Gibson.
688 Lowell Observatory, Anderson Mesa Station. Observers S. J. Bus, T. J. Kreidl and B. A. Skiff. 1.8-m reflector and CCD for comet 1984e, otherwise 0.33-m photographic telescope.
691 University of Arizona, Kitt Peak. 0.91-m reflector, CCD in scanning mode. Observer T. Gehrels. Reductions by J. V. Scotti.
695 Kitt Peak. #1 0.91-m reflector. Observers: H. Cohn, P. Lugger and C. Bailyn. Reduced by M. J. S. Belton.
696 Whipple Observatory. 0.6-m reflector and CCD. Observer R. Schild. Reduced by C.-Y. Shao and R. E. McCrosky.
707 Chamberlin Observatory field station. 0.40-m f/5.5 reflector. Observers J. Briggs and E. Everhart. Measured by Everhart.
711 McDonald Observatory. 2.1-m reflector. Observers A. Whipple and J. D. Mulholland. Measured by Mulholland.
801 Oak Ridge Observatory. Observers R. E. McCrosky, G. Schwartz, C.-Y. Shao (assisted by C. M. Bardwell, D. W. E. Green and B. G. Marsden).
893 Sendai Observatory. Observer K. Kurosu. Reduced by S. Kasahara.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
		Periodic Comet Smirnova-Chernykh					
/1975 VII	1985	03 22.38501	15 56 55.60	-16 26 18.6			801
		Periodic Comet Halley					
/1982i	1984	09 26.06146	06 46 24.71	+12 58 37.6	20.2T	1	115
/1982i	1984	11 24.89945	06 23 34.46	+11 57 52.2		2	188
/1982i	1984	12 23.02819	05 55 30.69	+11 57 13.3			043

/1982i	1984	12	23.10319	05	55	24.86	+11	57	14.1				043
/1982i	1984	12	24.24931	05	54	08.32	+11	57	44.3				711
/1982i	1985	01	20.79668	05	24	05.16	+12	22	40.2			2	188
/1982i	1985	01	20.69524	05	24	11.30	+12	22	32.1			2	188
/1982i	1985	02	13.11698	05	04	27.15	+13	01	26.1				711
/1982i	1985	02	13.17049	05	04	24.99	+13	01	32.7				711
/1982i	1985	02	14.11637	05	03	47.90	+13	03	24.4				711
/1982i	1985	02	14.15928	05	03	46.16	+13	03	29.7				711
/1982i	1985	03	15.84861	04	51	57.20	+14	10	50.9				493
/1982i	1985	03	15.90174	04	51	56.76	+14	10	59.5				493
/1982i	1985	03	16.83576	04	51	48.21	+14	13	18.9				493
/1982i	1985	03	16.89306	04	51	47.71	+14	13	25.4				493
/1982i	1985	03	24.88611	04	51	07.34	+14	33	38.4				493
/1982i	1985	04	10.85521	04	52	31.32	+15	17	29.1				493
/1982i	1985	04	11.84838	04	52	42.51	+15	20	03.0				493

Periodic Comet Wild 2

/1983s	1985	04	15.49155	20	10	55.56	-17	56	40.8				691
/1983s	1985	05	15.42400	20	25	22.94	-17	08	00.6				691
/1983s	1985	05	15.47120	20	25	23.22	-17	07	59.7				691
/1983s	1985	05	15.47383	20	25	23.26	-17	07	59.9				691
/1983s	1985	05	18.45568	20	25	38.46	-17	07	10.5				691
/1983s	1985	05	18.46948	20	25	38.52	-17	07	10.7				691

Periodic Comet Giacobini-Zinner

/1984e	1985	04	13.49224	19	24	00.42	+12	11	59.0			3	696
/1984e	1985	04	13.49896	19	24	01.10	+12	12	07.6				696
/1984e	1985	04	13.49997	19	24	01.19	+12	12	08.8				696
/1984e	1985	04	13.50116	19	24	01.30	+12	12	10.2				696
/1984e	1985	04	13.50218	19	24	01.40	+12	12	11.4				696
/1984e	1985	04	13.50316	19	24	01.49	+12	12	12.7				696
/1984e	1985	04	13.50416	19	24	01.58	+12	12	13.6				696
/1984e	1985	04	13.50519	19	24	01.69	+12	12	15.0				696
/1984e	1985	04	13.50618	19	24	01.78	+12	12	16.2				696
/1984e	1985	04	18.47049	19	32	16.90	+13	54	32.5				662
/1984e	1985	04	27.41840	19	47	17.44	+17	14	37.4				662
/1984e	1985	05	08.44640	20	06	12.49	+21	48	57.4				675
/1984e	1985	05	08.49069	20	06	17.03	+21	50	07.0				675
/1984e	1985	05	12.36667	20	13	06.40	+23	33	40.4				707
/1984e	1985	05	14.44860	20	16	49.00	+24	30	47.8				691
/1984e	1985	05	15.39236	20	18	30.72	+24	56	59.4			4	707
/1984e	1985	05	15.42416	20	18	34.21	+24	57	50.7				657
/1984e	1985	05	15.44639	20	18	36.31	+24	58	26.8				657
/1984e	1985	05	16.33958	20	20	13.48	+25	23	23.7				657
/1984e	1985	05	16.69688	20	20	51.88	+25	33	28.3	16	T		391
/1984e	1985	05	16.69792	20	20	52.19	+25	33	32.3	16	T		372
/1984e	1985	05	16.71076	20	20	53.27	+25	33	54.0				391
/1984e	1985	05	16.72465	20	20	54.91	+25	34	17.9				391
/1984e	1985	05	17.42375	20	22	11.20	+25	54	03.4				657
/1984e	1985	05	17.47890	20	22	17.12	+25	55	41.1				695
/1984e	1985	05	17.47988	20	22	17.24	+25	55	42.8				695
/1984e	1985	05	18.40501	20	23	58.68	+26	22	01.1				691
/1984e	1985	05	18.41966	20	24	00.25	+26	22	25.2				691
/1984e	1985	05	18.43392	20	24	01.79	+26	22	50.7				691
/1984e	1985	05	19.02986	20	25	07.29	+26	40	00.6				071
/1984e	1985	05	19.04048	20	25	08.57	+26	40	14.9				071
/1984e	1985	05	19.04881	20	25	09.57	+26	40	27.3				071
/1984e	1985	05	19.05477	20	25	10.09	+26	40	37.5				071
/1984e	1985	05	19.19746	20	25	25.89	+26	44	39.7			5	801

/1984e	1985	05	19.23139	20	25	29.62	+26	45	38.6				801
/1984e	1985	05	19.37847	20	25	45.82	+26	49	52.7			6	707
/1984e	1985	05	19.41495	20	25	49.67	+26	50	52.7				657
/1984e	1985	05	19.43103	20	25	51.31	+26	51	21.4				657
/1984e	1985	05	19.45804	20	25	54.52	+26	52	11.9				695
/1984e	1985	05	19.99922	20	26	54.30	+27	07	47.0				071
/1984e	1985	05	20.05119	20	27	00.08	+27	09	20.5				071
/1984e	1985	05	20.45327	20	27	44.74	+27	20	56.2				695
/1984e	1985	05	20.99031	20	28	44.69	+27	36	30.7				071
/1984e	1985	05	21.01793	20	28	47.73	+27	37	20.6				071
/1984e	1985	05	21.20779	20	29	08.89	+27	42	48.0				801
/1984e	1985	05	21.30854	20	29	19.90	+27	45	45.2				801
/1984e	1985	05	21.39228	20	29	29.43	+27	48	09.8				657
/1984e	1985	05	21.41617	20	29	32.18	+27	48	54.3				662
/1984e	1985	05	21.41698	20	29	32.23	+27	48	53.2				657
/1984e	1985	05	21.41754	20	29	32.32	+27	48	56.7				662
/1984e	1985	05	21.44705	20	29	35.51	+27	49	48.3				688
/1984e	1985	05	21.45347	20	29	36.23	+27	49	59.6				688
/1984e	1985	05	22.44965	20	31	28.09	+28	19	09.5				688
/1984e	1985	05	22.45313	20	31	28.46	+28	19	15.7				688
/1984e	1985	05	22.45660	20	31	28.84	+28	19	21.9				688
/1984e	1985	05	22.68576	20	31	54.43	+28	26	02.5	16	T		391
/1984e	1985	05	22.70313	20	31	56.28	+28	26	33.3				391
/1984e	1985	05	22.72049	20	31	58.16	+28	27	04.8				391
/1984e	1985	05	23.22307	20	32	55.51	+28	41	54.9				801
/1984e	1985	05	24.25235	20	34	52.43	+29	12	24.9				801
/1984e	1985	05	24.31028	20	34	58.94	+29	14	09.4				801
/1984e	1985	05	24.46034	20	35	16.09	+29	18	37.6				691
/1984e	1985	05	24.47523	20	35	17.73	+29	19	04.4				691
/1984e	1985	05	24.96762	20	36	14.48	+29	33	44.1				071
/1984e	1985	05	25.22754	20	36	44.12	+29	41	29.8				801
/1984e	1985	05	25.38576	20	37	02.39	+29	46	14.4				711
/1984e	1985	05	26.23015	20	38	39.97	+30	11	33.4				801
/1984e	1985	05	26.42639	20	39	02.55	+30	17	30.5				711
/1984e	1985	05	26.64757	20	39	28.70	+30	24	09.1	15	T		391
/1984e	1985	05	26.65104	20	39	28.76	+30	24	10.0				391
/1984e	1985	05	26.66666	20	39	30.85	+30	24	42.4				391
/1984e	1985	05	26.67014	20	39	30.87	+30	24	45.5				391
/1984e	1985	05	26.68229	20	39	32.69	+30	25	11.8				391
/1984e	1985	05	26.68576	20	39	32.65	+30	25	16.8				391
/1984e	1985	05	26.72222	20	39	36.90	+30	26	22.8				391
/1984e	1985	05	26.72569	20	39	37.33	+30	26	29.5				391
/1984e	1985	05	27.34619	20	40	49.95	+30	45	15.9				711
/1984e	1985	05	27.38750	20	40	54.60	+30	46	27.7				657
/1984e	1985	05	27.72118	20	41	33.36	+30	56	37.8	12.5	T		392
/1984e	1985	05	28.41635	20	42	55.66	+31	17	47.4				711
/1984e	1985	05	29.41462	20	44	54.18	+31	48	16.4				711
/1984e	1985	05	29.41485	20	44	54.31	+31	48	16.6				695
/1984e	1985	05	30.36944	20	46	48.81	+32	17	33.5				707
/1984e	1985	05	31.39372	20	48	52.61	+32	49	08.6				657
/1984e	1985	05	31.41484	20	48	55.08	+32	49	48.7				657
/1984e	1985	06	10.28705	21	10	10.63	+38	01	37.4				657
/1984e	1985	06	10.37883	21	10	23.10	+38	04	36.8				657
/1984e	1985	06	10.96588	21	11	44.41	+38	23	26.2				071
/1984e	1985	06	12.46531	21	15	15.65	+39	11	52.4				691
/1984e	1985	06	13.67917	21	18	10.94	+39	51	04.6				372
/1984e	1985	06	13.73597	21	18	19.26	+39	52	55.7	14	T		330
/1984e	1985	06	13.94311	21	18	49.56	+39	59	35.4				071
/1984e	1985	06	14.00852	21	18	59.06	+40	01	43.1				071

/1984e	1985	06	14.58868	21	20	24.12	+40	20	27.9	12.0T	397
/1984e	1985	06	14.97546	21	21	20.86	+40	33	00.5		071
/1984e	1985	06	15.97306	21	23	51.11	+41	05	21.0		071
/1984e	1985	06	16.98125	21	26	25.19	+41	37	59.4		494
/1984e	1985	06	17.00000	21	26	28.12	+41	38	36.2		494
/1984e	1985	06	17.75468	21	28	25.25	+42	03	10.6	14 T	330
/1984e	1985	06	18.74773	21	31	01.87	+42	35	20.9	13 T	330
/1984e	1985	06	18.75468	21	31	03.04	+42	35	34.3		330
/1984e	1985	06	18.79495	21	31	09.35	+42	36	54.5		330
			Periodic Comet Wolf-Harrington								
/1984g	1984	10	23.06666	08	56	37.61	+09	03	37.9		114
/1984g	1984	10	24.02910	08	58	35.09	+08	42	21.7		114
/1984g	1984	10	25.02090	09	00	34.65	+08	20	24.5		114
/1984g	1984	10	26.02774	09	02	34.55	+07	58	04.0		114
			Periodic Comet Faye								
/1984h	1984	10	23.03492	08	42	34.63	+08	32	54.5		114
/1984h	1984	10	24.00241	08	43	59.64	+08	23	17.0		114
/1984h	1984	10	24.99541	08	45	25.73	+08	13	38.8		114
/1984h	1984	10	26.00370	08	46	51.18	+08	03	51.1		114
			Comet Austin (1984i)								
/1984i	1984	10	21.78314	04	23	10.99	+49	18	09.6		114
/1984i	1984	10	21.79490	04	23	03.00	+49	17	58.2		114
/1984i	1984	10	22.77903	04	11	35.15	+49	04	50.9		114
/1984i	1984	10	23.80655	03	59	45.37	+48	46	15.0		114
/1984i	1984	10	24.75268	03	49	02.58	+48	24	51.4		114
/1984i	1984	10	25.77330	03	37	44.47	+47	57	24.4		114
			Periodic Comet Arend-Rigaux								
/1984k	1984	10	23.00842	06	57	44.95	-02	00	43.8		114
/1984k	1984	10	23.97790	07	00	05.92	-02	03	29.7		114
/1984k	1984	10	24.97189	07	02	29.48	-02	06	09.8		114
/1984k	1984	10	25.98063	07	04	54.58	-02	08	47.2		114
/1984k	1985	04	21.09162	09	49	23.48	+31	54	16.7		801
			Periodic Comet Schaumasse								
/1984m	1984	10	26.06003	09	51	12.91	+17	16	15.2		114
/1984m	1984	11	30.11220	12	16	27.32	+08	33	53.1		114
/1984m	1984	11	30.12048	12	16	29.28	+08	33	44.3		114
/1984m	1984	12	01.11601	12	20	24.25	+08	16	46.8		114
/1984m	1985	04	17.33946	16	13	55.40	-08	41	06.2		801
/1984m	1985	04	19.38050	16	11	50.34	-08	44	24.7	7	691
/1984m	1985	04	19.39289	16	11	49.49	-08	44	25.1	7	691
/1984m	1985	04	19.40850	16	11	48.46	-08	44	27.7	7	691
/1984m	1985	04	25.30594	16	05	09.08	-08	54	55.4		801
			Periodic Comet Tsuchinshan 1								
/1984p	1985	03	19.22767	10	34	11.30	+32	07	43.8		801
/1984p	1985	04	11.86721	10	44	47.26	+28	06	39.8	16.6T	046
/1984p	1985	04	11.88131	10	44	47.71	+28	06	34.5		046
/1984p	1985	04	12.85089	10	45	30.25	+27	54	11.5		046
/1984p	1985	04	12.86519	10	45	30.44	+27	54	03.0		046
/1984p	1985	04	14.82618	10	46	59.42	+27	28	42.2		046
/1984p	1985	04	14.84030	10	46	59.61	+27	28	33.8		046
/1984p	1985	04	18.83544	10	50	12.13	+26	35	36.8		046
/1984p	1985	04	18.84962	10	50	13.50	+26	35	25.6		046
/1984p	1985	04	21.12737	10	52	10.27	+26	04	37.2		801

Periodic Comet Shoemaker 1

/1984q	1984	11	22.71071	22	59	12.06	+22	56	42.6			114
/1984q	1984	11	23.71470	22	59	59.71	+23	01	33.4			114
/1984q	1984	11	26.63404	23	02	27.57	+23	15	54.2			114

Comet Shoemaker (1984s)

/1984s	1985	01	30.48654	05	35	16.89	-17	16	37.1			474
/1984s	1985	01	30.49759	05	35	19.45	-17	16	29.7			474
/1984s	1985	04	20.23682	09	13	05.49	-00	42	54.6			691
/1984s	1985	04	20.25037	09	13	07.00	-00	42	51.0			691
/1984s	1985	04	21.05677	09	14	39.24	-00	39	40.1		8	801
/1984s	1985	04	24.05286	09	20	17.78	-00	29	13.9			801
/1984s	1985	05	19.19920	10	04	23.00	-00	07	18.2		9	691
/1984s	1985	05	19.20589	10	04	24.16	-00	07	18.2		9	691
/1984s	1985	05	22.19337	10	09	18.82	-00	11	06.8		9	691
/1984s	1985	05	22.20470	10	09	19.96	-00	11	09.6		9	691

Comet Levy-Rudenko (1984t)

/1984t	1985	04	18.07503	08	24	12.99	+16	53	50.8			801
/1984t	1985	04	20.21198	08	25	35.53	+16	13	03.6			691
/1984t	1985	04	20.22567	08	25	36.01	+16	12	49.5			691
/1984t	1985	04	24.16253	08	28	16.29	+15	02	13.5			691
/1984t	1985	04	24.17583	08	28	16.85	+15	01	59.2			691
/1984t	1985	04	24.18950	08	28	17.31	+15	01	44.8			691

Periodic Comet Tsuchinshan 2

/1985d	1985	04	10.16944	04	03	38.74	+22	54	37.2	22 N	A	675
/1985d	1985	04	10.17333	04	03	39.36	+22	54	38.4		A	675
/1985d	1985	05	08.16431	05	11	47.26	+24	00	36.6	21.5N	A	675
/1985d	1985	05	08.16806	05	11	47.92	+24	00	36.9		A	675

Comet Machholz (1985e)

/1985e	1985	05	28.46180	00	55	18.44	+15	38	10.8			662
/1985e	1985	05	29.7359	01	02	51.7	+16	13	06	9 T		893
/1985e	1985	05	29.7473	01	02	55.6	+16	13	16			893
/1985e	1985	05	29.75822	01	02	59.30	+16	13	28.6			378
/1985e	1985	05	29.78646	01	03	09.0	+16	14	22			372
/1985e	1985	05	30.40486	01	06	57.93	+16	31	21.9			707
/1985e	1985	05	30.46424	01	07	19.80	+16	32	59.2			662
/1985e	1985	06	01.44583	01	20	09.93	+17	28	03.8			688
/1985e	1985	06	03.46007	01	34	14.63	+18	24	22.1			662
/1985e	1985	06	05.44010	01	49	12.07	+19	19	07.0			688
/1985e	1985	06	05.45122	01	49	17.23	+19	19	26.7			688
/1985e	1985	06	05.73750	01	51	31.95	+19	27	14.1	8.0T		391
/1985e	1985	06	05.74479	01	51	35.97	+19	27	34.1			391
/1985e	1985	06	05.77639	01	51	51.5	+19	28	23	8 T		372
/1985e	1985	06	05.78264	01	51	54.0	+19	28	34			372
/1985e	1985	06	06.73611	01	59	37.17	+19	54	14.0			391
/1985e	1985	06	06.73958	01	59	38.69	+19	54	20.3			391
/1985e	1985	06	06.74491	01	59	42.2	+19	54	40	8.0T		391
/1985e	1985	06	06.74653	01	59	42.39	+19	54	35.3			391
/1985e	1985	06	06.75747	01	59	47.8	+19	55	01			391
/1985e	1985	06	07.44149	02	05	30.77	+20	13	03.6			688
/1985e	1985	06	07.45260	02	05	36.58	+20	13	20.6			688
/1985e	1985	06	07.47903	02	05	49.94	+20	14	03.5			675
/1985e	1985	06	07.48340	02	05	52.18	+20	14	10.6			675
/1985e	1985	06	08.48160	02	14	29.60	+20	40	05.1		B	675
/1985e	1985	06	08.48403	02	14	30.89	+20	40	08.8		B	675
/1985e	1985	06	13.45330	03	02	22.14	+22	31	56.9			688

/1985e	1985 06 14.45538	03 13 01.75	+22 49 29.8			688
/1985e	1985 06 15.45573	03 24 00.25	+23 04 44.1			688
/1985e	1985 06 16.45191	03 35 15.76	+23 17 26.9			688
/1985e	1985 06 16.45651	03 35 18.97	+23 17 31.6			688
/1985e	1985 06 17.45790	03 46 57.84	+23 27 34.9			688

Note 1: correction to MPC 9391. 2: correction to MPC 9602. 3: very weak. 4: tail 20" long in p.a. 250 . 5: tail in p.a. 240 . 6: well condensed, round image; trace of tail. 7: diffuse; difficult to locate center. 8: weak image, weak measurement. 9: very faint, difficult and uncertain. A: stellar appearance. B: indication of tail 3′ long near p.a. 260 .

* * * * *

OBSERVATION MADE AT HOHER LIST BY M. HOFFMANN AND M. GEFFERT.

Contact: M. Hoffmann, Astronomisches Institut der Universitat Munster Aussenstation, Hembrich 6, D-5569 Schalkenmehren, Federal Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.		Obs.
1980 JA1	1980 05 11.00833	15 23 37.5	-14 41 37.8			017

OBSERVATIONS MADE AT KLET BY A. MRKOS, Z. VAVROVA, M. MAHROVA AND J. PRUSOVA.

Plates with the 0.6-m Maksutov reflector. Contact: A. Mrkos, Department of Astronomy and Astrophysics, Charles University, Svedska 8, C-15000 Prague 5, Czechoslovakia.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
69	1985 04 21.91204	14 18 58.07	-07 22 37.4				046
69	1985 04 21.92616	14 18 57.37	-07 22 31.6				046
69	1985 04 22.92038	14 18 11.96	-07 16 11.4				046
69	1985 04 22.93456	14 18 11.28	-07 16 06.3				046
239	1985 04 21.98993	14 46 58.39	-10 31 31.1			1	046
239	1985 04 22.00405	14 46 57.61	-10 31 29.0				046
314	1985 05 25.98502	16 29 30.62	-04 08 26.8				046
314	1985 05 25.99920	16 29 30.05	-04 08 23.9				046
415	1985 04 18.87242	12 46 24.70	+06 43 21.0				046
415	1985 04 18.88804	12 46 23.88	+06 43 27.4				046
415	1985 04 19.87468	12 45 41.37	+06 47 01.1				046
415	1985 04 19.88891	12 45 40.74	+06 47 04.9				046
417	1985 05 13.94707	14 40 33.00	-10 30 14.8				046
417	1985 05 13.96119	14 40 32.49	-10 30 09.8				046
417	1985 05 24.94289	14 33 11.24	-09 34 22.9				046
417	1985 05 24.95725	14 33 10.73	-09 34 18.9				046
435	1985 04 18.90986	12 41 25.97	-04 10 07.7				046
435	1985 04 18.92398	12 41 25.19	-04 10 03.3				046
435	1985 04 19.90899	12 40 36.18	-04 05 30.6				046
435	1985 04 19.92311	12 40 35.50	-04 05 26.4				046
435	1985 04 20.89230	12 39 48.02	-04 01 00.3				046
435	1985 04 20.90642	12 39 47.30	-04 00 56.0				046
435	1985 04 22.85319	12 38 14.41	-03 52 21.4				046
435	1985 04 22.86731	12 38 13.63	-03 52 16.9				046
461	1985 04 19.90899	12 45 51.86	-03 26 46.9				046
461	1985 04 19.92311	12 45 51.30	-03 26 43.1				046
461	1985 04 20.89230	12 45 13.28	-03 22 32.9				046
461	1985 04 20.90642	12 45 12.73	-03 22 29.5				046
461	1985 04 22.85319	12 43 58.74	-03 14 25.9				046
461	1985 04 22.86731	12 43 58.13	-03 14 20.4				046
486	1985 05 26.01830	16 31 42.85	-11 15 27.8				046
486	1985 05 26.03242	16 31 42.00	-11 15 32.9				046
633	1985 04 18.87242	12 46 13.84	+07 24 32.6				046

633	1985	04	18.88804	12	46	13.26	+07	24	38.4		046
633	1985	04	19.87468	12	45	34.95	+07	29	08.3		046
633	1985	04	19.88891	12	45	34.42	+07	29	12.8		046
782	1985	05	13.94707	14	33	35.45	-09	10	47.0		046
782	1985	05	13.96119	14	33	34.62	-09	10	46.5		046
782	1985	05	24.94289	14	23	53.47	-09	04	35.4		046
782	1985	05	24.95725	14	23	52.74	-09	04	36.3		046
810	1985	04	18.95350	13	12	50.53	-04	05	52.7		046
810	1985	04	18.96773	13	12	49.70	-04	05	47.2		046
810	1985	04	19.94285	13	11	52.01	-03	59	25.4		046
810	1985	04	19.95697	13	11	51.10	-03	59	19.2		046
810	1985	04	20.93183	13	10	54.41	-03	53	04.8		046
810	1985	04	20.94595	13	10	53.65	-03	52	59.8		046
810	1985	04	21.87795	13	09	59.83	-03	47	05.4		046
810	1985	04	21.89213	13	09	59.06	-03	47	01.7		046
810	1985	04	22.88606	13	09	02.28	-03	40	49.0		046
810	1985	04	22.90024	13	09	01.46	-03	40	44.3		046
852	1985	04	21.87795	13	19	05.56	-06	56	12.0		046
852	1985	04	21.89213	13	19	04.30	-06	56	14.0		046
852	1985	04	22.88606	13	17	40.09	-06	59	33.7		046
852	1985	04	22.90024	13	17	38.87	-06	59	36.8		046
923	1985	04	21.87795	13	16	37.99	-05	33	32.3		046
923	1985	04	21.89213	13	16	37.37	-05	33	25.4		046
923	1985	04	22.88583	13	15	52.80	-05	25	18.1	1	046
923	1985	04	22.90024	13	15	51.98	-05	25	15.1		046
1020	1985	04	21.91204	14	18	18.33	-10	02	25.3		046
1020	1985	04	21.92616	14	18	17.67	-10	02	20.6		046
1083	1985	04	11.90315	11	23	55.72	+13	23	33.1		046
1083	1985	04	11.91727	11	23	55.35	+13	23	31.7		046
1115	1985	05	27.00773	16	07	05.80	-17	27	45.4		046
1115	1985	05	27.02191	16	07	04.91	-17	27	46.3		046
1323	1985	04	21.95457	14	36	29.96	-10	19	37.5		046
1323	1985	04	21.96892	14	36	29.07	-10	19	38.9		046
1323	1985	04	21.98993	14	36	28.09	-10	19	45.3		046
1323	1985	04	22.00405	14	36	27.27	-10	19	47.8		046
1354	1985	04	21.87795	13	13	19.49	-06	56	33.6		046
1354	1985	04	21.89213	13	13	18.77	-06	56	33.9		046
1354	1985	04	22.88606	13	12	30.76	-06	53	50.7		046
1354	1985	04	22.90024	13	12	29.99	-06	53	49.0		046
1364	1985	05	10.93949	14	21	46.52	-06	41	08.0		046
1364	1985	05	10.95431	14	21	45.75	-06	41	08.2		046
1364	1985	05	24.90748	14	11	20.72	-06	48	56.2		046
1364	1985	05	24.92241	14	11	20.16	-06	48	56.9		046
1394	1985	04	18.90986	12	40	13.87	-02	44	57.0		046
1394	1985	04	18.92398	12	40	13.18	-02	44	53.8		046
1394	1985	04	19.90899	12	39	27.33	-02	39	01.5		046
1394	1985	04	19.92311	12	39	26.57	-02	38	56.6		046
1394	1985	04	20.89230	12	38	42.38	-02	33	18.3		046
1394	1985	04	20.90642	12	38	41.69	-02	33	12.1		046
1394	1985	04	22.85319	12	37	15.70	-02	22	10.5		046
1394	1985	04	22.86731	12	37	15.20	-02	22	07.8		046
1443	1985	05	27.00773	16	13	45.40	-18	23	52.6		046
1443	1985	05	27.02191	16	13	44.64	-18	23	49.8		046
1450	1985	04	21.95457	14	34	18.05	-10	16	29.0		046
1450	1985	04	21.96892	14	34	17.08	-10	16	24.8		046
1450	1985	04	21.98993	14	34	16.15	-10	16	22.5		046
1450	1985	04	22.00405	14	34	15.24	-10	16	20.9		046
1487	1985	04	21.91204	14	18	38.20	-10	13	50.3		046
1487	1985	04	21.92616	14	18	37.56	-10	13	46.3		046

1616	1985	04	21.95457	14	33	27.52	-12	27	43.6	046
1616	1985	04	21.96892	14	33	26.85	-12	27	40.8	046
1623	1985	04	21.95457	14	36	46.02	-11	45	59.0	046
1623	1985	04	21.96892	14	36	45.49	-11	45	56.3	046
1623	1985	04	21.98993	14	36	44.21	-11	45	55.8	046
1623	1985	04	22.00405	14	36	43.58	-11	45	49.4	046
1687	1985	04	18.95350	13	15	11.44	-04	13	11.5	046
1687	1985	04	18.96773	13	15	10.75	-04	13	09.5	046
1687	1985	04	19.94285	13	14	29.37	-04	09	18.9	046
1687	1985	04	19.95697	13	14	28.77	-04	09	17.3	046
1687	1985	04	20.93183	13	13	47.89	-04	05	30.4	046
1687	1985	04	20.94595	13	13	47.26	-04	05	27.4	046
1687	1985	04	21.87795	13	13	08.45	-04	01	57.9	046
1687	1985	04	21.89213	13	13	07.84	-04	01	54.5	046
1687	1985	04	22.88606	13	12	26.87	-03	58	10.8	046
1687	1985	04	22.90024	13	12	26.33	-03	58	07.7	046
1698	1985	04	21.87795	13	07	33.75	-06	59	23.5	046
1698	1985	04	21.89213	13	07	33.13	-06	59	18.8	046
1698	1985	04	22.88606	13	06	50.86	-06	55	35.4	046
1698	1985	04	22.90024	13	06	50.21	-06	55	33.8	046
1741	1985	04	18.90986	12	40	58.99	-01	29	45.7	046
1741	1985	04	18.92398	12	40	58.44	-01	29	44.3	046
1741	1985	04	19.90899	12	40	16.54	-01	26	12.0	046
1741	1985	04	19.92311	12	40	16.03	-01	26	12.0	046
1741	1985	04	20.89230	12	39	35.23	-01	22	54.4	046
1741	1985	04	20.90642	12	39	34.77	-01	22	52.6	046
1741	1985	04	22.85319	12	38	15.45	-01	16	25.5	046
1741	1985	04	22.86731	12	38	15.10	-01	16	24.8	046
1833	1985	04	19.87468	12	32	25.21	+06	15	41.9	046
1833	1985	04	19.88891	12	32	24.59	+06	15	45.6	046
1833	1985	04	20.84664	12	31	46.43	+06	21	07.4	046
1833	1985	04	20.86076	12	31	45.99	+06	21	14.9	046
1833	1985	04	21.84230	12	31	07.88	+06	26	34.9	046
1833	1985	04	21.85642	12	31	07.36	+06	26	38.2	046
1914	1985	04	11.90315	11	16	26.45	+13	01	22.4	046
1914	1985	04	11.91727	11	16	25.91	+13	01	24.0	046
1990	1985	04	18.90986	12	46	02.60	-04	10	59.5	046
1990	1985	04	18.92398	12	46	02.07	-04	10	55.0	046
1990	1985	04	19.90899	12	45	15.00	-04	03	48.6	046
1990	1985	04	19.92311	12	45	14.28	-04	03	41.6	046
1990	1985	04	20.89230	12	44	28.90	-03	56	45.5	046
1990	1985	04	20.90642	12	44	28.32	-03	56	41.3	046
1990	1985	04	22.85319	12	43	00.49	-03	43	18.9	046
1990	1985	04	22.86731	12	42	59.90	-03	43	11.8	046
2207	1985	05	10.99539	16	00	16.66	-12	09	05.9	046
2207	1985	05	11.00963	16	00	15.84	-12	09	03.0	046
2207	1985	05	24.97935	15	53	08.45	-11	43	37.3	046
2207	1985	05	24.99359	15	53	07.97	-11	43	35.9	046
2367	1985	05	27.00773	16	09	18.19	-18	14	57.9	046
2367	1985	05	27.02191	16	09	17.06	-18	14	52.9	046
2409	1985	04	21.91204	14	20	02.70	-08	03	25.1	046
2409	1985	04	21.92616	14	20	02.04	-08	03	18.5	046
2415	1985	04	18.95350	13	06	53.61	-03	18	54.1	16.0 046
2415	1985	04	18.96773	13	06	53.06	-03	18	50.3	046
2415	1985	04	19.94285	13	06	05.08	-03	14	33.3	046
2415	1985	04	19.95697	13	06	04.46	-03	14	31.3	046
2415	1985	04	20.93183	13	05	16.93	-03	10	15.5	046
2415	1985	04	20.94595	13	05	16.33	-03	10	12.2	046
2801	1985	04	19.94285	13	09	15.19	-04	00	49.2	046

2801		1985	04	19.95697	13	09	14.37	-04	00	46.6			046
2801		1985	04	20.93183	13	08	24.83	-03	58	18.9			046
2801		1985	04	20.94595	13	08	24.25	-03	58	16.7			046
1984	BT	1985	04	18.98793	14	23	32.37	-03	32	16.5			046
1984	BT	1985	04	19.00222	14	23	31.69	-03	32	13.2			046
1984	BT	1985	04	19.97595	14	22	47.18	-03	29	42.3			046
1984	BT	1985	04	19.99007	14	22	46.60	-03	29	42.0			046
1984	BT	1985	04	20.96644	14	22	01.62	-03	27	15.7			046
1984	BT	1985	04	20.98056	14	22	01.03	-03	27	13.9			046
1984	HA1	1985	04	19.03168	15	30	32.47	+04	04	41.8		16.0	046
1984	HA1	1985	04	19.04586	15	30	32.13	+04	04	47.0			046
1984	HA1	1985	04	20.01044	15	30	09.33	+04	10	00.5			046
1984	HA1	1985	04	20.02178	15	30	09.08	+04	10	04.7			046
1984	HA1	1985	04	20.99635	15	29	45.56	+04	15	18.0			046
1984	HA1	1985	04	21.00492	15	29	45.30	+04	15	20.8			046
1984	HA1	1985	04	22.02083	15	29	20.34	+04	20	45.3			046
1984	HA1	1985	04	22.02807	15	29	20.12	+04	20	47.2			046
1984	HA1	1985	04	22.95233	15	28	56.97	+04	25	39.0		2	046
1984	HA1	1985	04	22.96130	15	28	56.90	+04	25	42.8			046
1984	HA1	1985	05	10.90737	15	20	35.48	+05	47	57.2			046
1984	HA1	1985	05	10.91883	15	20	35.14	+05	48	00.4			046
1984	HA1	1985	05	13.87080	15	19	07.80	+05	58	49.8		15.6	046
1984	HA1	1985	05	13.88214	15	19	07.43	+05	58	52.8			046
1984	HA1	1985	05	24.87328	15	13	47.69	+06	30	49.6			046
1984	HA1	1985	05	24.88468	15	13	47.34	+06	30	51.0			046
1984	HA1	1985	05	25.90233	15	13	18.83	+06	33	06.3			046
1984	HA1	1985	05	25.91367	15	13	18.44	+06	33	07.9			046
1984	HA1	1985	05	27.04347	15	12	46.93	+06	35	29.7			046
1984	HA1	1985	05	27.05481	15	12	46.85	+06	35	31.2			046
1985	HE *	1985	04	18.87242	12	40	59.73	+08	31	06.9		16.7	046
1985	HE	1985	04	18.88804	12	40	58.67	+08	31	08.4			046
1985	HE	1985	04	19.87468	12	40	22.61	+08	38	58.4			046
1985	HE	1985	04	19.88891	12	40	21.99	+08	39	05.9			046
1985	HE	1985	04	20.84664	12	39	47.68	+08	46	30.6			046
1985	HE	1985	04	20.86076	12	39	47.18	+08	46	36.9			046
1985	HE	1985	04	21.84230	12	39	13.76	+08	53	59.8			046
1985	HE	1985	04	21.85642	12	39	13.04	+08	54	05.2			046
1985	HF *	1985	04	18.87242	12	41	19.00	+08	38	50.6		17.2	046
1985	HF	1985	04	18.88804	12	41	18.31	+08	39	01.0			046
1985	HG *	1985	04	18.95350	13	05	14.33	-03	09	12.4		16.7	046
1985	HG	1985	04	18.96773	13	05	13.57	-03	09	08.4			046
1985	HH *	1985	04	18.95350	13	08	05.79	-03	27	12.8			046
1985	HH	1985	04	18.96773	13	08	04.92	-03	27	06.5			046
1985	HH	1985	04	19.94285	13	07	17.62	-03	21	09.6			046
1985	HH	1985	04	19.95697	13	07	16.74	-03	21	03.8			046
1985	HH	1985	04	20.93183	13	06	30.18	-03	15	11.7			046
1985	HH	1985	04	20.94595	13	06	29.46	-03	15	06.9			046
1985	HJ *	1985	04	18.95350	13	15	15.49	-04	49	03.0		16.8	046
1985	HJ	1985	04	18.96773	13	15	14.84	-04	48	55.9			046
1985	HJ	1985	04	19.94285	13	14	31.82	-04	45	14.8			046
1985	HJ	1985	04	19.95697	13	14	31.17	-04	45	09.9			046
1985	HJ	1985	04	20.93183	13	13	48.53	-04	41	31.2			046
1985	HJ	1985	04	20.94595	13	13	47.86	-04	41	21.4			046
1985	HJ	1985	04	21.87795	13	13	07.57	-04	38	03.1			046
1985	HJ	1985	04	21.89213	13	13	06.77	-04	37	53.2			046
1985	HK *	1985	04	18.95350	13	15	22.46	-04	36	23.6		17.0	046
1985	HK	1985	04	18.96773	13	15	21.89	-04	36	16.0			046
1985	HK	1985	04	20.93183	13	13	49.40	-04	35	46.0		3	046

1985	HK		1985	04	20.94595	13	13	48.77	-04	35	39.0	046
1985	HL	*	1985	04	18.98793	14	25	53.11	-04	58	46.8	16.5 046
1985	HL		1985	04	19.00222	14	25	52.47	-04	58	38.9	046
1985	HL		1985	04	19.97595	14	25	12.10	-04	50	11.7	046
1985	HL		1985	04	19.99007	14	25	11.51	-04	50	05.6	046
1985	HL		1985	04	20.96644	14	24	30.50	-04	41	41.6	046
1985	HL		1985	04	20.98056	14	24	29.90	-04	41	33.5	046
1985	HM	*	1985	04	19.90899	12	45	19.70	-03	14	44.7	17.3 046
1985	HM		1985	04	19.92311	12	45	18.85	-03	14	42.0	046
1985	HN	*	1985	04	19.90899	12	47	05.80	-02	45	33.3	16.9 046
1985	HN		1985	04	19.92311	12	47	04.91	-02	45	26.1	046
1985	HO	*	1985	04	20.93183	13	09	12.99	-04	24	34.9	16.8 046
1985	HO		1985	04	20.94595	13	09	12.38	-04	24	32.2	046
1985	HP		1985	04	19.87468	12	36	33.20	+06	21	28.7	046
1985	HP		1985	04	19.88891	12	36	32.38	+06	21	37.8	046
1985	HP	*	1985	04	21.84230	12	34	51.48	+06	28	06.3	046
1985	HP		1985	04	21.85642	12	34	50.84	+06	28	12.5	046
1985	HQ	*	1985	04	21.87795	13	09	09.53	-04	13	47.4	046
1985	HQ		1985	04	21.89213	13	09	08.54	-04	13	39.9	046
1985	HR	*	1985	04	21.87795	13	11	27.33	-05	16	24.0	16.7 046
1985	HR		1985	04	21.89213	13	11	26.49	-05	16	24.3	046
1985	HS	*	1985	04	21.87795	13	15	01.48	-02	53	20.7	16.7 046
1985	HS		1985	04	21.89213	13	15	00.92	-02	53	11.1	046
1985	HT	*	1985	04	21.87795	13	15	27.52	-04	01	26.2	16.8 046
1985	HT		1985	04	21.89213	13	15	26.72	-04	01	16.4	046
1985	HU	*	1985	04	21.87795	13	16	21.44	-03	55	08.5	16.8 046
1985	HU		1985	04	21.89213	13	16	20.95	-03	55	03.2	046
1985	HV	*	1985	04	21.87795	13	19	44.86	-06	09	58.3	17.2 046
1985	HV		1985	04	21.89213	13	19	44.32	-06	09	51.7	046
1985	HW	*	1985	04	21.91204	14	17	41.06	-09	49	54.6	17.0 046
1985	HW		1985	04	21.92616	14	17	40.45	-09	49	48.3	046
1985	HX	*	1985	04	21.91204	14	17	48.39	-07	57	38.5	17.0 046
1985	HX		1985	04	21.92616	14	17	47.50	-07	57	32.0	046
1985	HY	*	1985	04	21.91204	14	23	44.94	-07	27	30.1	17.0 046
1985	HY		1985	04	21.92616	14	23	44.25	-07	27	24.4	046
1985	HZ	*	1985	04	21.95457	14	28	34.04	-11	43	07.8	16.8 046
1985	HZ		1985	04	21.96892	14	28	33.63	-11	43	06.7	046
1985	HA1	*	1985	04	21.95457	14	32	14.19	-11	41	53.8	17.0 046
1985	HA1		1985	04	21.96892	14	32	13.45	-11	41	50.8	046
1985	HB1	*	1985	04	21.95457	14	32	44.60	-13	41	16.7	16.7 046
1985	HB1		1985	04	21.96892	14	32	44.07	-13	41	06.8	046
1985	HC1	*	1985	04	21.95457	14	35	42.15	-14	05	33.4	17.0 046
1985	HC1		1985	04	21.96892	14	35	41.53	-14	05	22.4	046
1985	HD1	*	1985	04	21.98993	14	36	44.53	-09	22	26.9	16.6 046
1985	HD1		1985	04	22.00405	14	36	43.81	-09	22	24.6	046
1985	HE1	*	1985	04	21.98993	14	37	43.16	-07	38	56.6	16.7 046
1985	HE1		1985	04	22.00405	14	37	42.55	-07	38	48.6	046
1985	HF1	*	1985	04	21.98993	14	38	54.22	-08	18	52.9	16.8 046
1985	HF1		1985	04	22.00405	14	38	53.50	-08	18	48.5	046
1985	HG1	*	1985	04	21.98993	14	40	36.59	-09	20	24.1	16.5 046
1985	HG1		1985	04	22.00405	14	40	35.85	-09	20	19.9	046
1985	HH1	*	1985	04	21.98993	14	40	40.35	-11	48	59.8	16.8 046
1985	HH1		1985	04	22.00405	14	40	39.78	-11	48	55.1	046
1985	HJ1	*	1985	04	21.98993	14	44	35.36	-09	59	22.0	17.0 046
1985	HJ1		1985	04	22.00405	14	44	34.47	-09	59	11.8	046
1985	JB	*	1985	05	10.93949	14	18	44.79	-09	45	40.5	046
1985	JB		1985	05	10.95431	14	18	43.88	-09	45	31.9	046
1985	JC	*	1985	05	10.99539	15	53	38.16	-10	44	38.0	046

1985 JC		1985 05 11.00963	15 53 37.23	-10 44 39.3						046
1985 JD	*	1985 05 10.99539	16 01 07.26	-12 17 51.0						046
1985 JD		1985 05 11.00963	16 01 06.73	-12 17 47.2						046
1985 KH	*	1985 05 24.90748	14 09 02.24	-06 18 54.4						046
1985 KH		1985 05 24.92241	14 09 01.56	-06 18 50.5						046
1985 KJ	*	1985 05 24.90748	14 10 35.92	-08 17 54.8						046
1985 KJ		1985 05 24.92241	14 10 35.16	-08 17 54.6						046
1985 KK	*	1985 05 24.90748	14 11 00.29	-07 19 02.0						046
1985 KK		1985 05 24.92241	14 10 59.88	-07 18 53.9						046
1985 KL	*	1985 05 24.90748	14 11 55.00	-06 20 08.2						046
1985 KL		1985 05 24.92241	14 11 54.33	-06 20 05.6						046
1985 KM	*	1985 05 24.94289	14 26 21.08	-05 58 17.3			16.7			046
1985 KM		1985 05 24.95725	14 26 20.48	-05 58 16.0						046
1985 KN	*	1985 05 24.94289	14 33 57.32	-10 04 12.4			16.9			046
1985 KN		1985 05 24.95725	14 33 56.57	-10 04 08.5						046
1985 KO	*	1985 05 24.97935	15 45 58.51	-11 20 15.5						046
1985 KO		1985 05 24.99359	15 45 57.73	-11 20 13.6						046
1985 KP	*	1985 05 24.98502	16 24 49.25	-06 03 52.2					1	046
1985 KP		1985 05 24.99920	16 24 48.71	-06 03 46.4			16.7			046
1985 KQ	*	1985 05 24.98502	16 33 23.90	-04 46 49.6						046
1985 KQ		1985 05 24.99920	16 33 22.85	-04 46 47.1						046
1985 KR	*	1985 05 24.98502	16 34 05.11	-05 20 34.1						046
1985 KR		1985 05 24.99920	16 34 03.01	-05 20 31.6						046
1985 KS	*	1985 05 26.01830	16 25 08.32	-11 57 25.2			16.9			046
1985 KS		1985 05 26.03242	16 25 07.30	-11 57 19.4						046
1985 KT	*	1985 05 26.01830	16 35 57.23	-11 29 38.3			16.7			046
1985 KT		1985 05 26.03242	16 35 55.42	-11 29 32.9						046
1985 KU	*	1985 05 27.00773	16 07 05.86	-18 50 31.3			16.5			046
1985 KU		1985 05 27.02191	16 07 05.20	-18 50 30.4						046
1985 KV	*	1985 05 27.00773	16 12 12.56	-18 20 16.1			17.0			046
1985 KV		1985 05 27.02191	16 12 11.88	-18 20 05.9						046
1985 KW	*	1985 05 27.00773	16 14 41.72	-17 56 56.0			17.2			046
1985 KW		1985 05 27.02191	16 14 41.23	-17 56 48.0						046
1985 KX	*	1985 05 27.00773	16 15 43.38	-16 32 12.5			17.0			046
1985 KX		1985 05 27.02191	16 15 42.81	-16 32 04.8						046

Note 1: at edge of plate. 2: clouds. 3: very faint.

OBSERVATIONS MADE AT THE BURLINGTON REMOTE SITE BY T. HANDLEY.

Films taken with a 0.20-m f/4 astrograph. Contact: T. Handley, 13 Linden Avenue, Burlington, NJ 08016, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	N	Obs.
367	1985 02	18.28264	08 51 45.34	+22 27 11.0	1	293
615	1985 02	18.28264	08 43 02.91	+21 54 07.3	3	293
2138	1985 02	18.28264	08 50 47.10	+22 24 40.0	1	293
2172	1985 02	18.28264	08 49 35.93	+21 53 48.0		293
3252	1985 02	18.28264	08 47 27.84	+21 41 05.8		293
1984 YL	1984 12	26.35489	05 43 04.83	+23 20 11.0		293

Note 1: near edge of film. 2: poor reference star configuration. 3 = 1 + 2.

OBSERVATIONS MADE WITH THE 1.2-M U.K. SCHMIDT TELESCOPE AT SIDING SPRING.

Plates taken by J. Dawe, J. Barrow, M. Hartley, D. Morgan, K. Russell and A. Savage in the course of the U.K.-Caltech Asteroid Survey under the direction of E. Helin and E. Shoemaker. Scanned and measured by S. J. Bus (with assistance from R. S. Dunbar). Contact: S. J. Bus, Lowell Observatory, P.O. Box 1269, Flagstaff, AZ 86002, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1983 RL4	1981 02	02.70942	12 10 18.18	+00 05 24.2	413
1983 RL4	1981 02	13.74138	12 06 30.71	+01 17 48.5	413

OBSERVATIONS MADE AT KAMBAH BY D. HERALD.
Contact: D. Herald, P.O. Box 254, Woden, ACT 2606, Australia.

Object		Date	UT	R. A. (1950)	Decl.	N	Obs.
29		1985 06	12.48788	14 39 09.01	-23 50 32.5		415
29		1985 06	12.51672	14 39 08.11	-23 50 26.1	1	415
29		1985 06	14.38024	14 38 16.35	-23 44 28.3		415
29		1985 06	14.41822	14 38 15.29	-23 44 21.2		415

Note 1: affected by cloud.

OBSERVATIONS MADE AT MOUNT JOHN UNIVERSITY OBSERVATORY.
Plates taken with the 0.6-m f/14 Cassegrain reflector by A. C. Gilmore, measured by P. M. Kilmartin. Reductions using field plates from the Carter Observatory, AGK3, SAO Catalog and Cape Photographic Catalogue. Contact: Gilmore, P.O. Box 57, Lake Tekapo, New Zealand.

Object		Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
1578		1985 05	23.51207	15 10 48.34	-17 23 57.8		2	474
1578		1985 05	23.54517	15 10 47.10	-17 23 53.0		2	474
1578		1985 05	24.55873	15 10 10.61	-17 21 36.8		2	474
1578		1985 05	24.58431	15 10 09.84	-17 21 32.9		2	474
1578		1985 05	25.53963	15 09 35.92	-17 19 23.3		2	474
1578		1985 05	25.56556	15 09 34.99	-17 19 20.1		2	474
3060		1985 05	18.51255	15 12 17.65	-31 31 54.0		1	474
3060		1985 05	18.57401	15 12 13.41	-31 31 37.5		3	474
1980	DG	1985 05	18.51255	15 12 02.15	-30 26 52.1		1	474
1980	DG	1985 05	18.57401	15 11 58.80	-30 26 20.1		1	474
1982	DA	1984 11	25.61737	05 26 54.78	-37 04 57.5		4	474
1982	MH	1985 05	23.51207	15 10 21.51	-17 19 26.1			474
1982	MH	1985 05	23.54517	15 10 19.45	-17 19 21.8			474
1982	MH	1985 05	24.55873	15 09 18.09	-17 17 14.7			474
1982	MH	1985 05	24.58431	15 09 16.51	-17 17 11.4			474
1982	MH	1985 05	25.53963	15 08 19.79	-17 15 12.7			474
1982	MH	1985 05	25.56556	15 08 18.17	-17 15 09.6			474
1982	MH	1985 05	28.66382	15 05 20.27	-17 09 05.3			474
1982	MH	1985 05	28.69229	15 05 18.77	-17 09 00.8			474
1985	DX	1985 03	20.43509	09 33 10.88	+01 37 03.8			474
1985	DX	1985 03	20.45350	09 33 10.45	+01 37 10.8			474
1985	DX	1985 03	25.35523	09 31 57.03	+02 07 36.5	16.7		474
1985	DX	1985 03	25.37398	09 31 56.82	+02 07 43.7			474
1985	DX	1985 04	24.44552	09 42 33.33	+03 59 25.2			474
1985	DX	1985 04	24.47133	09 42 34.67	+03 59 26.2			474
1985	FE	1985 04	14.37596	10 54 51.34	-04 22 52.1	16		474
1985	FE	1985 04	14.39749	10 54 50.80	-04 22 44.9			474
1985	FE	1985 05	26.28373	11 01 52.47	-02 38 57.6			474
1985	FE	1985 05	26.30583	11 01 53.30	-02 38 58.6			474
1985	JA	1985 05	23.38811	15 04 17.03	-03 13 34.5	17.0	2	474
1985	JA	1985 05	23.41554	15 04 15.70	-03 11 35.1		2	474
1985	JA	1985 05	24.50109	15 03 28.25	-01 53 15.1	17.0		474
1985	JA	1985 05	24.52042	15 03 27.30	-01 51 52.4			474
1985	KA *	1985 05	18.51255	15 15 09.65	-28 59 25.4	17	3	474
1985	KA	1985 05	18.57401	15 15 05.21	-28 58 25.4		1	474
1985	KA	1985 05	21.49704	15 11 51.58	-28 11 40.0		1	474
1985	KA	1985 05	21.54738	15 11 48.23	-28 10 51.6		1	474
1985	KA	1985 05	23.28198	15 09 55.83	-27 42 18.0			474
1985	KA	1985 05	23.29471	15 09 55.01	-27 42 06.1			474
1985	KA	1985 05	24.64044	15 08 28.38	-27 19 34.5			474
1985	KA	1985 05	24.65311	15 08 27.65	-27 19 21.4			474
1985	KA	1985 05	30.65120	15 02 27.55	-25 36 03.3			474
1985	KA	1985 05	30.66961	15 02 26.52	-25 35 44.2			474
1985	KB *	1985 05	21.49704	15 08 14.17	-27 55 30.7	16	3	474

1985 KB		1985 05	21.54738	15 08	10.63	-27 55	38.1			3	474
1985 KB		1985 05	23.31740	15 06	10.30	-27 59	43.0				474
1985 KB		1985 05	23.33036	15 06	09.45	-27 59	45.1				474
1985 KB		1985 05	24.60942	15 04	43.11	-28 02	26.5				474
1985 KB		1985 05	24.62308	15 04	42.17	-28 02	27.9				474
1985 KB		1985 05	25.59461	15 03	38.07	-28 04	23.7				474
1985 KB		1985 05	25.60919	15 03	37.07	-28 04	24.6				474
1985 KB		1985 05	28.61741	15 00	24.59	-28 09	40.7		16		474
1985 KB		1985 05	28.63535	15 00	23.46	-28 09	42.1				474
1985 KC	*	1985 05	24.60942	15 05	02.95	-28 09	48.5		17.5		474
1985 KC		1985 05	24.62308	15 05	02.05	-28 09	44.8			2	474
1985 KC		1985 05	25.59461	15 04	00.74	-28 05	43.6				474
1985 KC		1985 05	25.60919	15 03	59.73	-28 05	39.4			2	474
1985 KC		1985 05	28.61741	15 00	57.34	-27 52	39.1		17.5		474
1985 KC		1985 05	28.63535	15 00	56.22	-27 52	32.9			2	474
1985 KD	*	1985 05	21.49704	15 11	28.35	-28 16	12.0		16.5	3	474
1985 KD		1985 05	21.54738	15 11	24.49	-28 14	49.7			3	474
1985 KE	*	1985 05	23.51207	15 09	05.59	-17 17	17.0		18		474
1985 KE		1985 05	23.54517	15 09	04.02	-17 17	10.2				474
1985 KE		1985 05	24.55873	15 08	16.78	-17 13	16.4				474
1985 KE		1985 05	24.58541	15 08	15.60	-17 13	09.9			2	474
1985 KE		1985 05	25.53963	15 07	31.85	-17 09	32.4		18		474
1985 KE		1985 05	25.56556	15 07	30.59	-17 09	27.5			2	474
1985 KF	*	1985 05	23.51207	15 10	12.60	-17 24	38.8		18		474
1985 KF		1985 05	23.54517	15 10	10.75	-17 24	35.6				474
1985 KF		1985 05	24.55873	15 09	14.88	-17 23	09.2				474
1985 KF		1985 05	24.58431	15 09	13.44	-17 23	06.5				474
1985 KF		1985 05	25.53963	15 08	21.92	-17 21	47.0		18		474
1985 KF		1985 05	25.56556	15 08	20.40	-17 21	45.0				474

Note 1: plates taken with the 0.25-m astrograph. 2: trailed image.
3 = 1 + 2. 4: correction to position on MPC 9327.

OBSERVATIONS MADE AT THE OSSERVATORIO S. VITTORE.

Plates taken by C. Vacchi and G. Sassi; blinked by Vacchi; measured by Vacchi, V. Goretti and E. Colombini. Reduced by Colombini from least-squares plate-constants solutions with five or more AGK3 or SAO reference stars. Contact: E. Colombini, Via S. Vittore 44, I-40136 Bologna, Italy.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
1394	1985 04	16.89028	12 41 50.65	-02 57 04.7	16.7	552
1394	1985 04	16.91250	12 41 49.65	-02 56 56.5		552
1394	1985 04	20.85000	12 38 44.41	-02 33 29.0	16.8	552
1394	1985 04	20.88125	12 38 42.94	-02 33 19.3		552
1394	1985 04	20.89514	12 38 42.27	-02 33 13.4		552
1394	1985 04	22.85833	12 37 15.68	-02 22 16.3	16.8	552
1394	1985 04	22.87639	12 37 14.74	-02 22 08.9		552
1394	1985 04	22.89444	12 37 14.09	-02 22 06.3		552
1978 NT1	1985 05	14.88125	13 02 43.58	+14 16 46.9	17.0	552
1978 NT1	1985 05	14.90972	13 02 42.82	+14 16 44.4		552
1979 SM11	1985 05	22.87292	15 49 20.60	-15 44 52.9	15.5	552
1979 SM11	1985 05	22.90000	15 49 18.98	-15 44 41.7		552
1983 WP	1985 04	20.91250	14 20 23.55	+05 06 20.6	16.6	552
1983 WP	1985 04	20.93819	14 20 22.06	+05 06 22.3		552
1984 HA1	1985 05	15.84792	15 18 09.40	+06 05 34.4	15.8	552
1984 HA1	1985 05	15.86319	15 18 08.86	+06 05 35.5		552
1984 HA1	1985 05	15.87778	15 18 08.39	+06 05 37.9		552

OBSERVATIONS MADE AT BASSANO BRESCIANO BY U. QUADRI AND V. MARINELLO.

Plates taken with an 0.15-m astrometric reflector, measured with a one-axis machine, reduced using a modified dependence method and SAO reference-

star positions. Contact: U. Quadri, Osservatorio Astronomico Brixia, Via S. Michele 4, I-25020 Bassano Bresciano, Brescia, Italy.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
32	1985 03	19.86047	09 20 17.84	+07 23 49.2	565
32	1985 03	19.88748	09 20 17.36	+07 23 58.3	565
51	1985 03	19.81297	07 27 54.23	+13 09 03.0	565
51	1985 03	19.83962	07 27 55.07	+13 09 10.8	565
129	1985 03	23.82913	09 54 32.61	+19 34 43.0	565
129	1985 03	23.86528	09 54 31.52	+19 34 53.4	565
385	1985 03	10.83677	08 53 45.91	+25 12 54.7	565
385	1985 03	10.87104	08 53 44.64	+25 12 43.5	565

OBSERVATIONS MADE AT ELDAGSEN BY W. BONK.

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

Object	Date	UT	R. A. (1950)	Decl.	N	Obs.
888	1984 12	24.90972	08 25 15.33	+14 26 45.1	1	573
888	1984 12	24.92708	08 25 14.79	+14 26 53.1	1	573
888	1984 12	24.94097	08 25 14.36	+14 26 59.4	1	573
888	1984 12	24.95833	08 25 13.83	+14 27 07.3	1	573
888	1984 12	24.97569	08 25 13.29	+14 27 15.3	1	573
888	1985 01	27.78263	07 57 14.76	+19 43 55.7	1	573
888	1985 01	27.79236	07 57 14.26	+19 44 02.3	1	573
888	1985 01	27.80138	07 57 13.79	+19 44 08.4	1	573
888	1985 01	27.81041	07 57 13.32	+19 44 14.4	1	573
888	1985 01	27.81944	07 57 12.85	+19 44 20.6	1	573

Note 1: observatory code 573, Long. and Parallax 9.66, -262. -335 (see MPC 7759).

OBSERVATIONS MADE AT VICTORIA BY D. D. BALAM.

Films (Kodak 2415 emulsion) taken with a 0.25-m f/2 Schmidt (Celestron 10). Measurements on single-coordinate engine. Generally 6-8 reference stars from SAO Catalog, least-squares plate-constants solution (Tatum 1982, J. Roy. Astron. Soc. Canada 76, 97). Contact: J. B. Tatum, Dept of Physics, University of Victoria, P.O. Box 1700, Victoria, BC, V8W 2Y2, Canada.

Object	Date	UT	R. A. (1950)	Decl.	N	Obs.
1984 HA1	1985 05	09.30486	15 21 22.69	+05 41 43.2		657
1984 HA1	1985 05	10.27064	15 20 54.24	+05 45 29.8		657
1984 HA1	1985 05	15.25936	15 18 26.61	+06 03 35.6		657
1984 HA1	1985 05	15.32593	15 18 24.62	+06 03 48.6	1	657
1984 KF	1985 05	21.40453	17 01 07.43	+09 45 33.1		657
1984 KF	1985 05	21.42866	17 01 06.65	+09 45 36.0		657

Note 1: position may be uncertain due to a plate defect.

OBSERVATIONS MADE AT PALOMAR.

Palomar-Leiden Survey plates taken with the 1.2-m Schmidt by T. Gehrels, scanned and measured by C. J. van Houten and I. van Houten-Groeneveld at Leiden. Computational support from the late P. Herget.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
6552 P-L *	1960 09	24.35002	00 06 58.10	-02 51 52.1	16.6	675
6552 P-L	1960 09	26.28543	00 05 17.12	-03 10 56.3		675
6552 P-L	1960 09	27.34237	00 04 21.82	-03 21 15.5		675
6552 P-L	1960 09	28.33822	00 03 29.95	-03 30 55.5		675
6552 P-L	1960 10	17.28198	23 49 07.02	-06 08 14.9		675
6552 P-L	1960 10	22.16324	23 46 33.61	-06 36 50.8		675
6552 P-L	1960 10	24.23753	23 45 40.12	-06 47 09.0		675
6552 P-L	1960 10	26.27157	23 44 54.88	-06 56 10.7		675
9507 P-L *	1960 10	17.22501	23 25 40.68	-07 49 21.8	18.4	675
9507 P-L	1960 10	22.16324	23 24 04.89	-07 53 55.5		675

9507	P-L	1960	10	24.23753	23	23	29.64	-07	55	15.4	675
9507	P-L	1960	10	26.27157	23	22	57.93	-07	56	12.6	675

OBSERVATIONS MADE AT PALOMAR BY C. S. SHOEMAKER AND E. SHOEMAKER.
4-15-min exposures with the 0.46-m Schmidt telescope. Film pairs scanned with a stereomicroscope. Measured by C. S. Shoemaker at the U.S. Geological Survey and by F. Salazar and S. J. Bus using a PDS scanning micro-densitometer at the Lowell Observatory. SAO reference stars, global solu-. tions. Contact: C. S. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
62	1985	04 24.37638	14 50 45.01	-13 13 04.5		675
62	1985	04 25.35000	14 50 02.58	-13 09 45.5		675
210	1985	04 12.32708	14 34 30.04	-15 30 25.8		675
379	1985	04 23.42986	15 17 58.46	-16 17 34.2		675
379	1985	04 24.39652	15 17 18.99	-16 14 31.2		675
379	1985	04 25.39791	15 16 37.39	-16 11 23.1		675
379	1985	04 25.43611	15 16 35.64	-16 11 15.2		675
395	1985	04 25.32708	13 59 27.54	-16 17 49.6	14.8	675
417	1985	04 24.37638	14 55 47.88	-12 35 54.3		675
417	1985	04 25.35000	14 55 03.59	-12 29 26.5		675
798	1985	04 23.42986	15 45 36.82	-16 11 13.6		675
798	1985	04 24.39652	15 45 03.15	-16 06 03.5		675
798	1985	04 25.39791	15 44 26.90	-16 00 38.1		675
798	1985	04 25.43611	15 44 25.64	-16 00 26.3		675
848	1985	04 24.37638	14 37 14.46	-15 02 57.6		675
848	1985	04 25.35000	14 36 29.84	-14 59 09.9		675
910	1985	04 23.42986	15 19 09.45	-16 48 27.1		675
910	1985	04 24.39652	15 18 24.50	-16 49 19.1		675
910	1985	04 25.39791	15 17 36.77	-16 50 13.9		675
910	1985	04 25.43611	15 17 34.91	-16 50 15.8		675
976	1985	04 15.37500	13 46 21.05	-18 21 04.0		675
1089	1985	04 24.37638	14 43 08.86	-12 17 10.6		675
1089	1985	04 25.35000	14 42 08.08	-12 13 36.6		675
1102	1985	04 12.32708	14 37 41.10	-15 39 20.3		675
1102	1985	04 24.37638	14 29 27.79	-14 10 08.2		675
1102	1985	04 25.35000	14 28 45.37	-14 02 35.0		675
1119	1985	04 23.42986	15 19 13.80	-15 08 22.2		675
1119	1985	04 24.39652	15 18 26.57	-15 08 26.1		675
1119	1985	04 25.39791	15 17 36.38	-15 08 27.1		675
1119	1985	04 25.43611	15 17 34.35	-15 08 26.0		675
1130	1985	04 24.37638	14 44 19.12	-15 40 42.1		675
1130	1985	04 25.35000	14 43 21.71	-15 35 11.5		675
1204	1985	04 12.32708	14 31 19.07	-16 22 04.1		675
1370	1985	04 15.37500	13 33 52.79	-18 56 40.7		675
1393	1985	04 11.26111	11 48 13.63	+09 44 29.5	16.5	675
1393	1985	04 15.20763	11 45 28.04	+09 46 16.5		675
1553	1985	04 11.26111	11 42 33.17	+06 59 44.3	16.5	675
1553	1985	04 15.20763	11 40 29.00	+07 10 10.2		675
1616	1985	04 12.32708	14 41 14.17	-12 42 22.7		675
1616	1985	04 24.37638	14 31 22.33	-12 23 40.5		675
1616	1985	04 25.35000	14 30 31.46	-12 22 01.5		675
1623	1985	04 24.37638	14 34 58.34	-11 37 20.1		675
1623	1985	04 25.35000	14 34 14.80	-11 33 51.1		675
1638	1985	04 12.32708	14 53 19.69	-16 26 30.2		675
1638	1985	04 24.37638	14 44 31.77	-15 45 41.7		675
1638	1985	04 25.35000	14 43 43.50	-15 41 52.6		675
1662	1985	04 15.37500	13 45 56.07	-16 32 45.6		675
1662	1985	04 23.36805	13 39 04.65	-15 59 42.9		675
1662	1985	04 24.36180	13 38 14.05	-15 55 24.0		675

1662		1985	04	25.32708	13	37	25.44	-15	51	11.0		675
1675		1985	04	24.37638	14	32	41.23	-16	45	36.4		675
1675		1985	04	25.35000	14	31	36.32	-16	43	35.3		675
2200		1985	04	15.37500	13	35	27.65	-16	17	45.0		675
2358		1985	04	15.37500	13	36	45.17	-20	26	16.2		675
2398		1985	04	11.26111	11	45	10.28	+08	35	31.4	17.5	675
2398		1985	04	15.20763	11	42	56.40	+08	40	14.8		675
2763		1985	04	23.36805	13	37	37.28	-16	11	11.8		675
2763		1985	04	24.36180	13	36	38.70	-16	05	53.2		675
2763		1985	04	25.32708	13	35	41.78	-16	00	36.0		675
1985	FA	1985	04	11.36527	14	11	28.23	+17	39	04.4		675
1985	FA	1985	04	12.24861	14	10	16.09	+17	36	09.8		675
1985	FA	1985	04	15.31458	14	06	01.72	+17	24	01.4		675
1985	FA	1985	04	23.31354	13	54	59.76	+16	36	23.9		675
1985	FA	1985	04	24.31388	13	53	39.20	+16	28	56.8		675
1985	FA	1985	04	25.28541	13	52	21.52	+16	21	19.5		675
1985	FC	1985	04	11.26111	11	39	06.16	+09	36	16.5	17.5	675
1985	FC	1985	04	15.20763	11	33	35.71	+08	32	17.6		675
1985	FC	1985	04	24.25763	11	23	54.18	+06	01	35.0		675
1985	FC	1985	04	25.27083	11	23	04.94	+05	44	31.6		675
1985	FD	1985	04	11.19444	11	32	52.71	+27	57	11.9		675
1985	FD	1985	04	15.19861	11	30	41.81	+27	46	14.3		675
1985	FU1	1985	04	11.26111	11	45	37.13	+08	09	56.7	17.5	675
1985	FU1	1985	04	15.20763	11	43	28.11	+08	23	52.8		675
1985	FD3 *	1985	03	26.27638	10	48	39.22	-04	18	48.3	17	675
1985	FD3	1985	04	11.21388	10	32	22.99	-05	16	58.3		675
1985	FD3	1985	04	15.21840	10	29	31.63	-05	31	22.9		675
1985	GS	1985	04	13.25347	13	57	43.37	+13	13	08.2	17	675
1985	GS	1985	04	23.31354	13	50	11.50	+13	57	31.4		675
1985	GS	1985	04	24.31388	13	49	27.28	+14	00	36.2		675
1985	GS	1985	04	25.28541	13	48	44.33	+14	03	20.5		675
1985	GO1	1985	04	24.37638	14	58	22.42	-14	02	03.9	17.0	675
1985	GO1	1985	04	25.35000	14	57	28.19	-13	59	11.8		675
1985	GP1 *	1985	04	14.32916	15	33	39.06	+20	09	45.1	17.5	675
1985	GP1	1985	04	23.37291	15	26	02.16	+20	52	44.8		675
1985	GP1	1985	04	25.33194	15	24	06.48	+20	58	30.8		675
1985	GQ1 *	1985	04	15.37500	13	36	09.64	-18	21	55.5	17	675
1985	GR1 *	1985	04	15.37500	13	37	35.08	-19	19	24.9	17	675
1985	GS1 *	1985	04	15.37500	13	49	08.93	-19	16	17.1	17.8	675
1985	GT1 *	1985	04	15.37500	13	51	34.62	-14	10	03.1	15	675
1985	GU1 *	1985	04	11.35833	13	04	20.89	-10	30	34.5	16	675
1985	GU1	1985	04	12.26944	13	03	20.35	-10	30	47.0		675
1985	GU1	1985	04	15.27152	13	00	00.21	-10	31	16.5		675
1985	GU1	1985	04	23.31250	12	51	22.91	-10	31	46.5		675
1985	GU1	1985	04	24.30763	12	50	21.86	-10	31	50.7		675
1985	GU1	1985	04	25.30972	12	49	21.41	-10	31	56.3		675
1985	GV1 *	1985	04	15.27152	12	37	58.66	-07	53	46.2	16	675
1985	GV1	1985	04	15.29930	12	37	57.45	-07	53	25.1		675
1985	GV1	1985	04	23.28680	12	32	59.28	-06	21	54.1		675
1985	GV1	1985	04	24.30277	12	32	25.98	-06	10	43.7		675
1985	GV1	1985	04	25.27569	12	31	55.39	-06	00	12.6		675
1985	HC *	1985	04	23.42986	15	25	03.50	-12	13	16.2	16	675
1985	HC	1985	04	24.39652	15	24	21.68	-11	57	26.0		675
1985	HC	1985	04	25.39791	15	23	37.04	-11	40	49.5		675
1985	HC	1985	04	25.43611	15	23	35.30	-11	40	15.2		675
1985	HD *	1985	04	23.42986	15	30	18.29	-12	08	21.4	16.5	675
1985	HD	1985	04	24.39652	15	29	45.37	-11	59	01.9		675
1985	HD	1985	04	25.39791	15	29	10.00	-11	49	19.2		675
1985	HD	1985	04	25.43611	15	29	08.72	-11	48	56.9		675

1985 HS1		1985 04 11.26111	11 46 33.47	+07 51 37.6						675
1985 HS1		1985 04 15.20763	11 45 29.15	+09 12 39.0						675
1985 HS1	*	1985 04 24.25277	11 44 42.37	+11 50 31.7				17		675
1985 HS1		1985 04 25.24375	11 44 46.60	+12 05 22.5						675
1985 JA		1985 05 11.33542	15 17 40.58	-22 17 39.2						675
1985 JA	*	1985 05 14.33194	15 13 30.17	-16 50 18.5				16.5		675
1985 JA		1985 05 14.35833	15 13 27.97	-16 47 32.1						675
1985 JA		1985 05 15.41181	15 12 07.84	-14 58 27.0						675

OBSERVATIONS MADE WITH THE 0.46-M SCHMIDT AT PALOMAR.

Observers E. Helin, S. Singer-Brewster and D. Schneeberger. Measured by Singer-Brewster and M. Rudnyk. Contact: E. Helin, MS 183-501, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
443	1985 04 17.35880		13 01 37.12	-02 52 37.0	12.5	675
443	1985 04 17.39491		13 01 35.29	-02 52 24.2		675
1985 JA	1985 05 19.36921		15 07 45.68	-08 40 58.6		675
1985 JA	1985 05 19.37616		15 07 44.83	-08 40 15.0		675
1985 JA	1985 05 20.27500		15 06 54.18	-07 22 03.8		675
1985 JA	1985 05 20.28194		15 06 54.00	-07 21 37.7		675

OBSERVATIONS MADE WITH THE 1.6-m REFLECTOR AND CCD AT PALOMAR BY J. GIBSON.

Coordination with J. G. Williams and with the Minor Planet Center. AGK3 and SAO reference stars. Contact: J. Gibson, MS 264-700, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
1982 RB	1985 05 08.28862		18 08 59.38	+27 14 12.6		675
1982 RB	1985 05 08.29945		18 08 59.92	+27 14 29.0		675
1985 FD3	1985 05 26.19927		10 29 48.60	-08 43 40.2		675
1985 FD3	1985 05 26.24826		10 29 50.22	-08 43 58.4		675
1985 FD3	1985 05 26.25556		10 29 50.48	-08 44 01.2		675
1985 FD3	1985 05 27.21818		10 30 24.40	-08 50 01.5		675
1985 FD3	1985 05 27.23068		10 30 24.83	-08 50 06.1		675
1985 HC	1985 05 08.31091		15 12 32.64	-07 55 03.1		675
1985 HC	1985 05 08.32024		15 12 32.10	-07 54 53.1		675
1985 JA	1985 06 07.30067		14 58 38.82	+09 33 49.3		675
1985 JA	1985 06 07.30428		14 58 38.79	+09 33 56.4		675
1985 JA	1985 06 08.30694		14 58 37.24	+10 05 51.5		675
1985 JA	1985 06 08.31250		14 58 37.21	+10 06 01.8		675

OBSERVATIONS MADE AT THE LOWELL OBSERVATORY'S ANDERSON MESA STATION.

CCD frames with the 1.8-m Perkins reflector. Observers S. J. Bus and T. J. Kreidl. Measured by Bus. SAO primary reference stars, faint star transfer. Contact: E. Bowell, Lowell Observatory, P.O. Box 1269, Flagstaff AZ 86002, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1985 JA	1985 05 19.27135		15 07 51.91	-08 49 32.8	688
1985 JA	1985 05 19.27656		15 07 51.56	-08 49 05.1	688
1985 JA	1985 05 21.40000		15 05 52.28	-05 48 35.5	688
1985 JA	1985 05 21.40382		15 05 52.06	-05 48 16.8	688

OBSERVATIONS MADE WITH THE 0.33-M PHOTOGRAPHIC TELESCOPE AT THE LOWELL OBSERVATORY'S ANDERSON MESA STATION.

Observations made by B. A. Skiff, measured by E. Bowell and S. J. Bus using a PDS scanning microdensitometer. See also MPC 9533. Contact: E. Bowell, Lowell Observatory, P.O. Box 1269, Flagstaff, AZ 86002, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N Obs.
4	1985 04 24.27569		13 57 47.97	+01 18 36.7		688
4	1985 04 24.35694		13 57 43.20	+01 18 54.1		688

44	1985	04	23.25318	13	50	16.22	-04	42	01.6		688
44	1985	04	23.33090	13	50	11.82	-04	41	38.3		688
55	1985	04	24.30417	14	27	33.79	-19	56	16.6		688
55	1985	04	24.38264	14	27	29.38	-19	56	05.6		688
126	1985	04	23.25318	13	43	34.38	-11	19	28.3		688
126	1985	04	23.33090	13	43	29.78	-11	19	07.8		688
147	1985	04	25.26181	14	04	04.80	-14	17	48.1		688
147	1985	04	25.30642	14	04	02.73	-14	17	36.5		688
210	1985	04	24.30417	14	24	19.32	-14	59	38.7		688
210	1985	04	24.38264	14	24	15.05	-14	59	25.5		688
395	1985	04	25.26181	13	59	31.03	-16	18	11.4		688
395	1985	04	25.30642	13	59	28.68	-16	17	57.5		688
423	1985	04	24.27569	13	56	02.33	-00	18	16.2		688
423	1985	04	24.35694	13	55	58.19	-00	18	08.3		688
443	1985	04	23.23108	12	56	48.19	-02	10	58.1		688
443	1985	04	23.30903	12	56	44.40	-02	10	27.1		688
490	1985	04	23.25318	13	40	33.95	-03	39	52.9		688
490	1985	04	23.33090	13	40	30.72	-03	39	28.0		688
513	1985	04	23.25318	13	55	56.21	-05	21	06.9		688
513	1985	04	23.33090	13	55	52.72	-05	20	38.1		688
527	1985	04	25.28391	14	06	54.66	+03	00	17.3		688
527	1985	04	25.32876	14	06	52.27	+03	00	30.1		688
558	1985	04	24.27569	13	41	52.57	+01	29	32.5		688
558	1985	04	24.35694	13	41	48.80	+01	29	55.3		688
563	1985	04	23.20382	12	23	59.96	+12	39	51.8		688
563	1985	04	23.28160	12	23	56.85	+12	39	52.4		688
565	1985	04	24.30417	14	23	28.13	-17	33	45.2		688
565	1985	04	24.38264	14	23	24.01	-17	32	57.3		688
625	1985	04	23.20382	12	09	36.53	+15	00	15.3		688
625	1985	04	23.28160	12	09	33.94	+15	00	24.6		688
669	1985	04	23.23108	12	58	02.48	+02	07	29.2		688
669	1985	04	23.30903	12	57	59.45	+02	07	57.4		688
791	1985	04	24.33125	14	01	32.41	+11	37	02.8		688
791	1985	04	24.40833	14	01	28.92	+11	37	22.9		688
796	1985	04	23.20382	12	14	31.06	+10	17	51.9		688
796	1985	04	23.28160	12	14	27.60	+10	17	49.4		688
810	1985	04	23.30903	13	08	37.97	-03	38	09.9		688
906	1985	04	23.23108	13	12	03.42	-01	51	08.1		688
906	1985	04	23.30903	13	11	59.39	-01	51	02.2		688
912	1985	04	23.20382	12	10	06.59	+11	24	01.8		688
912	1985	04	23.28160	12	10	03.52	+11	23	39.8		688
923	1985	04	23.23108	13	15	37.14	-05	22	28.6		688
923	1985	04	23.30903	13	15	33.55	-05	21	50.0		688
1102	1985	04	24.30417	14	29	30.73	-14	10	41.9		688
1102	1985	04	24.38264	14	29	27.26	-14	10	06.0		688
1204	1985	04	24.30417	14	19	18.06	-15	38	26.3		688
1204	1985	04	24.38264	14	19	12.81	-15	38	06.3		688
1289	1985	04	23.25318	13	45	46.03	-10	10	08.3		688
1289	1985	04	23.33090	13	45	42.30	-10	09	45.1		688
1326	1985	04	24.33125	13	44	55.98	+12	56	15.6		688
1326	1985	04	24.40833	13	44	51.96	+12	56	26.8		688
1357	1985	04	24.27569	14	02	06.48	+04	22	09.7		688
1357	1985	04	24.35694	14	02	02.66	+04	22	20.0		688
1410	1985	04	23.23108	12	54	20.22	+01	27	25.4		688
1410	1985	04	23.30903	12	54	17.18	+01	27	51.5		688
1516	1985	04	24.27569	13	44	31.48	+06	21	40.8		688
1516	1985	04	24.35694	13	44	27.53	+06	21	59.6		688
1624	1985	04	23.25318	13	37	06.00	-07	01	31.2	16.5	688
1624	1985	04	23.33090	13	37	02.56	-07	01	10.8		688

1632	1985	04	23.25318	13	42	39.51	-09	03	36.2			688
1632	1985	04	23.33090	13	42	35.64	-09	03	05.0			688
1675	1985	04	24.30417	14	32	46.08	-16	45	49.3			688
1675	1985	04	24.38264	14	32	40.67	-16	45	40.6			688
1687	1985	04	23.23108	13	12	12.80	-03	56	50.9		16.8	688
1687	1985	04	23.30903	13	12	09.50	-03	56	33.5			688
1694	1985	04	24.30417	14	08	32.70	-19	58	19.6	1		688
1730	1985	04	23.23108	13	16	31.48	-00	35	49.3			688
1730	1985	04	23.30903	13	16	28.21	-00	35	24.3			688
1845	1985	04	24.27569	13	54	32.53	+03	50	01.6			688
1845	1985	04	24.35694	13	54	28.74	+03	50	25.2			688
1908	1985	04	25.26181	13	49	35.82	-13	41	53.4		16.8	688
1908	1985	04	25.30642	13	49	33.35	-13	41	45.5			688
2032	1985	04	23.25318	13	44	37.71	-10	48	44.6			688
2032	1985	04	23.33090	13	44	33.93	-10	48	26.6			688
2040	1985	04	23.23108	13	04	31.81	+01	02	08.0			688
2040	1985	04	23.30903	13	04	27.82	+01	02	03.1			688
2097	1985	04	25.26181	13	46	01.94	-17	10	21.1			688
2097	1985	04	25.30642	13	45	59.86	-17	10	08.4			688
2149	1985	04	23.20382	12	13	02.46	+08	33	11.6			688
2149	1985	04	23.28160	12	12	59.45	+08	33	13.1			688
2169	1985	04	23.25318	13	43	08.71	-08	59	26.5			688
2169	1985	04	23.33090	13	43	04.72	-08	59	06.9			688
2179	1985	04	25.26181	14	06	08.93	-18	27	26.4		16.8	688
2179	1985	04	25.30642	14	06	06.61	-18	27	20.8			688
2204	1985	04	24.33125	13	47	02.24	+12	58	42.6			688
2204	1985	04	24.40833	13	46	58.03	+12	59	12.3			688
2219	1985	04	23.23108	13	03	59.33	+02	15	29.3			688
2219	1985	04	23.30903	13	03	56.04	+02	15	41.0			688
2311	1985	04	23.25318	13	54	11.69	-04	09	41.3		16.8	688
2311	1985	04	23.33090	13	54	08.66	-04	09	22.2			688
2338	1985	04	23.23108	13	01	37.90	-01	21	03.7			688
2338	1985	04	23.30903	13	01	34.36	-01	20	46.4			688
2362	1985	04	24.30417	14	14	09.35	-16	39	00.1			688
2362	1985	04	24.38264	14	14	04.03	-16	38	40.8			688
2371	1985	04	24.30417	14	08	54.67	-14	09	54.5		16.5	688
2371	1985	04	24.38264	14	08	50.23	-14	09	28.3			688
2415	1985	04	23.23108	13	03	27.82	-03	00	46.6		17.0	688
2415	1985	04	23.30903	13	03	23.99	-03	00	26.7			688
2464	1985	04	24.30417	14	29	43.68	-15	24	23.2			688
2464	1985	04	24.38264	14	29	40.02	-15	24	08.2			688
2489	1985	04	23.23108	12	53	51.25	-04	05	28.2			688
2543	1985	04	23.23108	13	12	13.72	+00	00	11.8			688
2543	1985	04	23.30903	13	12	09.86	+00	00	18.2			688
2756	1985	04	25.26181	13	40	23.22	-16	43	30.8			688
2756	1985	04	25.30642	13	40	20.94	-16	43	21.4			688
2786	1985	04	25.26181	13	54	59.59	-20	56	51.3	3		688
2786	1985	04	25.30642	13	54	57.02	-20	56	41.6			688
2801	1985	04	23.23108	13	06	30.05	-03	52	43.1			688
2801	1985	04	23.30903	13	06	26.09	-03	52	32.4			688
2811	1985	04	24.30417	14	27	52.14	-16	07	41.2			688
2811	1985	04	24.38264	14	27	48.02	-16	07	23.4			688
2823	1985	04	25.26181	13	44	31.97	-14	48	10.0			688
2823	1985	04	25.30642	13	44	29.34	-14	47	49.8			688
2847	1985	04	25.26181	14	04	27.10	-15	27	46.3			688
2847	1985	04	25.30642	14	04	24.38	-15	27	28.4			688
2891	1985	04	23.20382	12	12	28.32	+11	14	40.5		17.5	688
2891	1985	04	23.28160	12	12	25.90	+11	14	48.5			688
2990	1985	04	23.25318	13	54	38.90	-08	27	56.8		17.5	688

1934	AF	1985	04	23.25318	13	59	47.68	-10	46	02.0		16.8	688
1934	AF	1985	04	23.33090	13	59	43.89	-10	45	42.4			688
1949	DA	1985	04	23.25318	13	58	24.31	-07	12	16.9		16.8	688
1949	DA	1985	04	23.33090	13	58	19.67	-07	11	45.3			688
1977	RG	1985	03	22.30197	12	10	07.03	+02	53	59.0		17.2	2 688
1977	RG	1985	03	22.36944	12	10	03.74	+02	54	29.9			688
1979	TK	1985	04	23.25318	13	51	03.86	-10	35	08.6		17.0	688
1979	TK	1985	04	23.33090	13	50	58.37	-10	34	54.6			688
1981	EQ27	1985	03	21.25579	11	05	37.46	+06	33	43.2		17.2	688
1981	EQ27	1985	03	21.31748	11	05	34.60	+06	34	05.7			688
1982	HB2	1985	03	21.28576	11	30	45.06	+10	34	16.5		17.0	688
1982	HB2	1985	03	21.34797	11	30	41.01	+10	34	28.8			688
1982	TL1	1985	04	25.26181	14	00	18.83	-17	06	21.0		17.2	688
1982	TL1	1985	04	25.30642	14	00	16.53	-17	06	12.6			688
1983	WP	1985	04	25.28391	14	16	09.07	+05	09	23.9		17.2	688
1985	FA	1985	04	24.33125	13	53	37.83	+16	28	49.9		16.8	688
1985	FA	1985	04	24.40833	13	53	31.27	+16	28	12.6			688
1985	FZ1	1985	04	23.20382	12	14	08.24	+15	25	02.8		17.0	688
1985	FZ1	1985	04	23.28160	12	14	06.43	+15	25	12.6			688
1985	FA2	1985	04	23.20382	12	24	40.76	+14	14	20.0		17.0	688
1985	FA2	1985	04	23.28160	12	24	38.08	+14	14	26.5			688
1985	FB2	1985	04	23.20382	12	27	33.40	+13	25	45.4		16.8	688
1985	FB2	1985	04	23.28160	12	27	31.35	+13	26	02.3			688
1985	FC2	1985	04	23.20382	12	29	50.36	+14	06	14.0		17.0	688
1985	FC2	1985	04	23.28160	12	29	47.05	+14	05	57.2			688
1985	GB	1985	04	23.25318	13	37	27.80	-09	17	08.7		16.5	688
1985	GB	1985	04	23.33090	13	37	24.35	-09	16	53.7			688
1985	GC	1985	04	23.25318	13	37	26.95	-07	23	52.3		17.0	688
1985	GC	1985	04	23.33090	13	37	22.24	-07	23	45.8			688
1985	GD	1985	04	23.25318	13	41	28.12	-04	23	49.6		17.2	688
1985	GD	1985	04	23.33090	13	41	23.45	-04	23	29.3			1 688
1985	GE	1985	04	23.25318	13	44	43.25	-04	03	37.7		17.2	688
1985	GE	1985	04	23.33090	13	44	39.71	-04	03	12.1			688
1985	GF	1985	04	23.25318	13	44	57.05	-08	23	17.8		17.2	688
1985	GF	1985	04	23.33090	13	44	53.28	-08	22	57.6			1 688
1985	GG	1985	04	23.25318	13	47	07.82	-06	06	39.3		17.2	688
1985	GG	1985	04	23.33090	13	47	03.89	-06	06	33.9			688
1985	GK	1985	04	23.33090	13	54	22.82	-08	35	47.1		17.0	688
1985	GM	1985	04	23.25318	13	59	42.00	-07	51	23.5		16.8	688
1985	GM	1985	04	23.33090	13	59	38.15	-07	51	06.1			688
1985	GO	1985	04	23.23108	13	03	13.44	+02	16	03.3		17.0	688
1985	GO	1985	04	23.30903	13	03	09.40	+02	16	16.2			688
1985	GP	1985	04	23.23108	13	13	22.51	+02	15	06.2		16.5	688
1985	GP	1985	04	23.30903	13	13	18.25	+02	15	33.3			688
1985	GS	1985	04	24.33125	13	49	26.44	+14	00	37.0		16.8	688
1985	GS	1985	04	24.40833	13	49	22.92	+14	00	51.5			688
1985	GT	1985	04	24.33125	13	51	57.16	+12	12	35.4		16.8	688
1985	GU	1985	04	24.33125	13	57	28.72	+11	50	27.3		17.2	688
1985	GU	1985	04	24.40833	13	57	24.41	+11	50	46.6			688
1985	GV	1985	04	24.27569	13	43	35.51	+04	33	29.8		16.0	688
1985	GV	1985	04	24.35694	13	43	31.84	+04	34	06.9			688
1985	GW	1985	04	24.27569	13	42	02.11	+03	21	52.9		17.0	688
1985	GW	1985	04	24.35694	13	41	57.60	+03	22	03.1			688
1985	GX	1985	04	24.27569	13	53	10.29	+05	04	11.2		16.8	688
1985	GX	1985	04	24.35694	13	53	06.29	+05	04	44.2			688
1985	GY	1985	04	24.27569	13	52	37.69	+00	34	06.3		17.5	688
1985	GY	1985	04	24.35694	13	52	33.48	+00	34	10.5			688
1985	GZ	1985	04	24.27569	13	52	19.75	-00	29	17.1		17.2	1 688
1985	GZ	1985	04	24.35694	13	52	15.23	-00	28	51.5			3 688

1985 GA1		1985 04	24.27569	13	59	28.77	+00	07	37.2		17.0	688
1985 GA1		1985 04	24.35694	13	59	23.74	+00	08	07.7			688
1985 GD1		1985 04	24.30417	14	15	12.20	-13	24	42.8		17.0	688
1985 GD1		1985 04	24.38264	14	15	08.25	-13	24	21.1			688
1985 GE1		1985 04	24.30417	14	19	14.39	-14	35	55.4		15.8	688
1985 GE1		1985 04	24.38264	14	19	10.16	-14	35	15.6			688
1985 HB		1985 04	24.27569	14	01	35.06	+06	00	21.6		16.0	688
1985 HB		1985 04	24.35694	14	01	31.15	+06	00	35.3			688
1985 HJ		1985 04	23.23108	13	12	09.76	-04	33	06.6		17.2	688
1985 HJ		1985 04	23.30903	13	12	06.28	-04	32	48.9			688
1985 HK1	*	1985 04	23.23108	12	55	04.30	+01	14	07.5		17.0	4 688
1985 HK1		1985 04	23.30903	12	55	01.17	+01	14	24.8			688
1985 HL1	*	1985 04	23.25318	13	37	06.62	-03	54	16.9		17.2	4 688
1985 HL1		1985 04	23.33090	13	37	01.58	-03	54	12.9			688
1985 HM1	*	1985 04	23.25318	13	48	14.43	-04	05	31.0		17.2	4 688
1985 HM1		1985 04	23.33090	13	48	09.43	-04	05	25.7			688
1985 HN1	*	1985 04	24.30417	14	22	12.18	-17	58	47.3		17.0	4 688
1985 HN1		1985 04	24.38264	14	22	07.64	-17	58	16.2			688
1985 HO1	*	1985 04	24.30417	14	27	36.27	-18	21	05.5		16.8	4 688
1985 HO1		1985 04	24.38264	14	27	32.50	-18	20	42.4			688
1985 JA		1985 05	18.28993	15	08	51.81	-10	18	30.0		16.5	688
1985 JA		1985 05	18.31076	15	08	50.44	-10	16	37.2			688
1985 JA		1985 05	18.34792	15	08	47.64	-10	13	09.0			688
1985 JA		1985 05	20.23270	15	06	56.62	-07	25	48.6		16.5	688
1985 JA		1985 05	20.23964	15	06	56.04	-07	25	12.3			688
4650 P-L		1985 04	25.26181	13	55	04.89	-13	34	40.0		17.0	688
4650 P-L		1985 04	25.30642	13	55	02.16	-13	34	30.8			688

Note 1: right ascension uncertain. 2: declination uncertain. 3 = 1 + 2. 4: discoverer Bowell.

OBSERVATIONS MADE WITH THE SPACEWATCH CAMERA 0.91-M TELESCOPE ON KITT PEAK.

Observations made by T. Gehrels with a CCD in scanning mode. Reductions by J. V. Scotti using reference stars from the 1984 SAO Catalog. For further details see MPC 9198. Contact: T. Gehrels, Space Sciences Building, University of Arizona, Tucson, AZ 85721, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
1866	1985 04	19.41260	16 44 59.42	-04 00 47.4		691
1866	1985 04	19.42596	16 44 58.74	-04 00 52.4		691
1866	1985 04	19.44176	16 44 57.93	-04 00 58.1		691
1941 UG	1985 04	23.22116	08 44 44.51	+13 17 39.6		691
1941 UG	1985 04	23.23566	08 44 45.15	+13 17 37.7		691
1953 NB	1985 05	15.33031	16 47 49.95	-20 39 50.2	16.5V	691
1953 NB	1985 05	15.34383	16 47 49.27	-20 39 51.4		691
1953 NB	1985 05	15.35765	16 47 48.59	-20 39 52.9		691
1953 NB	1985 05	18.32065	16 45 22.23	-20 44 34.5		691
1953 NB	1985 05	18.33402	16 45 21.48	-20 44 35.7		691
1953 NB	1985 05	18.34803	16 45 20.72	-20 44 37.2		691
1973 SZ1	1985 04	25.13282	10 22 24.59	+13 42 45.3		691
1973 SZ1	1985 04	25.14788	10 22 24.62	+13 42 44.1		691
1973 SZ1	1985 04	25.18914	10 22 24.70	+13 42 41.1		691
1973 SZ1	1985 04	25.24804	10 22 24.83	+13 42 36.6		691
1981 VA	1985 05	22.15196	09 17 11.78	-12 05 48.6	17.4V	691
1981 VA	1985 05	22.16583	09 17 10.71	-12 05 00.0		691
1981 VA	1985 05	22.16843	09 17 10.52	-12 04 51.0		691
1981 VA	1985 05	22.17038	09 17 10.37	-12 04 44.3		691
1981 VA	1985 05	23.15122	09 15 58.46	-11 06 27.3		691
1981 VA	1985 05	23.16149	09 15 57.67	-11 05 50.7		691
1981 VA	1985 05	23.16464	09 15 57.42	-11 05 49.5		691
1981 YC	1985 04	24.12590	08 36 32.16	-10 48 44.3		691

1981	YC		1985	04	24.13910	08	36	33.13	-10	48	37.7	691
1981	YC		1985	04	24.15260	08	36	34.07	-10	48	30.3	691
1982	DV		1985	05	15.44097	21	17	01.09	-07	31	35.5	18.6V 691
1982	DV		1985	05	15.46694	21	17	03.14	-07	31	14.2	691
1982	DV		1985	05	19.43421	21	22	05.05	-06	37	31.4	691
1982	DV		1985	05	19.45383	21	22	06.37	-06	37	15.8	691
1982	DV		1985	05	19.47366	21	22	07.71	-06	36	59.2	691
1982	RB		1985	04	19.34047	17	48	22.72	+19	22	14.5	691
1982	RB		1985	04	19.35402	17	48	23.75	+19	22	34.5	691
1982	RB		1985	04	19.36804	17	48	24.78	+19	22	54.7	691
1982	RB		1985	05	15.38322	18	14	33.05	+30	07	03.7	691
1982	RB		1985	05	15.40100	18	14	33.71	+30	07	30.0	691
1982	RB		1985	05	18.36163	18	16	29.24	+31	17	03.2	691
1982	RB		1985	05	18.37605	18	16	29.72	+31	17	23.6	691
1982	RB		1985	05	18.39102	18	16	30.21	+31	17	43.6	691
1983	PA		1985	05	23.16957	10	09	49.59	-10	56	29.0	18.5V 691
1983	PA		1985	05	23.18216	10	09	49.94	-10	56	27.2	691
1983	PA		1985	05	23.19024	10	09	50.14	-10	56	27.2	691
1985	CN		1985	04	24.19661	11	20	31.13	+10	27	59.0	691
1985	CN		1985	04	24.20970	11	20	31.05	+10	28	01.1	691
1985	CN		1985	04	24.22487	11	20	31.04	+10	28	02.8	691
1985	CN		1985	05	15.18024	11	25	11.43	+10	24	43.5	19.0V 691
1985	CN		1985	05	15.19334	11	25	11.77	+10	24	41.4	691
1985	CN		1985	05	15.20677	11	25	12.19	+10	24	39.7	691
1985	FC		1985	05	15.21859	11	16	57.46	+00	14	08.6	17.4V 691
1985	FC		1985	05	15.23105	11	16	57.53	+00	13	56.4	691
1985	FC		1985	05	15.24434	11	16	57.60	+00	13	43.8	691
1985	FC		1985	05	18.21895	11	17	30.56	-00	34	12.1	691
1985	FC		1985	05	18.23433	11	17	30.74	-00	34	27.2	691
1985	FC		1985	05	18.24892	11	17	30.92	-00	34	41.0	691
1985	KG	*	1985	05	19.44177	21	33	09.99	-06	37	23.2	17.5V 691
1985	KG		1985	05	19.46138	21	33	10.70	-06	37	14.6	691
1985	KG		1985	05	19.48120	21	33	11.54	-06	37	05.2	691

OBSERVATIONS MADE AT THE GOETHE LINK OBSERVATORY.

Plates measured and reduced at Indiana University under the direction of D. Owings in response to requests from the Minor Planet Center. Contact: F. K. Edmondson, Swain Hall West 319A, Indiana University, Bloomington, IN 47401, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
3227	1957	11 27.23335	03 00 22.51	+10 14 12.0	760
3227	1957	11 27.27710	03 00 20.02	+10 14 04.3	760
1949 UP	1949	10 28.21662	02 02 15.32	+01 54 20.3	760
1955 UM	1955	10 20.17363	01 13 29.20	+10 01 54.4	760
1955 UM	1955	10 20.21461	01 13 26.66	+10 01 34.8	760
1957 EO	1957	03 04.38717	13 53 45.19	-03 26 43.9	760
1957 EO	1957	03 04.45105	13 53 44.02	-03 26 28.7	760
1957 WK	1957	10 23.26734	02 40 34.44	+26 02 05.0	760
1957 WK	1957	10 23.31317	02 40 31.61	+26 01 53.5	760
1957 WK1	1957	11 27.23335	03 06 06.41	+03 19 06.6	760
1957 WK1	1957	11 27.27710	03 06 04.64	+03 18 45.6	760
1958 DO	1958	02 23.19453	08 42 57.38	+23 28 58.6	760
1958 DO	1958	02 23.23819	08 42 55.28	+23 29 05.4	760
1958 VB1	1958	11 11.26946	01 05 03.53	+18 44 10.4	760
1958 VB1	1958	11 11.31806	03 05 00.65	+18 44 16.6	760
1962 PA	1962	08 01.15443	20 23 43.59	-16 07 23.2	760
1962 PA	1962	08 01.19783	20 23 41.58	-16 07 29.9	760
1962 RL	1962	09 07.26671	00 38 58.69	+09 01 14.4	760
1962 RL	1962	09 07.31937	00 38 56.63	+09 00 58.4	760

1962	TH	1962	10	04.15619	22	16	56.18	-21	19	00.9	760
1964	EE	1964	03	16.33823	12	53	10.89	+06	25	25.8	760
1964	EE	1964	03	16.38823	12	53	08.12	+06	25	34.9	760

OBSERVATIONS MADE AT OAK RIDGE OBSERVATORY BY R. E. McCROSKY, C.-Y. SHAO AND G. SCHWARTZ.

Plates with the 1.5-m reflector, reduced using the Astrographic Catalogue. Coordination and verification by, and assistance with identifications from, C. M. Bardwell. Contact: R. E. McCrosky, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
550	1985	05 19.06271	08 48 41.82	+09 01 31.4	16		801
1394	1985	04 17.21110	12 41 35.03	-02 55 21.0			801
1866	1985	04 25.33155	16 39 07.77	-04 42 16.1			801
1932 CN	1985	04 18.25743	14 03 23.45	-02 02 40.0			801
1934 AF	1985	04 25.24401	13 58 15.54	-10 37 38.1	17		801
1938 DZ	1985	04 25.03775	11 47 28.61	-03 36 44.1			801
1938 DB1	1985	04 18.13375	10 01 46.38	+18 01 03.5			801
1953 NB	1985	05 19.21493	16 44 35.48	-20 45 55.5			801
1953 VN2	1985	04 22.19016	11 57 56.88	+10 15 07.1			801
1973 UX5	1985	05 25.21067	15 18 22.15	-16 49 34.2	16		801
1973 UX5	1985	05 26.09015	15 17 28.63	-16 46 20.4		1	801
1975 TS2	1985	04 17.27401	13 29 30.44	-00 25 15.9		2	801
1975 TS2	1985	05 25.14049	13 06 14.00	-00 56 24.9			801
1976 SE1	1985	04 22.21336	12 24 26.52	-01 42 52.8			801
1977 QC4	1985	05 21.16570	13 40 28.34	+09 42 06.7			801
1977 RG	1985	04 25.06113	11 49 28.54	+06 48 42.0			801
1978 NE	1985	02 18.26408	08 59 37.71	+25 23 01.8			801
1978 NE	1985	03 23.09516	08 41 15.47	+27 26 54.3			801
1978 NT1	1985	04 22.23857	13 16 20.91	+13 44 45.2			801
1979 QA10	1985	04 18.15933	10 56 18.50	+06 22 11.1			801
1979 SM11	1985	05 24.21254	15 48 04.59	-15 36 21.4			801
1980 FA	1985	03 19.33343	13 03 13.95	-05 25 48.5			801
1980 FA	1985	04 17.21110	12 41 26.24	-02 51 54.4			801
1981 AA	1985	04 25.19420	12 45 52.86	+32 41 42.6			801
1981 DD	1985	04 25.08672	12 06 22.66	-05 31 51.3			801
1981 DK1	1985	04 18.33006	15 48 16.69	-15 42 59.0			801
1981 DK1	1985	05 21.22276	15 24 56.67	-08 55 09.8			801
1981 EQ27	1985	05 21.11333	11 07 14.13	+07 23 47.9			801
1981 QO2	1985	04 22.16096	11 34 21.89	+03 32 14.6			801
1981 YC	1985	03 23.05065	08 13 04.27	-16 45 58.3			801
1981 YC	1985	04 22.04542	08 34 03.79	-11 07 12.5			801
1982 DA	1985	04 17.05200	07 44 12.32	+26 21 02.1			801
1982 DV	1985	05 21.32589	21 24 13.94	-06 12 59.9			801
1982 HB2	1985	05 25.11304	11 21 34.98	+07 05 11.5		3	801
1982 JA	1985	03 22.17341	08 31 08.29	+30 37 13.2			801
1982 RZ1	1985	03 22.33210	13 29 47.78	-06 13 06.9			801
1982 RZ1	1985	04 18.21430	13 10 37.64	-04 24 01.2			801
1982 TD1	1985	04 17.22990	13 15 38.72	-12 47 09.5			801
1982 VX3	1985	03 26.27256	12 26 59.79	-01 08 04.5			801
1982 VX3	1985	04 25.10991	12 07 46.99	+01 03 29.8			801
1983 QD	1985	04 24.12191	10 08 29.44	+00 31 14.4			801
1983 WB	1985	04 22.14262	10 55 44.86	+20 11 25.6			801
1983 WP	1985	03 22.35447	14 42 35.10	+03 37 25.6			801
1983 WP	1985	04 17.29639	14 23 50.79	+05 01 08.4			801
1984 AR	1985	04 25.21796	13 35 52.86	-10 06 42.8			801
1984 AF1	1985	03 22.30613	12 34 37.24	+08 35 17.1			801
1984 AF1	1985	04 23.19765	12 13 28.78	+10 15 18.1			801
1984 BT	1985	03 25.30416	14 38 51.00	-04 42 21.5			801

1984	BT		1985	04	18.27806	14	24	04.79	-03	34	06.0	801
1984	DU		1985	04	22.28496	15	08	34.90	-07	28	56.8	801
1984	DU		1985	05	25.18718	14	42	51.80	-05	24	57.8	801
1984	HA1		1985	04	17.31579	15	31	11.98	+03	55	16.3	801
1984	KF		1985	05	24.26554	16	59	38.97	+09	48	33.5	801
1984	YC		1985	04	21.03602	07	51	08.72	-07	09	39.0	801
1985	CL		1985	04	17.18315	09	11	54.70	+22	05	46.8	801
1985	DA		1985	04	18.18872	11	08	18.96	+28	14	45.6	801
1985	DX		1985	05	25.07046	10	17	40.44	+03	16	41.1	801
1985	DS1	*	1985	02	21.35919	11	14	33.77	+04	39	40.3	18 801
1985	FD1		1985	05	19.08230	12	06	51.01	-04	05	37.6	801
1985	FD1		1985	05	21.05908	12	08	04.92	-04	08	16.4	801
1985	HC		1985	05	21.18313	15	00	17.95	-04	06	22.8	801
1985	HH		1985	03	22.33210	13	29	29.09	-06	27	22.0	16.5 801
1985	HP1	*	1985	04	17.21110	12	41	42.72	-02	53	07.8	18 801
1985	HQ1	*	1985	04	17.25442	13	19	29.13	-11	54	01.0	16 801
1985	HR1	*	1985	04	25.24401	13	58	27.42	-10	35	51.5	18.5 4 801
1985	JA		1985	05	21.13239	15	06	07.41	-06	10	23.1	801
1985	JA		1985	05	23.20750	15	04	24.37	-03	27	32.7	801
4650	P-L		1985	02	20.36832	14	14	12.82	-13	33	15.4	801
4650	P-L		1985	04	18.23328	14	01	40.61	-13	59	07.9	801
6563	P-L		1985	04	17.25442	13	18	26.25	-12	00	25.5	5 801
9103	P-L		1985	03	26.24937	11	27	31.84	+02	05	44.1	801
9103	P-L		1985	04	21.15977	11	10	18.65	+04	31	45.7	801

Note 1: exposure ended in clouds. 2: very weak image. 3: dark plate, inkdot measured. 4: measured in one direction only. 5: image trailed.

OBSERVATIONS MADE WITH THE AUTOMATIC MERIDIAN CIRCLE AT FLOIRAC BY Y. REQUIEME AND M. RAPAPORT.

Contact: M. Rapaport, Observatoire de l'Universite de Bordeaux, B.P. 21, F-33270 Floirac, France.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1	1983	08 04.05193	21 59 32.79	-26 47 02.3	999
1	1983	08 05.04850	21 58 45.47	-26 53 48.0	999
1	1983	08 05.04959	21 58 45.41	-26 53 48.0	999
1	1983	08 06.04522	21 57 57.38	-27 00 28.5	999
1	1983	08 07.04193	21 57 08.58	-27 07 04.6	999
1	1983	08 07.04301	21 57 08.50	-27 07 04.9	999
1	1983	08 08.03863	21 56 19.14	-27 13 35.8	999
1	1983	08 15.01546	21 50 19.59	-27 56 13.8	999
1	1983	08 15.01657	21 50 19.53	-27 56 13.8	999
1	1983	08 18.00536	21 47 41.44	-28 12 35.4	999
1	1983	08 19.99868	21 45 55.80	-28 22 43.5	999
1	1983	08 19.99978	21 45 55.76	-28 22 43.4	999
1	1983	08 31.95934	21 35 45.57	-29 09 29.5	999
1	1983	09 01.95569	21 34 58.28	-29 12 13.6	999
1	1983	09 04.94584	21 32 41.41	-29 19 15.9	999
1	1983	09 05.94380	21 31 57.56	-29 21 14.0	999
1	1983	09 07.93709	21 30 33.00	-29 24 36.3	999
1	1983	09 12.92030	21 27 20.95	-29 29 45.8	999
1	1983	09 12.92139	21 27 20.91	-29 29 45.9	999
1	1983	09 13.91717	21 26 46.19	-29 30 15.2	999
1	1983	09 13.91826	21 26 46.14	-29 30 14.8	999
1	1983	09 14.91444	21 26 12.66	-29 30 33.6	999
1	1983	09 20.89642	21 23 19.80	-29 28 42.6	999
1	1983	09 22.88968	21 22 33.33	-29 26 45.7	999
1	1983	09 22.89078	21 22 33.32	-29 26 45.4	999
1	1983	09 23.88671	21 22 12.27	-29 25 33.0	999
1	1983	09 23.88779	21 22 12.24	-29 25 32.3	999

1	1983	09	24.88375	21	21	52.64	-29	24	10.2	999
1	1983	09	24.88487	21	21	52.61	-29	24	10.2	999
1	1983	09	29.86923	21	20	36.65	-29	15	02.9	999
1	1983	09	29.87032	21	20	36.65	-29	15	02.5	999
1	1983	10	04.85622	21	19	57.89	-29	02	23.3	999
1	1983	10	12.83346	21	20	13.73	-28	35	31.6	999
1	1983	10	12.83455	21	20	13.74	-28	35	31.4	999
1	1983	11	03.77910	21	28	29.65	-26	48	15.3	999
1	1983	11	03.78017	21	28	29.70	-26	48	14.5	999
1	1983	11	04.77679	21	29	06.20	-26	42	25.1	999
1	1983	11	04.77787	21	29	06.25	-26	42	24.5	999
1	1983	11	06.77243	21	30	22.61	-26	30	31.3	999
2	1983	06	15.06655	19	04	12.68	+22	33	36.1	999
2	1983	06	15.06765	19	04	12.65	+22	33	36.4	999
2	1983	06	16.06436	19	03	29.64	+22	35	57.6	999
2	1983	06	18.05685	19	02	01.63	+22	39	52.9	999
2	1983	06	18.05792	19	02	01.58	+22	39	53.0	999
2	1983	06	19.05060	19	01	16.63	+22	41	26.7	999
2	1983	06	20.05034	19	00	31.03	+22	42	44.7	999
2	1983	06	20.05144	19	00	30.99	+22	42	44.9	999
2	1983	06	30.01749	18	52	30.67	+22	40	34.4	999
2	1983	07	02.01089	18	50	51.29	+22	36	46.0	999
2	1983	07	02.01198	18	50	51.19	+22	36	45.9	999
2	1983	07	03.00758	18	50	01.44	+22	34	26.5	999
2	1983	07	06.99478	18	46	42.09	+22	22	18.7	999
2	1983	07	07.99106	18	45	52.47	+22	18	34.8	999
2	1983	07	07.99214	18	45	52.46	+22	18	34.6	999
2	1983	07	08.98716	18	45	03.02	+22	14	34.3	999
2	1983	07	08.98884	18	45	03.03	+22	14	33.9	999
2	1983	07	11.97788	18	42	36.25	+22	00	52.9	999
2	1983	07	11.97896	18	42	36.21	+22	00	52.6	999
2	1983	08	03.90419	18	26	49.61	+19	04	10.2	999
2	1983	08	04.90111	18	26	18.96	+18	54	08.1	999
2	1983	08	05.89804	18	25	49.39	+18	43	56.8	999
2	1983	08	06.89498	18	25	20.93	+18	33	37.0	999
2	1983	08	10.88293	18	23	38.40	+17	50	57.3	999
2	1983	08	14.87117	18	22	14.69	+17	06	29.5	999
2	1983	08	17.86228	18	21	24.62	+16	32	12.3	999
2	1983	08	17.86332	18	21	24.61	+16	32	11.7	999
3	1983	09	14.12265	02	23	35.00	+04	21	40.4	999
3	1983	09	14.12365	02	23	35.02	+04	21	39.9	999
3	1983	09	18.11239	02	24	32.56	+03	40	16.2	999
3	1983	09	19.10977	02	24	42.56	+03	29	23.1	999
3	1983	09	19.11078	02	24	42.56	+03	29	22.4	999
3	1983	09	24.09733	02	25	05.64	+02	31	59.6	999
3	1983	09	26.09088	02	25	02.37	+02	07	47.5	999
3	1983	09	26.09190	02	25	02.37	+02	07	46.8	999
3	1983	09	28.08598	02	24	51.97	+01	42	55.6	999
3	1983	09	29.08248	02	24	44.11	+01	30	17.5	999
3	1983	09	29.08349	02	24	44.10	+01	30	16.8	999
3	1983	10	03.07099	02	23	55.37	+00	38	29.4	999
3	1983	10	04.06806	02	23	38.95	+00	25	17.2	999
3	1983	10	05.06513	02	23	20.89	+00	12	00.2	999
3	1983	10	05.06614	02	23	20.88	+00	11	59.6	999
3	1983	10	06.06217	02	23	01.25	-00	01	20.4	999
3	1983	10	06.06318	02	23	01.23	-00	01	21.2	999
3	1983	10	09.05319	02	21	53.19	-00	41	37.9	999
3	1983	10	09.05418	02	21	53.18	-00	41	38.7	999
3	1983	10	10.05016	02	21	27.61	-00	55	05.4	999

3	1983	10	10.05117	02	21	27.59	-00	55	06.4	999
3	1983	10	12.04406	02	20	32.44	-01	22	00.2	999
3	1983	10	12.04508	02	20	32.42	-01	22	01.0	999
3	1983	10	13.04099	02	20	02.96	-01	35	24.3	999
3	1983	10	13.04204	02	20	02.95	-01	35	25.0	999
3	1983	11	04.96881	02	05	38.08	-06	00	58.0	999
3	1983	11	11.94676	02	01	28.37	-06	51	53.9	999
3	1983	11	17.92857	01	58	35.56	-07	20	42.4	999
3	1983	11	18.92480	01	58	11.45	-07	24	08.8	999
3	1983	11	18.92581	01	58	11.44	-07	24	08.9	999
3	1983	11	21.91587	01	57	07.85	-07	32	09.8	999
3	1983	11	21.91688	01	57	07.83	-07	32	09.7	999
3	1983	11	22.91294	01	56	49.75	-07	34	04.0	999
3	1983	11	22.91395	01	56	49.72	-07	34	04.1	999
3	1983	11	30.89011	01	55	24.51	-07	36	02.2	999
3	1983	11	30.89112	01	55	24.51	-07	36	02.1	999
3	1983	12	01.88824	01	55	21.69	-07	34	40.5	999
3	1983	12	05.87650	01	55	28.58	-07	25	53.0	999
3	1983	12	05.87756	01	55	28.58	-07	25	52.9	999
3	1983	12	07.87121	01	55	43.04	-07	19	34.1	999
3	1983	12	07.87225	01	55	43.05	-07	19	33.6	999
4	1983	10	03.21092	05	45	47.81	+18	00	49.9	999
4	1983	10	03.21198	05	45	47.85	+18	00	49.7	999
4	1983	10	05.20626	05	46	56.85	+18	00	32.4	999
4	1983	11	04.12745	05	51	19.07	+17	59	08.9	999
4	1983	11	04.12849	05	51	19.05	+17	59	08.8	999
4	1983	11	05.12443	05	51	00.23	+17	59	24.4	999
4	1983	11	05.12547	05	51	00.21	+17	59	24.4	999
4	1983	11	12.10320	05	47	56.55	+18	02	05.9	999
4	1983	11	12.10425	05	47	56.51	+18	02	05.9	999
4	1983	11	18.08421	05	44	09.66	+18	05	42.1	999
4	1983	11	18.08524	05	44	09.61	+18	05	42.1	999
4	1983	12	01.04182	05	32	49.21	+18	17	29.8	999
4	1983	12	02.03742	05	31	48.30	+18	18	36.3	999
4	1983	12	06.02409	05	27	35.87	+18	23	20.3	999
4	1983	12	08.01677	05	25	25.63	+18	25	51.8	999
5	1983	02	18.04686	10	54	07.30	+09	36	35.5	999
5	1983	02	19.04683	10	53	24.57	+09	45	03.3	999
5	1983	02	22.03391	10	51	11.75	+10	10	43.7	999
5	1983	03	05.99496	10	41	49.32	+11	51	48.2	999
5	1983	03	06.99140	10	41	03.05	+11	59	43.8	999
5	1983	03	15.96238	10	34	37.60	+13	04	27.1	999
5	1983	03	19.94979	10	32	13.35	+13	28	27.6	999
5	1983	03	20.94669	10	31	40.63	+13	33	55.7	999
5	1983	03	29.91988	10	27	55.80	+14	13	00.7	999
5	1983	04	26.84534	10	31	12.50	+14	17	58.3	999
5	1983	04	27.84339	10	31	43.79	+14	15	12.0	999
6	1983	06	04.04876	17	53	19.14	-03	21	21.7	999
6	1983	06	15.01067	17	43	06.47	-03	29	17.7	999
6	1983	06	15.01171	17	43	06.38	-03	29	17.4	999
6	1983	06	16.00767	17	42	07.35	-03	31	12.4	999
6	1983	06	18.00140	17	40	08.42	-03	35	39.5	999
6	1983	06	18.99700	17	39	08.76	-03	38	11.4	999
6	1983	06	18.99802	17	39	08.71	-03	38	11.6	999
6	1983	06	19.99399	17	38	08.95	-03	40	55.0	999
6	1983	06	29.95950	17	28	21.30	-04	19	09.3	999
6	1983	06	29.96052	17	28	21.24	-04	19	09.4	999
6	1983	07	01.95275	17	26	29.28	-04	29	04.7	999
6	1983	07	01.95376	17	26	29.22	-04	29	05.0	999

6	1983	07	02.94908	17	25	34.87	-04 34 18.9	999
6	1983	07	06.93603	17	22	03.44	-04 56 56.7	999
6	1983	07	06.93705	17	22	03.89	-04 56 57.2	999
6	1983	07	07.93272	17	21	13.16	-05 03 01.3	999
6	1983	07	07.93373	17	21	13.12	-05 03 01.6	999
6	1983	07	08.92942	17	20	24.01	-05 09 15.2	999
6	1983	07	08.93045	17	20	23.96	-05 09 15.5	999
6	1983	07	09.92614	17	19	35.97	-05 15 38.0	999
6	1983	07	10.92342	17	18	49.15	-05 22 10.7	999
6	1983	07	11.91962	17	18	03.63	-05 28 51.0	999
6	1983	07	11.92063	17	18	03.59	-05 28 51.4	999
7	1983	06	04.03797	17	38	57.53	-23 11 09.4	999
7	1983	06	04.03903	17	38	57.48	-23 11 08.8	999
7	1983	06	15.99651	17	26	24.62	-22 41 35.8	999
7	1983	06	15.99754	17	26	24.56	-22 41 35.2	999
7	1983	06	17.99040	17	24	16.01	-22 36 14.9	999
7	1983	06	18.98610	17	23	12.01	-22 33 32.8	999
7	1983	06	18.98717	17	23	11.93	-22 33 32.2	999
7	1983	06	29.94890	17	11	56.22	-22 03 03.8	999
7	1983	07	01.94199	17	10	02.79	-21 57 32.6	999
7	1983	07	06.92580	17	05	37.71	-21 43 58.8	999
7	1983	07	07.92238	17	04	48.30	-21 41 20.3	999
7	1983	07	08.91863	17	04	00.17	-21 38 44.2	999
7	1983	07	09.91558	17	03	13.38	-21 36 10.4	999
8	1983	05	05.00306	14	50	28.06	-06 56 11.3	999
8	1983	05	15.96619	14	39	15.59	-06 19 14.2	999
8	1983	05	16.96236	14	38	17.29	-06 16 35.6	999
8	1983	05	28.92186	14	27	51.69	-05 56 20.4	999
8	1983	06	03.90264	14	23	45.25	-05 54 39.5	999
8	1983	06	10.88098	14	20	05.62	-06 00 01.6	999
8	1983	06	13.87254	14	18	55.37	-06 04 42.3	999
10	1983	03	16.09770	13	49	59.40	-17 09 42.7	999
10	1983	03	20.08562	13	48	19.17	-17 05 52.3	999
10	1983	03	21.08300	13	47	50.98	-17 04 32.2	999
10	1983	04	23.97346	13	24	22.03	-15 04 22.0	999
10	1983	05	04.93818	13	16	48.54	-14 09 33.0	999
10	1983	05	04.93926	13	16	48.50	-14 09 32.6	999
10	1983	05	13.91024	13	11	57.42	-13 27 37.1	999
10	1983	05	15.90464	13	11	05.42	-13 19 05.9	999
11	1983	02	17.80014	04	57	42.19	+19 57 30.2	999
11	1983	02	18.79776	04	58	11.93	+20 00 22.5	999
11	1983	02	19.79538	04	58	43.16	+20 03 16.0	999
15	1983	02	22.08815	12	09	33.69	-17 09 52.3	999
15	1983	03	06.04922	12	00	40.36	-17 06 21.9	999
15	1983	03	07.04602	11	59	50.45	-17 04 46.1	999
15	1983	03	08.04260	11	58	59.91	-17 02 59.6	999
15	1983	03	09.03928	11	58	08.75	-17 01 00.0	999
15	1983	03	13.02594	11	54	39.27	-16 51 08.4	999
15	1983	03	16.01589	11	51	58.47	-16 41 48.2	999
15	1983	03	20.00247	11	48	22.02	-16 26 56.8	999
15	1983	03	20.99920	11	47	27.93	-16 22 49.7	999
15	1983	04	19.90265	11	24	53.05	-13 36 47.0	999
15	1983	04	28.87444	11	21	12.63	-12 45 37.0	999
15	1983	05	04.85794	11	19	45.75	-12 14 49.7	999
16	1983	05	05.01392	15	05	27.51	-12 54 33.4	999
16	1983	05	16.97454	14	55	50.95	-12 11 40.5	999
16	1983	05	21.95820	14	52	00.57	-11 55 32.6	999
16	1983	06	03.91713	14	43	16.56	-11 21 49.1	999
16	1983	06	10.89552	14	39	37.49	-11 09 55.5	999

16	1983	06	11.89236	14	39	10.48	-11	08	38.2	999
16	1983	06	12.88895	14	38	44.63	-11	07	26.8	999
16	1983	06	13.88545	14	38	19.95	-11	06	21.7	999
16	1983	06	13.88650	14	38	19.94	-11	06	21.5	999
18	1983	02	22.04009	11	00	07.08	+09	04	19.1	999
18	1983	03	05.99965	10	49	01.61	+10	57	01.9	999
18	1983	03	06.99628	10	48	06.10	+11	06	04.4	999
18	1983	03	07.99201	10	47	10.91	+11	15	01.9	999
18	1983	03	15.96651	10	40	07.81	+12	22	24.6	999
18	1983	03	19.95304	10	36	54.95	+12	52	35.6	999
18	1983	03	20.94994	10	36	09.26	+12	59	42.8	999
18	1983	03	29.92112	10	30	12.38	+13	55	29.1	999
20	1983	09	14.10169	01	53	17.62	+11	52	10.7	999
20	1983	09	14.10270	01	53	17.60	+11	52	10.6	999
20	1983	09	18.09075	01	51	56.86	+11	43	43.2	999
20	1983	09	23.07554	01	49	38.06	+11	29	29.4	999
20	1983	09	24.07192	01	49	05.43	+11	26	10.3	999
20	1983	09	26.06520	01	47	55.50	+11	19	03.9	999
20	1983	09	26.06623	01	47	55.46	+11	19	03.7	999
20	1983	09	27.06250	01	47	18.17	+11	15	16.2	999
20	1983	09	28.05892	01	46	39.49	+11	11	20.5	999
20	1983	09	29.05567	01	45	59.29	+11	07	15.8	999
20	1983	09	29.05672	01	45	59.25	+11	07	15.5	999
20	1983	10	04.04010	01	42	18.12	+10	44	46.1	999
20	1983	10	05.03618	01	41	30.22	+10	39	53.6	999
20	1983	10	05.03719	01	41	30.19	+10	39	53.1	999
20	1983	10	06.03288	01	40	41.24	+10	34	52.9	999
20	1983	10	06.03390	01	40	41.19	+10	34	52.5	999
20	1983	10	09.02358	01	38	08.33	+10	19	12.6	999
20	1983	10	12.01382	01	35	28.12	+10	02	42.5	999
20	1983	11	13.90369	01	07	54.57	+07	05	30.9	999
20	1983	11	17.89140	01	05	56.59	+06	52	02.6	999
20	1983	11	18.88838	01	05	31.50	+06	49	07.9	999
20	1983	11	21.87944	01	04	26.91	+06	41	30.7	999
20	1983	11	21.88044	01	04	26.90	+06	41	30.4	999
20	1983	11	22.87650	01	04	09.05	+06	39	20.9	999
20	1983	11	22.87751	01	04	09.03	+06	39	20.5	999
20	1983	11	30.85419	01	02	53.26	+06	29	07.6	999
20	1983	12	01.85170	01	02	52.27	+06	28	44.5	999
20	1983	12	02.84833	01	02	53.20	+06	28	33.6	999
20	1983	12	05.84060	01	03	07.24	+06	29	11.9	999
20	1983	12	07.83505	01	03	25.96	+06	30	36.3	999
20	1983	12	07.83605	01	03	25.97	+06	30	36.3	999
21	1983	03	15.87070	08	21	35.73	+23	04	06.8	999
21	1983	03	19.85819	08	20	58.15	+23	03	23.3	999
22	1983	03	06.05146	12	03	06.00	+21	21	35.4	999
22	1983	03	07.04759	12	02	17.09	+21	26	54.5	999
22	1983	03	08.04429	12	01	27.55	+21	32	05.3	999
22	1983	03	09.04098	12	00	37.44	+21	37	07.4	999
22	1983	03	13.02770	11	57	12.58	+21	55	43.9	999
22	1983	03	20.00436	11	51	05.91	+22	21	25.3	999
22	1983	03	21.00102	11	50	13.64	+22	24	18.5	999
22	1983	04	19.90453	11	29	09.08	+22	11	14.2	999
22	1983	04	28.87782	11	26	03.53	+21	32	45.5	999
22	1983	05	04.86070	11	24	59.57	+21	00	11.5	999
31	1983	09	23.09833	02	22	32.83	+08	51	15.1	999
31	1983	10	03.06557	02	15	05.79	+09	33	22.8	999
31	1983	10	04.06235	02	14	12.91	+09	37	29.0	999
31	1983	10	05.05911	02	13	18.65	+09	41	33.3	999

31	1983	10	09.04507	02	09	28.85	+09	57	39.1	999
31	1983	10	10.04122	02	08	28.42	+10	01	38.0	999
31	1983	10	10.04223	02	08	28.36	+10	01	38.3	999
31	1983	10	13.03086	02	05	20.72	+10	13	29.1	999
31	1983	10	13.03187	02	05	20.65	+10	13	29.4	999
31	1983	11	02.95756	01	41	09.11	+11	34	11.8	999
31	1983	11	03.95413	01	40	00.26	+11	38	02.4	999
31	1983	11	11.92577	01	31	16.45	+12	09	24.8	999
31	1983	11	22.88836	01	21	15.34	+12	55	52.2	999
31	1983	11	22.88939	01	21	15.32	+12	55	52.4	999
31	1983	11	30.86280	01	15	53.68	+13	33	18.0	999
31	1983	12	01.85970	01	15	21.12	+13	38	14.5	999
31	1983	12	01.86072	01	15	21.09	+13	38	14.7	999
31	1983	12	02.85714	01	14	50.34	+13	43	15.4	999
31	1983	12	05.84748	01	13	28.76	+13	58	41.3	999
31	1983	12	05.84852	01	13	28.74	+13	58	41.5	999
31	1983	12	07.84194	01	12	43.35	+14	09	19.5	999
37	1983	06	16.05319	18	46	55.80	-27	33	59.3	999
37	1983	07	01.99794	18	31	30.42	-27	52	39.0	999
37	1983	08	06.87979	18	02	50.20	-27	39	23.1	999
39	1983	10	03.19334	05	20	29.09	+10	19	30.7	999
39	1983	10	03.19436	05	20	29.12	+10	19	30.3	999
39	1983	10	05.18855	05	21	24.86	+10	10	37.6	999
39	1983	10	05.18956	05	21	24.90	+10	10	37.4	999
39	1983	11	04.10817	05	22	21.26	+07	49	09.0	999
39	1983	11	12.08304	05	18	25.41	+07	15	17.5	999
39	1983	11	18.06357	05	14	29.10	+06	53	21.8	999
39	1983	11	18.06457	05	14	29.06	+06	53	21.6	999
39	1983	12	01.02160	05	03	49.75	+06	20	11.0	999
39	1983	12	06.00390	04	59	17.63	+06	13	49.3	999
39	1983	12	06.00490	04	59	17.54	+06	13	48.8	999
40	1983	06	16.10805	20	07	31.37	-21	32	15.9	999
40	1983	06	16.10910	20	07	31.36	-21	32	16.0	999
40	1983	06	19.09892	20	06	09.00	-21	44	18.0	999
40	1983	07	02.05720	19	57	09.79	-22	45	12.3	999
40	1983	07	02.05824	19	57	09.75	-22	45	12.7	999
40	1983	07	03.05390	19	56	17.50	-22	50	16.9	999
40	1983	07	07.04148	19	52	36.08	-23	10	50.6	999
40	1983	07	10.03123	19	49	39.10	-23	26	18.3	999
40	1983	07	11.02746	19	48	38.59	-23	31	26.4	999
40	1983	07	12.02330	19	47	37.33	-23	36	32.6	999
40	1983	08	03.94467	19	24	31.33	-25	15	54.9	999
40	1983	08	04.94214	19	23	40.66	-25	19	03.9	999
40	1983	08	07.93211	19	21	17.70	-25	27	52.1	999
40	1983	08	14.90913	19	16	44.35	-25	44	25.0	999
40	1983	08	14.91020	19	16	44.31	-25	44	25.2	999
40	1983	08	17.90078	19	15	15.89	-25	49	50.4	999
40	1983	08	31.86046	19	12	30.63	-26	03	00.9	999
40	1983	09	05.84702	19	13	11.59	-26	03	19.9	999
40	1983	09	07.84148	19	13	42.49	-26	02	51.3	999
40	1983	09	22.80721	19	21	40.79	-25	48	58.6	999
42	1983	12	01.07931	06	28	17.13	+23	46	28.4	999
42	1983	12	06.06246	06	23	39.40	+24	04	00.8	999
42	1983	12	08.05588	06	21	39.38	+24	11	00.3	999
44	1983	09	14.13200	02	37	03.35	+09	54	07.6	999
44	1983	09	19.11819	02	36	49.46	+09	40	25.3	999
44	1983	09	19.11919	02	36	49.45	+09	40	25.2	999
44	1983	09	23.10678	02	36	06.89	+09	27	05.6	999
44	1983	09	23.10782	02	36	06.90	+09	27	05.3	999

44	1983	09	24.10438	02	35	51.86	+09	23	26.1	999
44	1983	09	28.09205	02	34	34.17	+09	07	36.8	999
44	1983	09	29.08952	02	34	10.37	+09	03	21.4	999
44	1983	09	30.08703	02	33	44.85	+08	58	59.2	999
44	1983	10	03.07684	02	32	18.14	+08	45	14.3	999
44	1983	10	03.07785	02	32	18.12	+08	45	14.1	999
44	1983	10	04.07450	02	31	45.87	+08	40	26.6	999
44	1983	10	05.07106	02	31	12.01	+08	35	33.6	999
44	1983	10	06.06747	02	30	36.58	+08	30	35.4	999
44	1983	10	06.06848	02	30	36.56	+08	30	34.9	999
44	1983	10	09.05805	02	28	41.10	+08	15	08.9	999
44	1983	10	10.05565	02	27	59.66	+08	09	51.5	999
44	1983	10	13.04502	02	25	47.42	+07	53	36.5	999
44	1983	11	04.96779	02	04	58.52	+05	48	35.3	999
44	1983	11	11.94433	01	58	41.99	+05	18	48.6	999
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44	1983	11	21.91184	01	51	12.79	+04	50	23.3	999
44	1983	11	21.91284	01	51	12.76	+04	50	23.1	999
44	1983	11	22.90868	01	50	35.50	+04	48	35.0	999
44	1983	11	30.88407	01	46	36.05	+04	41	27.2	999
44	1983	11	30.88508	01	46	36.02	+04	41	27.3	999
44	1983	12	01.88108	01	46	13.95	+04	41	28.9	999
44	1983	12	01.88207	01	46	13.92	+04	41	28.9	999
44	1983	12	05.86935	01	45	03.96	+04	43	42.1	999
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44	1983	12	07.86407	01	44	40.17	+04	46	01.8	999
45	1983	06	16.09670	19	51	10.54	-13	53	01.7	999
45	1983	06	16.09773	19	51	10.53	-13	53	01.6	999
45	1983	06	19.08812	19	49	35.29	-13	58	22.3	999
45	1983	06	20.08485	19	49	00.88	-14	00	23.4	999
45	1983	07	02.04576	19	40	38.62	-14	33	13.0	999
45	1983	07	02.04677	19	40	38.57	-14	33	12.9	999
45	1983	07	03.04291	19	39	50.57	-14	36	36.3	999
45	1983	07	08.02598	19	35	40.95	-14	54	50.4	999
45	1983	07	11.01623	19	33	05.67	-15	06	41.5	999
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45	1983	08	03.93695	19	13	39.44	-16	53	31.5	999
45	1983	08	03.93801	19	13	39.42	-16	53	31.6	999
45	1983	08	04.93421	19	13	00.56	-16	58	02.0	999
45	1983	08	06.92746	19	11	46.52	-17	07	00.3	999
45	1983	08	06.92850	19	11	46.48	-17	07	00.1	999
45	1983	08	07.92506	19	11	11.42	-17	11	26.3	999
45	1983	08	10.91547	19	09	34.30	-17	24	36.5	999
45	1983	08	17.89429	19	06	39.14	-17	53	59.2	999
45	1983	09	05.84194	19	05	17.33	-19	01	07.2	999
45	1983	09	07.83590	19	05	42.59	-19	06	55.1	999
51	1983	08	05.12706	23	52	11.82	+02	55	37.6	999
51	1983	08	06.12457	23	52	02.21	+02	51	57.2	999
51	1983	08	07.12171	23	51	51.08	+02	48	03.7	999
51	1983	08	15.09781	23	49	28.29	+02	09	10.1	999
51	1983	08	15.09884	23	49	28.27	+02	09	09.6	999
51	1983	09	02.04138	23	38	57.76	-00	04	20.4	999
51	1983	09	05.03161	23	36	40.57	-00	31	30.5	999
51	1983	09	05.03263	23	36	40.51	-00	31	31.1	999
51	1983	09	06.02834	23	35	53.49	-00	40	47.6	999
51	1983	09	13.00527	23	30	11.18	-01	47	52.6	999
51	1983	09	14.00197	23	29	21.23	-01	57	39.3	999
51	1983	09	14.00298	23	29	21.17	-01	57	40.0	999
51	1983	09	14.99897	23	28	31.21	-02	07	26.8	999

51	1983	09	17.98874	23	26	01.44	-02	36	52.2	999
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51	1983	09	18.98544	23	25	11.84	-02	46	39.3	999
51	1983	09	22.97272	23	21	56.41	-03	25	24.5	999
51	1983	09	23.96899	23	21	08.63	-03	34	57.0	999
51	1983	09	25.96244	23	19	34.83	-03	53	50.1	999
51	1983	09	25.96347	23	19	34.80	-03	53	50.7	999
51	1983	09	26.95934	23	18	48.84	-04	03	09.7	999
51	1983	09	27.95650	23	18	03.64	-04	12	22.6	999
51	1983	09	28.95307	23	17	19.18	-04	21	29.1	999
51	1983	09	29.94945	23	16	35.59	-04	30	28.4	999
51	1983	09	29.95047	23	16	35.55	-04	30	29.1	999
51	1983	10	04.93442	23	13	11.68	-05	13	31.8	999
51	1983	10	05.93028	23	12	34.15	-05	21	41.6	999
51	1983	10	09.91776	23	10	16.04	-05	52	44.2	999
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51	1983	11	06.83816	23	05	05.50	-08	01	07.0	999
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52	1983	02	18.91639	07	49	26.12	+20	40	37.7	999
52	1983	02	19.91330	07	48	58.74	+20	44	27.8	999
52	1983	03	08.86421	07	45	06.89	+21	35	49.3	999
63	1983	02	18.93055	08	09	34.43	+24	17	30.2	999
63	1983	03	08.87475	07	59	22.91	+23	55	41.8	999
63	1983	03	15.85409	07	58	06.27	+23	39	38.0	999
63	1983	03	20.84062	07	58	07.42	+23	26	01.5	999
68	1983	09	14.11355	02	10	25.83	+06	47	44.2	999
68	1983	09	14.11456	02	10	25.82	+06	47	44.4	999
68	1983	09	18.10256	02	09	09.50	+06	48	31.6	999
68	1983	09	19.09875	02	08	46.02	+06	48	30.3	999
68	1983	09	19.09975	02	08	46.02	+06	48	30.4	999
68	1983	09	23.08744	02	06	54.89	+06	47	36.7	999
68	1983	09	24.08389	02	06	22.92	+06	47	12.1	999
68	1983	09	26.07822	02	05	14.23	+06	46	10.1	999
68	1983	09	30.06447	02	02	38.42	+06	43	18.6	999
68	1983	09	30.06546	02	02	38.37	+06	43	18.6	999
68	1983	10	03.05476	02	00	26.74	+06	40	36.1	999
68	1983	10	03.05576	02	00	26.70	+06	40	36.0	999
68	1983	10	04.05149	01	59	40.28	+06	39	36.5	999
68	1983	10	05.04821	01	58	52.62	+06	38	34.9	999
68	1983	10	05.04921	01	58	52.58	+06	38	34.9	999
68	1983	10	06.04492	01	58	03.88	+06	37	30.6	999
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68	1983	10	10.03263	01	54	38.86	+06	33	00.3	999
68	1983	10	12.02493	01	52	51.46	+06	30	40.4	999
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68	1983	10	13.02157	01	51	56.77	+06	29	30.6	999
68	1983	10	13.02257	01	51	56.72	+06	29	30.5	999
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68	1983	11	11.92253	01	25	52.23	+06	17	17.7	999

68	1983	11	21.89121	01	20	39.24	+06	33	06.3	999
68	1983	11	30.86508	01	18	18.81	+06	58	17.8	999
68	1983	12	01.86173	01	18	11.78	+07	01	43.8	999
68	1983	12	05.85108	01	18	00.82	+07	16	44.2	999
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89	1983	03	16.00740	11	39	41.19	-17	33	49.2	999
89	1983	03	19.99414	11	35	43.68	-17	23	48.3	999
89	1983	03	20.99029	11	34	44.59	-17	20	52.3	999
115	1983	02	18.94898	08	36	34.79	+15	44	41.3	999
115	1983	02	19.94600	08	35	39.97	+15	43	00.0	999
115	1983	02	21.93892	08	33	55.55	+15	39	29.8	999
115	1983	03	19.86038	08	23	02.07	+14	40	43.4	999
115	1983	03	20.85813	08	23	03.59	+14	37	56.5	999
129	1983	12	02.03526	05	28	46.22	+08	45	58.6	999
129	1983	12	06.02205	05	25	27.42	+08	44	18.8	999
129	1983	12	06.02306	05	25	27.36	+08	44	19.0	999
192	1983	02	21.96340	09	09	15.85	+20	40	37.0	999
192	1983	03	08.91464	08	57	12.17	+20	44	48.6	999
192	1983	03	15.89319	08	53	37.08	+20	37	50.9	999
192	1983	03	19.88111	08	52	12.56	+20	31	32.6	999
192	1983	03	20.87768	08	51	55.84	+20	29	43.8	999
192	1983	03	29.85330	08	50	42.08	+20	09	12.4	999
196	1983	03	05.97960	10	20	02.53	+21	26	52.5	999
196	1983	03	07.97369	10	18	31.34	+21	33	33.0	999
196	1983	03	15.94734	10	12	51.95	+21	54	21.5	999
196	1983	03	19.93523	10	10	22.11	+22	01	03.8	999
196	1983	03	20.93208	10	09	47.16	+22	02	20.6	999
216	1983	03	20.10917	14	22	11.90	-16	29	55.6	999
216	1983	05	16.92378	13	43	19.10	-10	41	06.8	999
216	1983	05	18.91843	13	42	11.27	-10	29	33.9	999
354	1983	05	17.07020	17	13	27.44	+03	11	08.2	999
354	1983	06	04.01069	16	59	10.44	+03	30	44.2	999
354	1983	06	17.96434	16	47	28.63	+02	58	46.5	999
354	1983	06	19.95831	16	45	55.28	+02	50	52.2	999
354	1983	07	01.91939	16	37	45.40	+01	48	07.5	999
354	1983	07	02.91676	16	37	11.07	+01	41	49.6	999
354	1983	07	06.90389	16	35	05.32	+01	15	14.3	999
354	1983	07	07.90040	16	34	36.90	+01	08	15.4	999
354	1983	07	08.89824	16	34	09.71	+01	01	09.2	999
451	1983	06	04.09054	18	54	13.15	-24	31	33.7	999
451	1983	06	15.05481	18	46	37.41	-25	23	37.5	999
451	1983	06	16.05201	18	45	50.35	-25	28	23.9	999
451	1983	06	18.04498	18	44	14.09	-25	37	56.0	999
451	1983	08	04.88901	18	06	50.93	-28	34	40.2	999
451	1983	08	06.88237	18	05	58.70	-28	39	09.5	999
471	1983	03	16.04115	12	27	39.35	+20	08	09.2	999
471	1983	03	20.02740	12	24	23.72	+20	29	01.0	999
471	1983	03	21.02409	12	23	34.16	+20	33	50.3	999
471	1983	04	19.92712	12	00	50.45	+21	29	58.4	999
471	1983	04	23.91448	11	58	37.49	+21	24	01.0	999
471	1983	04	28.89871	11	56	15.44	+21	12	30.2	999
471	1983	05	04.88079	11	54	02.11	+20	53	12.7	999
471	1983	05	13.85527	11	52	00.98	+20	14	17.3	999
511	1983	06	04.11883	19	35	01.15	-19	43	49.5	999
511	1983	06	15.08448	19	29	32.02	-20	22	53.2	999
511	1983	06	15.08558	19	29	32.02	-20	22	53.2	999

511	1983	06	16.08134	19	28	56.29	-20	26	44.6	999
511	1983	06	16.08247	19	28	56.30	-20	26	45.1	999
511	1983	06	18.07508	19	27	42.26	-20	34	35.8	999
511	1983	06	19.07234	19	27	04.03	-20	38	34.2	999
511	1983	06	30.03694	19	19	17.16	-21	24	21.5	999
511	1983	07	02.03034	19	17	45.08	-21	32	56.8	999
511	1983	07	03.02757	19	16	58.43	-21	37	14.5	999
511	1983	07	09.00800	19	12	12.61	-22	03	04.1	999
511	1983	08	03.92348	18	52	44.33	-23	46	02.2	999
511	1983	08	04.92034	18	52	07.24	-23	49	29.8	999
511	1983	08	05.91719	18	51	31.03	-23	52	52.8	999
511	1983	08	06.91307	18	50	55.90	-23	56	15.4	999
532	1983	06	04.07671	18	34	59.31	-14	51	47.0	999
532	1983	06	04.07775	18	34	59.28	-14	51	46.9	999
532	1983	06	16.03704	18	24	59.48	-15	56	31.3	999
532	1983	06	18.03042	18	23	08.52	-16	08	24.9	999
532	1983	06	19.02746	18	22	12.32	-16	14	26.6	999
532	1983	06	20.02354	18	21	15.75	-16	20	32.2	999
532	1983	06	29.98992	18	11	41.53	-17	23	51.6	999
532	1983	07	01.98284	18	09	48.12	-17	36	51.7	999
532	1983	07	01.98888	18	09	48.05	-17	36	51.7	999
532	1983	07	06.96705	18	05	12.75	-18	09	30.5	999
532	1983	07	07.96268	18	04	19.63	-18	16	02.0	999
532	1983	07	07.96371	18	04	19.58	-18	16	03.3	999
532	1983	07	08.95934	18	03	27.23	-18	22	33.9	999
532	1983	07	08.96038	18	03	27.18	-18	22	34.3	999
532	1983	07	09.95603	18	02	35.66	-18	29	05.3	999
532	1983	07	10.95271	18	01	44.98	-18	35	36.0	999
532	1983	07	11.94940	18	00	55.23	-18	42	05.7	999
532	1983	07	11.95044	18	00	55.12	-18	42	05.8	999
532	1983	08	03.87770	17	47	39.84	-21	03	38.2	999
532	1983	08	05.87160	17	47	07.67	-21	14	57.0	999
532	1983	08	05.87265	17	47	07.65	-21	14	57.5	999
532	1983	08	14.84676	17	46	02.95	-22	03	36.6	999

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ORBITAL ELEMENTS OF ONE-OPPOSITION MINOR PLANETS.

The orbit computers and authors of double designations are B = C. M. Bardwell, E = E. Bowell, G = D. W. E. Green, M = B. G. Marsden, N = S. Nakano. For further information see MPC 7828.

Planet	B(1,0)	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1976 UQ1	16.0	761029	352.13	10.41	34.24	12.96	0.2660	2.5600	27	0	1	N
1977 ED1	13.5	770318	119.17	229.91	184.73	12.23	0.1080	2.9863	28	5	1	N
1985 CL	14.5	850316	74.69	69.36	355.38	18.90	0.1011	1.9343	64	4		B
1985 CN	17.0	850405	64.58	285.05	162.81	9.64	0.2429	2.3754	91	0		B
1985 DA	16.0	850316	9.61	4.42	155.47	23.27	0.0737	1.8997	53	8		B
1985 DX	14.0	850405	357.47	286.60	243.60	6.82	0.1087	2.2493	94	0		M
1985 FC	16.5	850405	24.81	142.60	14.58	23.97	0.0406	1.8622	59	0		B
1985 FD	14.5	850405	314.93	141.53	92.98	14.89	0.1440	2.6595	25	5		B
1985 FZ1	13.6	850405	39.11	357.44	142.02	13.12	0.1035	2.6435	32	6		E
1985 FA2	12.4	850405	231.35	214.81	109.17	11.38	0.1013	3.0188	32	6		E
1985 FB2	14.3	850405	21.35	10.29	149.75	11.49	0.1660	2.3992	32	6		E
1985 FC2	13.9	850405	356.27	132.56	59.82	13.68	0.0748	2.6155	32	6		E
1985 FD3	14.0	850425	314.33	259.94	340.97	28.64	0.1327	2.6053	62	8		B
1985 GS	13.0	850405	37.29	27.25	125.49	15.61	0.1385	3.0643	12	6		M
1985 GO1	15.5	850425	32.52	84.38	83.64	1.89	0.2394	2.2992	10	4		B

1985 GP1	14.5	850405	288.75	203.84	97.63	25.08	0.1783	2.3248	11	3		M
1985 GU1	13.0	850425	274.77	292.41	13.13	18.12	0.1518	2.6399	14	6		B
1985 GV1	13.0	850425	328.93	28.69	205.00	14.82	0.0535	2.5934	10	5		B
1985 HC	13.0	850515	312.69	107.32	217.32	28.79	0.4108	2.7718	28	7		B
1985 HE	14.0	850405	341.43	49.62	165.18	13.72	0.0979	2.5756	3	7		M
1985 HH	14.5	850405	331.75	79.90	157.52	2.53	0.1742	2.3948	30	7		B
1985 HJ	14.0	850405	337.15	153.03	84.94	1.97	0.2589	3.2212	4	0	2	M
1985 HL	14.5	850405	7.40	20.48	175.79	8.08	0.2108	2.7176	2	6		G
1985 HS1	15.0	850405	342.59	31.26	180.82	23.40	0.2002	2.3445	14	4		M
1985 KA	14.5	850515	297.94	79.92	249.67	22.31	0.2975	2.3709	12	0		M
1985 KB	14.0	850515	330.20	246.10	30.40	12.37	0.1781	2.5733	7	0		M
1985 KC	15.5	850515	326.47	285.03	344.10	5.79	0.0241	2.1928	4	6		M
1985 KE	14.5	850515	309.45	61.89	227.47	2.12	0.0710	2.9610	2	6	2	M
1985 KF	16.0	850515	357.93	176.94	58.26	3.50	0.0982	2.4405	2	6	2	M

Note 1: double designations 1976 UQ1 = 1976 WO (N); 1977 ED1 = 1977 GP (N).
2: e assumed.

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ORBITAL ELEMENTS BY L. D. SCHMADEL, ASTRONOMISCHES RECHEN-INSTITUT.

(29) Amphitrite
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	219.79630				
n	0.24150587	Peri.	63.05140	+0.51437062	-0.85753540
a	2.5537846	Node	355.96945	+0.74421272	+0.45069506
e	0.0735928	Incl.	6.10622	+0.42611065	+0.24800605
P	4.08	B(1,0)	7.1		

From 1104 observations at 88 oppositions 1847-1985, mean residual 1".6.

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ORBITAL ELEMENTS BY K. HURUKAWA, TOKYO ASTRONOMICAL OBSERVATORY.

The identifications are by K. Hurukawa unless otherwise stated.

1981 EB19 = 1975 RD1
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	29.69849				
n	0.29222465	Peri.	139.98987	+0.62180854	+0.78314728
a	2.2490150	Node	168.45440	-0.72580354	+0.57906213
e	0.2309342	Incl.	1.68086	-0.29421651	+0.22664374
P	3.37	B(1,0)	16.1		

Residuals in seconds of arc

750903	095	0.3-	0.5+	810302	413	0.5-	1.2-	810316	413	2.0-	2.2+
750906	095	0.5+	1.1-	810303	413	0.6-	0.4-	810329	413	1.6+	1.2-
810202	413	0.3-	1.8-	810307	413	0.5-	0.9+	810408	413	2.4+	1.2-
810213	413	0.5-	0.6+	810307	413	2.8+	1.7-	810411	413	2.9-	1.7+
810302	413	1.5-	1.3+	810311	413	1.5+	0.2-				

1981 EP20 = 1979 SY7 = 1979 TO1
The double designation 1979 SY7 = 1979 TO1 was independently found by N. S. Chernykh.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	240.57017				
n	0.27029690	Peri.	4.86279	+0.91227599	-0.40932809
a	2.3690608	Node	19.31905	+0.37429256	+0.81905616
e	0.2246662	Incl.	2.46851	+0.16630573	+0.40199194
P	3.65	B(1,0)	15.5		

Residuals in seconds of arc

790923 095	0.4-	1.0+	810307 413	0.4+	0.5+	810408 413	1.3-	1.0+
791014 095	0.2+	0.4-	810307 413	0.8+	0.8-	810408 413	1.4+	0.9-
810202 413	0.9+	1.3-	810311 413	1.7-	1.6+	810411 413	0.7-	0.7+
810213 413	0.2-	0.5-	810316 413	1.2-	0.6+	810411 413	0.7+	0.9-
810302 413	1.2-	1.0+	810316 413	2.0+	1.2-			
810303 413	0.4+	0.4+	810329 413	0.1+	0.5+			

1981 EB23 = 1971 TN
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	274.74088				
n	0.25881188	Peri.	325.93680	+0.98543808	+0.16892101
a	2.4386386	Node	24.36015	-0.14360955	+0.88801821
e	0.2116060	Incl.	2.69982	-0.09103889	+0.42765565
P	3.81	B(1,0)	14.8		

Residuals in seconds of arc

711010 095	2.6-	0.5-	810303 413	2.8+	1.0-	810408 413	4.2-	1.9+
711011 095	2.3+	1.3+	810307 413	0.2-	0.8+	810408 413	0.9-	0.9+
810209 413	0.6-	1.0-	810311 413	0.6+	1.1-	810411 413	5.0+	0.3+
810213 413	1.8-	0.1+	810316 413	0.1+	0.2-	810411 413	1.0+	0.2-
810302 413	1.4-	0.6-	810329 413	0.1-	1.0+			

1981 EU35 = 1960 SG = 1971 QQ
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	301.94184				
n	0.26710834	Peri.	181.24578	+0.95191298	+0.30550284
a	2.3878770	Node	160.91700	-0.28046135	+0.89918836
e	0.2370440	Incl.	4.03671	-0.12330088	+0.31325439
P	3.69	B(1,0)	14.6		

Residuals in seconds of arc

600926 839	0.3-	0.1-	810302 413	0.4-	0.5+	810329 413	1.4-	0.7+
600926 839	0.3+	0.1+	810302 413	1.8+	2.2-	810329 413	0.6+	0.2+
710818 095	0.1-	3.0-	810303 413	0.3+	0.9+	810408 413	1.2-	0.5+
710824 095	0.1+	3.1+	810307 413	1.8-	0.9+	810408 413	1.5-	1.0+
810209 413	0.7+	1.8+	810311 413	0.1+	1.0-	810411 413	2.4-	0.6+
810213 413	1.3+	3.4-	810316 413	2.5+	1.0-	810411 413	0.6+	0.2-
810213 413	1.1+	0.2-	810316 413	0.2-	0.9+			

1981 EE37 = 1965 UC1
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	339.74651				
n	0.28698709	Peri.	318.75413	+0.92660877	+0.37512948
a	2.2762957	Node	19.26110	-0.32103446	+0.82515831
e	0.1826814	Incl.	4.51416	-0.19578833	+0.42236434
P	3.43	B(1,0)	14.7		

Residuals in seconds of arc

651016 330	2.6-	2.8+	810311 413	0.7-	0.0-	810407 413	1.6-	0.1-
651020 330	1.9-	1.0-	810316 413	0.1+	0.5-	810407 413	1.1-	0.1+
651024 330	4.5+	1.7-	810316 413	0.1+	0.4-	810408 413	2.5-	1.3+
810209 413	0.5+	0.2+	810329 413	1.4-	0.2-	810408 413	2.6+	0.0-
810213 413	1.6+	0.1+	810329 413	1.0+	0.4+	810411 413	1.8+	0.6-

1983 VM7 = 1973 YP1
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	229.61947				
n	0.29086148	Peri.	320.10218	+0.90373576	-0.42403167
a	2.2560364	Node	65.07990	+0.40743804	+0.80982436
e	0.1473783	Incl.	3.71821	+0.13136179	+0.40544007
P	3.39	B(1,0)	14.8		

Residuals in seconds of arc

731220	095	0.6-	3.4+	831101	330	(8.8-	0.4+)	831107	688	1.4+	0.2+
731221	095	0.6+	3.2-	831104	688	0.6-	1.4-	831107	688	1.0+	0.2+
831028	330	0.2-	1.3+	831104	688	2.1-	1.7-				

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ORBITAL ELEMENTS BY S. NAKANO, TOKYO.

The identifications are by S. Nakano unless otherwise stated.

Comet Machholz (1985e)
T 1985 June 28.73970 ET

			(1950.0)	P	Q
q	0.1062889	Peri.	274.49977	-0.31919017	-0.94500556
		Node	194.72998	+0.94198211	-0.30812437
e	1.0	Incl.	16.28254	+0.10386208	-0.10965340

From 22 observations 1985 May 28-June 17.

1976 SV10 = 1976 UA3 = 1983 ER

The double designation 1976 SV10 = 1976 UA3 is by B. G. Marsden (MPC 9065).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	90.73834				
n	0.21812206	Peri.	4.57694	+0.48274465	+0.87515698
a	2.7331944	Node	294.29091	-0.80458437	+0.42853796
e	0.0739202	Incl.	2.04498	-0.34583464	+0.22462297
P	4.52	B(1,0)	13.5		

Residuals in seconds of arc

760925	801	0.4+	0.2+	761026	095	2.3+	3.1+	830316	688	1.0+	0.6+
761024	381	1.3-	0.5-	830310	688	0.7-	0.5-	830316	688	0.3+	0.4-
761024	381	1.3-	2.8-	830310	688	0.7-	0.3+				

1976 YO1 = 1979 OS7

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	169.50604				
n	0.26415719	Peri.	111.86720	+0.71710317	-0.69551809
a	2.4056288	Node	292.23372	+0.62016864	+0.66616900
e	0.2058653	Incl.	2.78143	+0.31804702	+0.26920895
P	3.73	B(1,0)	15.0		

Residuals in seconds of arc

761216	095	0.0	0.9-	761220	095	0.5+	0.9+	790727	675	0.5-	0.2-
761218	095	0.5-	0.0	790724	413	0.5+	0.2+				

1977 DO4 = 1957 FE = 1978 NW4 = 1979 YH3

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

			(1950.0)	P	Q
M	238.94536				
n	0.29271775	Peri.	127.15682	-0.62368214	-0.78167708
a	2.2464886	Node	1.43050	+0.70051274	-0.55962372
e	0.0687167	Incl.	2.84005	+0.34684650	-0.27532204
P	3.37	B(1,0)	15.5		

Residuals in seconds of arc

570324	839	0.4+	0.7+	770312	381	0.4+	0.5+	780711	675	(15.1+	3.5+)
770218	381	0.3-	1.1+	770312	381	0.1-	0.1+	780713	675	1.1-	2.0+
770218	381	0.5-	1.3+	770315	381	0.3+	0.6+	791224	095	0.0	5.1+
770219	381	0.3-	0.1-	770315	381	1.3+	0.2-				
770219	381	0.2+	0.4-	780710	675	1.1-	5.4+				

1977 NN = 1977 PX = 1984 SK5

The double designation 1977 NN = 1977 PX is by H. Oishi (JAM 1391).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	165.39010		(1950.0)	P	Q
n	0.29075617	Peri.	353.89298	+0.65207665	+0.75593351
a	2.2565811	Node	316.78561	-0.69192490	+0.56211829
e	0.1789630	Incl.	4.85657	-0.30989671	+0.33554068
P	3.39	B(1,0)	15.0		

Residuals in seconds of arc

770714 095	0.6-	1.1-	770814 095	0.5-	0.2-	840927 675	0.1+	0.6+
770722 095	1.1+	1.3+	840926 675	0.1-	0.6-			

1977 QK2 = 1974 DN = 1980 DN2 = 1980 EU

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	5.92016		(1950.0)	P	Q
n	0.17289682	Peri.	172.78361	-0.84534731	-0.52212233
a	3.1911379	Node	334.72093	+0.47593067	-0.63995995
e	0.0602165	Incl.	15.34880	+0.24264773	-0.56377258
P	5.70	B(1,0)	12.5		

Residuals in seconds of arc

740216 095	0.3+	0.7+	770823 095	0.3-	0.4+	800220 095	2.4-	0.9-
770821 095	0.6-	0.0	770909 095	1.2+	0.6-	800315 095	1.9+	0.1+

1977 RW6 = 1975 EP5 = 1982 SM4

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	255.89354		(1950.0)	P	Q
n	0.20101018	Peri.	330.21013	+0.99399057	+0.10847113
a	2.8861897	Node	23.57624	-0.09173990	+0.89884185
e	0.0848934	Incl.	2.10957	-0.05972057	+0.42463789
P	4.90	B(1,0)	14.0		

Residuals in seconds of arc

750315 095	0.3-	0.6-	770918 095	0.0	1.4-	820920 095	1.5+	0.9+
770911 095	0.4-	1.1+	770921 095	1.1+	1.2-	820926 095	1.9-	0.0

1978 QC = 1978 SE8 = 1973 SK4 = 1973 UW

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	101.67460		(1950.0)	P	Q
n	0.18896530	Peri.	208.56860	+0.76883579	-0.63942457
a	3.0075686	Node	191.18500	+0.59169710	+0.71452382
e	0.2664421	Incl.	1.55594	+0.24245839	+0.28388718
P	5.22	B(1,0)	14.5		

Residuals in seconds of arc

730926 095	0.8+	1.2-	780902 809	0.0	1.0-	780910 809	0.0	1.5+
731026 095	0.7-	1.0+	780902 809	1.0+	0.4-	780910 809	1.1+	1.0-
780808 095	2.5-	0.5+	780902 809	0.1+	1.6-	780910 809	1.0+	0.2+
780830 801	0.0	3.4+	780903 095	2.1-	0.5+	780910 809	1.5+	1.0-
780902 809	0.7+	0.9-	780906 809	1.2+	0.8-	780928 095	2.4-	1.0+

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ORBITAL ELEMENTS BY H. OISHI, NIIZA, JAPAN.

The following orbital elements are from JAM 1888-1889 (with correction). The identifications are by T. Furuta unless otherwise stated.

1980 XW = 1962 WV1 = 1969 UD = 1972 OA
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	248.72063	(1950.0)	P	Q
n	0.27362875	Peri. 71.94170	+0.58504822	+0.80680590
a	2.3497903	Node 234.14697	-0.77717998	+0.52873375
e	0.1304699	Incl. 5.83194	-0.23175388	+0.26363776
P	3.60	B(1,0) 13.9		

Residuals in seconds of arc

621130	760	0.1-	1.2+	691218 095	2.1+	3.7+	801207 330	1.5+ 1.2-
621130	760	0.2-	1.4+	720718 095	0.3+	1.3-	801210 095	0.1+ 2.1-
691216	095	2.2-	1.4-	801130 095	1.3-	2.4-		

1981 JD3 = 1950 XF = 1953 VW = 1972 RN
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	59.65802	(1950.0)	P	Q
n	0.30975733	Peri. 178.51839	+0.94743099	+0.31924581
a	2.1633288	Node 162.81751	-0.29428243	+0.89566560
e	0.1771081	Incl. 4.14810	-0.12558808	+0.30962112
P	3.18	B(1,0) 15.4		

Residuals in seconds of arc

501210	839	0.1-	1.8+	720907 095	1.0+	1.4+	810505 675	1.5+ 2.2+
531105	760	2.3-	0.4+	720909 095	1.1-	1.1-	810506 675	0.5+ 0.6+
531105	760	1.8+	0.4+	810411 675	0.9-	1.3+	810510 675	0.4- 1.3-

1983 AK = 1952 DL1 = 1971 UE4 = 1973 FO1
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	262.44790	(1950.0)	P	Q
n	0.28493001	Peri. 67.41697	-0.94472685	-0.30577936
a	2.2872385	Node 94.61514	+0.23990186	-0.89062424
e	0.1541059	Incl. 6.81505	+0.22346876	-0.33658200
P	3.46	B(1,0) 14.7		

Residuals in seconds of arc

520219	711	2.0-	6.9- Y	730327 095	0.6+	1.0+	830116 688	1.8- 2.0+
711022	805	0.5+	1.6-	730402 095	0.1-	0.6-	830116 688	3.7+ 2.3-
711022	805	1.1+	2.2-	830109 688	2.4-	2.5+	830215 688	0.8- 0.6+
711022	805	(2.6+	11.3-)	830109 688	1.7+	2.3+	830215 688	0.6- 1.2+

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ORBITAL ELEMENTS BY T. URATA, SHIMIZU, JAPAN.

The following orbital elements are from NOC 1515-1517 (with correction). The identifications are by T. Urata unless otherwise stated.

(3260)* 1974 SO2 = 1974 TV1 = 1951 WC = 1954 SF1 = 1961 VN = 1961 XE = 1968 WC

Discovered 1974 Sept. 20 by L. Zhuravleva at the Crimean Astrophysical Observatory. The double designation 1974 SO2 = 1974 TV1 is by H. Oishi (JAM 1206).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	340.46292	(1950.0)	P	Q
n	0.29507167	Peri. 259.04206	-0.84426011	-0.52917100
a	2.2345206	Node 248.95884	+0.52033651	-0.77142014
e	0.0933938	Incl. 5.21730	+0.12835415	-0.35339640
P	3.34	B(1,0) 13.5		

Residuals in seconds of arc

511129	760	0.3+	3.1+		681222	095	2.2+	0.6-		840826	801	0.5-	0.9+
511129	760	3.5+	7.4+		740920	095	0.4+	0.4+		840923	801	0.8-	1.1+
540927	760	(6.1+	41.7-)X		740922	095	0.1+	0.1-		840928	688	0.6-	1.0-
611110	760	2.5-	3.1-		741010	095	1.4-	3.0+		840928	688	2.3+	1.0+
611110	760	2.3-	2.0-		830507	688	1.0-	0.6+		840928	688	1.7+	1.0-
611203	760	0.4-	0.5-		830507	688	1.2+	0.4+		840928	688	0.6+	1.1-
611203	760	5.4-	0.8+		830515	688	1.1+	1.4+		841026	688	2.3+	1.9-
681130	095	0.2-	3.1-		830515	688	1.5-	1.0+		841026	688	0.1-	1.3-

(3261)* 1979 SF9 = 1949 SN1 = 1953 KB = 1959 RL = 1967 EQ = 1969 UW1 = 1975 XU5

Discovered 1979 Sept. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.

M	133.12269		(1950.0)	P	Q
n	0.19907753	Peri.	180.80044	+0.80367348	+0.59436041
a	2.9048333	Node	142.68284	-0.54567288	+0.75556260
e	0.0750078	Incl.	2.74784	-0.23738165	+0.27542850
P	4.95	B(1,0)	12.5		

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

490925	760	(56.6-	42.8-)X		790928	095	2.3-	1.8-		841029	552	0.1-	0.6+
530519	839	0.3+	1.9-		791016	095	0.2+	0.2-		841029	552	0.1+	0.5+
530609	839	0.3-	2.5-		791116	095	2.3-	0.7-		841030	567	1.8+	0.2-
590907	760	(0.06-	0.00-)X		840928	688	0.2+	1.2-		841030	567	2.2+	0.0
670309	095	2.4-	2.4-		840928	688	0.5-	1.1-		841030	567	1.9+	0.1+
691017	095	0.1+	2.1+		841017	801	0.9-	0.8+		841031	688	0.8-	0.0
751204	095	1.0+	1.0-		841026	688	0.0	2.3-		841031	688	1.2+	1.0-
790922	095	0.6-	1.0+		841026	688	1.0+	2.0-					

(3262)* 1983 WB = 1967 UE = 1977 TZ6

Discovered 1983 Nov. 28 by T. Seki at Geisei. The identifications are by S. Nakano and W. Landgraf, who found them independently (MPC 8535).

M	83.02087		(1950.0)	P	Q
n	0.18897187	Peri.	54.79206	-0.60166440	-0.78312858
a	3.0074928	Node	72.96355	+0.66891645	-0.60156498
e	0.0667519	Incl.	9.46280	+0.43652116	-0.15757284
P	5.22	B(1,0)	12.0		

Residuals in seconds of arc

671029	095	1.2-	2.7+		831205	688	0.9+	1.3-		840102	688	0.8+	0.1+
771009	095	1.0-	1.4+		831206	552	0.6-	1.1-		840104	688	0.0	3.3-
831128	688	0.9+	1.3-		831206	688	1.2-	1.0-		840104	688	0.3-	0.6-
831128	688	1.1+	1.0-		831206	688	1.3+	0.8-		840107	372	0.6-	0.5-
831128	372	1.1-	3.3-	Y	831206	552	0.4-	0.9-		840107	372	0.6-	2.0-
831128	889	1.0-	3.9+		831207	372	4.1+	0.5+		840107	889	1.5-	0.7+
831128	372	0.9+	1.7-	Y	831208	552	1.0+	0.3+		850212	567	1.2-	0.6+
831128	889	0.1+	3.8+		831208	552	1.2+	1.7-		850213	372	0.2-	0.5-
831201	688	0.8+	1.3-		831209	688	0.7+	1.2-		850213	567	1.7-	0.4+
831201	889	0.2-	1.2+		831209	372	0.7+	0.4-		850213	567	1.7-	0.4+
831201	688	0.8+	1.1-		831209	688	0.8+	1.2-		850217	889	0.7-	0.2+
831201	889	1.8+	1.4+		831212	372	0.7-	0.0		850217	889	3.3-	0.6-
831202	372	2.1-	0.6-		831212	372	0.7-	3.1-		850218	567	0.3-	0.9+
831202	372	1.1-	0.1-		831227	552	0.0	0.7+		850218	567	1.5+	0.7+
831204	372	4.1-	0.0		831227	552	0.7+	1.3+		850218	567	0.7+	0.8+
831204	372	2.7-	0.3+		831229	688	0.2+	0.2-		850219	054	0.4-	0.4+
831205	552	1.8+	1.0+		831229	688	0.7-	0.3-		850225	688	1.5+	0.5-
831205	552	3.6+	0.9+		831230	372	1.0-	3.2+		850225	688	1.6+	0.8-
831205	372	0.9-	3.0+		831230	372	2.9-	1.5+		850312	372	2.1+	1.0+
831205	688	0.2+	1.4-		840101	552	0.6+	1.8+		850321	688	1.6+	0.3-
831205	372	1.3-	1.2+		840101	552	1.4+	2.3+		850321	688	1.1+	0.0

ORBITAL ELEMENTS BY B. G. MARSDEN, SMITHSONIAN ASTROPHYSICAL OBSERVATORY.

The identifications are by B. G. Marsden unless otherwise stated.

(3263)* 1932 CN = 1949 UP = 1974 HG3 = 1983 WD

Discovered 1932 Feb. 5 by K. Reinmuth at Heidelberg. The key identification 1932 CN = 1983 WD is by E. Bowell (MPC 8390).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	174.31123		(1950.0)	P	Q
n	0.26284135	Peri.	8.61728	+0.05733251	-0.98959031
a	2.4136461	Node	78.17289	+0.90770027	-0.00338240
e	0.0695316	Incl.	7.75070	+0.41568401	+0.14387348
P	3.75	B(1,0)	14.0		

Residuals in seconds of arc

320205	024	7.8+	1.3-	831205	688	1.9-	0.9-	831229	552	3.0+	0.6-
320211	024	5.8-	5.4+	831206	688	0.4-	0.1+	840102	688	1.6+	0.2-
320301	024	0.3+	0.1-	831206	688	0.1+	0.6-	840104	688	1.1-	0.7+
320310	024	1.6-	2.0-	831209	688	1.2-	0.9-	840104	688	1.6-	2.3-
491028	760	0.0	0.6+	831209	688	1.6-	0.8-	850319	801	(11.4+	2.3-)
740425	805	0.1-	0.0	831228	552	2.9+	1.1+	850415	688	0.8-	1.3-
831128	688	1.4-	0.3+	831228	552	4.2+	1.7+	850415	688	2.2-	1.3-
831128	688	0.4-	1.1-	831229	688	1.5-	0.0	850418	801	1.9+	0.0
831201	688	0.4-	1.9-	831229	688	1.2-	1.5+				
831205	688	1.0-	0.2-	831229	552	3.5+	1.3+				

(3264)* 1934 AF = 1976 SF1 = 1984 AO

Discovered 1934 Jan. 7 by K. Reinmuth at Heidelberg. The identifications 1934 AF = 1976 SF1 and 1934 AF = 1984 AO are by L. D. Schmadel and by E. Bowell, respectively (MPC 8537).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	96.92549		(1950.0)	P	Q
n	0.17670487	Peri.	359.21964	-0.74907002	-0.66240425
a	3.1451187	Node	139.29014	+0.60788253	-0.69366297
e	0.1479427	Incl.	0.94094	+0.26338743	-0.28293514
P	5.58	B(1,0)	13.5		

Residuals in seconds of arc

340107	024	0.2+	1.1+	840105	688	0.3-	0.6+	840204	688	0.9+	1.2-
340204	024	2.3-	2.8+	840108	688	0.2-	0.2-	850414	688	0.1-	0.6+
340209	024	0.3-	1.9+	840108	688	0.5+	0.6+	850414	688	0.1-	0.6+
340214	024	1.3-	2.2+	840108	688	0.3+	0.2-	850423	688	0.3+	1.1+
340305	024	1.4-	1.1+	840108	688	0.2-	0.3-	850423	688	0.6-	0.9+
760924	095	0.4+	0.4-	840126	688	0.4+	0.9-	850425	801	0.9+	1.2-
840105	688	0.5+	1.2+	840126	688	0.4+	1.2-				
840105	688	1.0-	0.1-	840204	688	0.1-	2.7-				

(3265)* 1953 VN2 = 1953 XG = 1953 XJ1 = 1934 SC = 1978 JU1 = 1983 XA

Discovered 1953 Nov. 9 by K. Reinmuth at Heidelberg. The triple designation 1953 VN2 = 1953 XG = 1953 XJ1 is by C. M. Bardwell (MPC 4772), The key identification 1953 VN2 = 1983 XA is by E. Bowell (MPC 8390).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	236.16015		(1950.0)	P	Q
n	0.26344358	Peri.	297.09200	+0.97950966	-0.16515664
a	2.4099663	Node	72.59922	+0.19901277	+0.88154317
e	0.1418901	Incl.	6.93737	-0.03089910	+0.44227245
P	3.74	B(1,0)	14.0		

Residuals in seconds of arc

340929	078	3.6-	1.1+	831130	372	2.5-	1.1+	831205	372	1.8-	0.6-
341012	078	6.2+	3.0-	831130	372	(2.0-	5.3+)	831206	688	0.6+	0.2+
531109	024	1.5-	0.5+	831201	688	0.4+	0.4-	831206	688	2.4+	0.0
531205	760	0.9+	0.9-	831201	688	1.2+	0.1-	831207	372	3.0-	0.4-
531205	760	0.9-	1.6+	831201	889	0.4-	1.2+	831209	688	1.3+	0.2-
531208	024	0.4-	2.1-	831201	889	1.7+	1.6+	831209	372	0.3+	0.2-
780506	095	1.7-	0.5+	831202	372	0.6-	0.6-	831212	372	4.2-	0.9-
831128	688	1.0+	0.7-	831202	372	0.6-	2.2-	831212	372	0.4-	0.6+
831128	688	0.6+	0.5-	831204	372	0.7-	1.5-	840102	688	0.0	0.5+
831128	889	1.1+	1.4+	831204	372	0.8+	0.5-	850221	801	0.2-	0.8-
831128	889	2.8+	2.3+	831205	688	0.1+	0.0	850319	801	0.6+	1.0-
831128	372	0.8+	0.1+	831205	688	0.3-	0.9-	850422	801	0.2+	1.6-
831128	372	1.4+	1.2+	831205	372	0.9-	1.7-				

(3266)* 1978 PA

Discovered 1978 Aug. 11 by H.-E. Schuster at the European Southern Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	249.59696				
n	0.37394335	Peri.	255.80744	+0.89983054	-0.12745566
a	1.9080899	Node	110.13218	+0.23445734	+0.94779654
e	0.1102566	Incl.	26.38206	-0.36787873	+0.29229569
P	2.64	B(1,0)	15.0		

Residuals in seconds of arc

780811	809	0.5-	0.5+	780904	809	0.0	0.0	830704	688	1.1+	3.0-
780811	809	0.8+	1.3-	780904	323	1.4-	0.1+	830710	801	1.5-	0.8+
780812	809	0.7+	0.6-	780905	323	0.8-	0.2-	850118	691	0.2+	1.4-
780812	809	0.3+	0.6+	780905	323	1.6+	0.2-	850118	691	0.9+	1.0-
780813	809	0.4+	0.1-	780910	809	0.6+	1.2+	850118	691	1.3+	1.4-
780814	809	0.3+	0.0	780923	809	0.3+	0.6+	850120	691	0.3+	2.3+
780814	323	0.1+	0.9-	780929	323	2.1-	1.8+	850120	691	0.4+	2.3+
780815	809	0.2+	1.0+	820116	688	3.0+	0.2-	850120	691	0.2+	2.1+
780821	323	0.9-	1.1+	830618	675	0.7+	2.4+	850216	801	0.3-	2.8+
780824	323	2.5-	0.4+	830619	675	0.7-	0.4+	850225	688	2.7-	0.8+
780903	809	0.5+	1.6+	830704	688	0.7+	0.5-	850323	801	0.7-	0.6+

(3267)* 1981 AA

Discovered 1981 Jan. 3 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	166.41350				
n	0.27736750	Peri.	307.24604	+0.47444536	-0.79314056
a	2.3286220	Node	110.13430	+0.87981854	+0.41313101
e	0.2967415	Incl.	23.99975	+0.02865184	+0.44749393
P	3.55	B(1,0)	14.0		

Residuals in seconds of arc

810103	688	0.5+	1.1-	810226	688	1.9+	1.3-	831005	474	0.5-	2.2-
810103	688	0.6+	0.0	810312	688	6.3+	3.8-	831005	474	0.4-	1.9-
810108	381	0.8-	0.3+	820612	675	0.4-	1.4-	850220	801	1.4+	0.7+
810108	381	2.7-	2.1+	820613	675	0.4+	0.8-	850321	691	0.6-	0.6-
810108	381	0.6+	0.6-	830711	474	0.0	0.7-	850321	691	0.2-	0.6-
810108	381	4.0-	2.9+	830711	474	0.3-	0.9-	850321	691	0.2+	0.7-
810128	688	1.2+	3.2-	830808	474	0.3+	0.4+	850321	801	0.7-	1.6+
810226	688	1.1+	1.4-	830808	474	0.7-	0.1-	850425	801	1.1+	2.5+

(3268)* 1981 DD = 1979 UQ4 = 1979 WZ1

Discovered 1981 Feb. 26 by H. Debehogne and G. De Sanctis at the European Southern Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	335.42648		(1950.0)		P		Q
n	0.27424239	Peri.	74.21790		+0.42747745		+0.90106607
a	2.3462790	Node	221.33737		-0.86598490		+0.38494025
e	0.1270401	Incl.	6.35386		-0.25948637		+0.19975222
P	3.59	B(1,0)	14.5				

Residuals in seconds of arc

791017	095	0.6-	2.1-	810303	809	0.2+	0.3+	810308	809	0.9-	0.2-
791116	095	1.4+	1.3-	810303	809	0.3+	0.2+	810308	809	0.4-	0.2-
791122	095	0.1-	0.4+	810303	809	0.4+	0.1+	810308	809	0.2+	0.3-
810226	809	0.0	0.2-	810304	809	0.3+	0.4+	810309	809	0.5-	0.2-
810226	809	0.7+	0.5-	810304	809	0.5+	0.1+	810309	809	0.4-	0.2-
810226	809	1.0+	0.3-	810304	809	0.7+	0.2-	810309	809	0.8-	0.2-
810301	809	0.1+	0.3+	810306	809	0.3-	0.5+	831206	801	0.2+	1.2+
810301	809	0.4+	0.3+	810306	809	0.5-	0.1-	840203	801	0.1-	1.0+
810301	809	0.6+	0.2+	810306	809	0.7-	0.6-	850321	688	0.5+	1.9-
810302	809	0.1-	0.2-	810307	809	0.7-	0.3-	850321	688	1.4-	1.1+
810302	809	0.2+	0.2-	810307	809	0.6-	0.1+	850425	801	0.4+	0.8-
810302	809	0.4+	0.3-	810307	809	0.6-	0.7+				

(3269)* 1981 EX16 = 1969 RG = 1969 RR1 = 1979 YH1

Discovered 1981 Mar. 6 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Sky Survey. The identification and double designation 1981 EX16 = 1969 RG = 1969 RR1 are by L. D. Schmadel and T. Urata (MPC 7771), who found them independently.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	137.61460		(1950.0)		P		Q
n	0.21201356	Peri.	43.63111		+0.79711033		-0.60280839
a	2.7854388	Node	353.16439		+0.44030185		+0.62010986
e	0.1589457	Incl.	17.18884		+0.41321835		+0.50208146
P	4.65	B(1,0)	13.5				

Residuals in seconds of arc

690908	095	(3.2-	13.3+)	810406	413	1.8-	0.5+	830907	809	1.3-	0.2+
690913	095	1.6+	1.4-	810408	413	1.1-	0.1+	830907	809	0.8-	0.1+
791218	095	0.6-	0.4-	810408	413	1.5+	0.5-	830907	809	0.6-	0.1+
810212	413	0.0	0.7+	810409	413	1.1-	0.3-	830909	809	0.6-	1.0+
810212	413	0.5+	0.3-	810409	413	0.1-	0.4-	830909	809	0.4-	0.8+
810213	413	0.6+	0.9-	830901	809	0.5-	0.1-	830914	809	2.1-	0.2-
810302	413	0.7-	1.1+	830901	809	0.5-	0.1-	830915	809	0.9+	0.7+
810306	413	1.0-	0.0	830901	809	0.6-	0.1-	830915	809	0.9+	0.7+
810306	413	2.8+	0.1-	830902	809	0.3+	0.1+	830915	809	1.2+	0.7+
810306	413	0.9+	0.5+	830902	809	0.5+	0.2+	830916	809	1.0+	1.2+
810308	413	0.5-	0.8+	830902	809	0.4+	0.4+	830916	809	0.4+	0.7+
810308	413	1.3+	0.4+	830904	809	0.9-	0.2+	830918	809	0.6-	0.1+
810311	413	0.7-	0.7-	830904	809	0.6-	0.3+	830918	809	0.4-	0.1+
810311	413	0.8+	0.2+	830904	809	0.4-	0.2+	850217	801	1.3+	0.2+
810312	413	0.5-	1.4+	830904	688	0.3-	0.9-	850319	801	0.2+	0.5+
810312	413	1.1+	0.9+	830904	688	0.7+	1.9-				

(3270)* 1982 DA

Discovered 1982 Feb. 18 by C. S. Shoemaker and S. J. Bus at Palomar.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	92.24111		(1950.0)		P		Q
n	0.31296668	Peri.	326.47842		-0.42528868		-0.86811554
a	2.1485097	Node	146.50889		+0.89830090		-0.43937434
e	0.3307664	Incl.	27.63387		+0.11038582		+0.23092334
P	3.15	B(1,0)	16.0				

Residuals in seconds of arc

820218	675	0.1+	0.1-	820228	675	0.4-	0.6-	840920	474	1.3+	0.6-
820218	675	0.2+	2.2-	820228	675	0.4+	1.5-	840921	474	0.0	0.0
820219	675	0.5-	1.9-	820228	675	1.3+	1.6-	840921	474	0.6+	0.7-
820220	675	0.1+	1.3-	820228	324	0.3-	0.9-	841125	474	0.7-	0.1-
820220	324	0.5-	0.4-	820301	330	2.1-	2.9+	850219	801	1.3-	0.4+
820223	489	1.6+	1.8-	820301	330	0.9-	0.0	850317	801	0.8+	0.2+
820223	489	2.3+	4.0+	820304	675	0.4+	1.6-	850321	691	0.2-	0.5-
820223	324	1.5-	8.0+	820323	801	0.7+	0.4+	850325	691	0.0	0.1-
820223	489	0.7-	1.2+	820324	675	1.2-	1.4-	850325	691	0.3+	0.2-
820224	324	0.8-	0.7+	820413	675	0.6+	1.5-	850325	691	0.2-	0.2+
820226	324	0.2-	0.3-	820422	801	1.1+	1.0+	850417	801	0.6+	0.4+
820227	511	1.9+	1.4-	820514	675	0.2+	0.4-				
820228	675	1.0-	0.8-	820621	801	0.1-	0.1+				

(3271)* 1982 RB

Discovered 1982 Sept. 14 by H.-E. Schuster at the European Southern Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	32.40218		(1950.0)	P	Q
n	0.32337565	Peri.	158.57561	+0.74416008	+0.64970843
a	2.1021539	Node	158.44416	-0.65767858	+0.75329866
e	0.3949735	Incl.	24.99720	-0.11698142	-0.10207880
P	3.05	B(1,0)	18.0		

Residuals in seconds of arc

820914	809	0.0	0.1+	821014	809	1.2+	0.3+	850419	691	0.3+	0.5-
820915	809	0.0	1.1+	821203	413	0.5+	1.3+	850508	675	0.1-	0.7+
820919	809	0.1+	0.2+	821203	413	1.9-	0.5-	850508	675	0.2-	0.8+
820921	809	0.1-	1.1-	850414	691	0.2-	0.4-	850515	691	0.2+	1.2-
821011	675	0.9-	0.5+	850414	691	0.2+	0.1-	850515	691	0.2+	0.4-
821011	675	0.0	1.8-	850414	691	0.2+	0.3-	850518	691	0.5-	0.6+
821012	809	0.6+	0.5-	850419	691	0.2+	0.1-	850518	691	0.3-	0.8+
821013	809	0.1-	0.4+	850419	691	0.5+	0.1-	850518	691	0.1-	0.1-

1941 HJ = 1945 EB = 1985 GV

The key identification 1941 HJ = 1985 GV is by E. Bowell.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	38.27966		(1950.0)	P	Q
n	0.22362538	Peri.	61.12215	-0.72673631	+0.68417557
a	2.6881666	Node	161.81836	-0.67856822	-0.70116802
e	0.1500754	Incl.	11.33041	-0.10676846	-0.20066689
P	4.41	B(1,0)	13.5		

Residuals in seconds of arc

410419	062	1.3-	0.9-	450304	062	1.1-	0.6-	850415	688	1.2-	1.0-
410421	062	0.1+	0.8-	450304	062	1.0+	0.2+	850424	688	0.7+	1.2+
410426	062	0.7+	0.5-	850415	688	0.5+	1.1+	850424	688	0.6+	1.1+

1983 WP

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	112.04695		(1950.0)	P	Q
n	0.23132884	Peri.	56.70378	-0.71058134	-0.66113325
a	2.6281462	Node	80.64693	+0.53664849	-0.73056434
e	0.1156400	Incl.	14.12442	+0.45506325	-0.17081734
P	4.26	B(1,0)	13.5		

Residuals in seconds of arc

831128	688	1.0+	0.3+	831209	688	1.9+	1.1-	840404	801	0.1+	0.5-
831128	688	0.5+	0.9+	831209	688	0.7-	0.5-	850322	801	0.4+	0.2+
831201	688	1.7+	0.3-	831229	688	3.0-	2.6+	850417	801	0.2+	0.7-
831201	688	0.5-	0.8-	831229	688	1.0-	1.5-	850420	552	2.2-	0.3+
831205	688	0.1-	0.4-	840102	688	2.8+	1.1+	850420	552	1.6-	0.3+
831205	688	2.7-	0.1+	840104	688	0.8+	1.3-	850425	688	2.9+	0.7-
831206	688	0.5-	1.1+	840104	688	0.0	0.4+				
831206	688	0.9+	1.6-	840304	801	1.5-	1.2+				

1985 JA
Epoch 1985 May 15.0 ET = JDE 2446200.5

M	40.14755		(1950.0)	P	Q
n	0.46806618	Peri.	288.76690	-0.79613880	-0.37954068
a	1.6428499	Node	232.01208	+0.42118455	-0.90678102
e	0.3199168	Incl.	36.72493	-0.43447277	-0.18356753
P	2.11	B(1,0)	18.0		

From 23 observations 1985 May 11-June 8.

6552 P-L = 1984 SA6
The identification is by O. Kippes.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	51.99559		(1950.0)	P	Q
n	0.28754306	Peri.	280.65210	+0.06348525	-0.99751565
a	2.2733606	Node	165.60185	+0.95688013	+0.05215269
e	0.1101495	Incl.	7.05275	+0.28346080	+0.04735630
P	3.43	B(1,0)	15.0		

Residuals in seconds of arc

600924	675	0.2-	0.2+	840923	809	0.8-	0.8+	840929	809	0.2+	0.6+
600926	675	0.3-	0.2-	840924	809	1.0-	0.3+	840929	809	0.2+	1.0+
600927	675	0.2+	0.1+	840924	809	1.4-	0.1+	840929	809	0.5+	0.7+
600928	675	0.3-	0.5-	840924	809	1.5-	0.0	840929	809	0.9-	0.6-
601017	675	0.1-	1.1+	840926	809	0.4-	0.9-	840929	809	0.9-	0.6-
601022	675	2.2-	0.4+	840926	809	0.2-	0.6-	840929	809	0.7-	0.5-
601024	675	0.3+	1.6+	840926	809	0.3+	1.0-	840930	809	0.3-	1.3-
601026	675	1.2+	1.9+	840927	809	0.3-	0.8-	840930	809	0.3-	1.2-
840921	809	1.0-	0.2+	840927	809	0.3-	0.3-	840930	809	0.1+	1.0-
840921	809	0.6-	0.1+	840927	809	0.2+	0.0	841001	809	1.9+	1.1-
840921	809	0.5-	0.2-	840928	809	1.8+	0.5-	841001	809	2.1+	1.0-
840922	809	0.8+	2.4+	840928	809	2.0+	0.8-	841001	809	2.2+	1.0-
840922	809	0.9+	2.3+	840928	809	2.3+	1.1-	841021	071	0.7-	1.3-
840922	809	0.9+	2.2+	840928	809	0.3-	0.1-	841021	071	1.4-	0.8-
840923	809	1.3-	0.9+	840928	809	0.2-	0.1+				
840923	809	1.0-	0.8+	840928	809	0.2+	0.2-				

9507 P-L = 1984 SV6
The identification is by O. Kippes.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	32.68509		(1950.0)	P	Q
n	0.08227594	Peri.	331.10857	+0.99474143	-0.08998178
a	5.2354619	Node	34.16152	+0.10240778	+0.88068565
e	0.0844290	Incl.	4.99750	-0.00146311	+0.46507640
P	11.98	B(1,0)	11.5		

Residuals in seconds of arc

601017	675	0.2+	0.2+	840928	809	0.0	0.5-	840930	809	0.1+	0.5+
601022	675	1.1-	0.1+	840928	809	0.1+	0.3-	840930	809	0.4-	0.3+
601024	675	0.7+	0.2-	840929	809	0.4+	0.2-	840930	809	0.3-	0.0
601026	675	0.3+	0.1-	840929	809	0.1+	0.1+				
840928	809	0.0	0.6-	840929	809	0.0	0.6+				

ORBITAL ELEMENTS BY D. K. YEOMANS, JET PROPULSION LABORATORY.

Periodic Comet Giacobini-Zinner (1984e)
Epoch 1985 Sept. 12.0 ET = JDE 2446320.5
T 1985 Sept. 5.20584 ET

		(1950.0)	P	Q
q	1.0282552			
n	0.14952104	Peri.	172.48560	+0.98712582	-0.08722701
a	3.5156139	Node	194.70598	+0.10487536	+0.98584961
e	0.7075176	Incl.	31.87837	+0.12076332	-0.14315025
P	6.59				

From observations 1972-1985, mean residual 1".2. The nongravitational parameters are A1 = +0.28, A2 = -0.0598.

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ORBITAL ELEMENTS BY C. M. BARDWELL, SMITHSONIAN ASTROPHYSICAL OBSERVATORY.

The orbital elements are by C. M. Bardwell unless otherwise stated.

(3272)* 1938 DB1 = 1958 DO = 1972 HS = 1975 EH = 1980 TQ11 = 1985 DP
Discovered 1938 Feb. 24 by Y. Vaisala at Turku.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

		(1950.0)	P	Q
M	121.57771			
n	0.29331776	Peri.	12.64616	-0.28087968	-0.95730536
a	2.2434194	Node	93.69719	+0.87442908	-0.28461922
e	0.0925604	Incl.	3.92797	+0.39557602	-0.05058015
P	3.36	B(1,0)	14.0		

Residuals in seconds of arc

380219 062	2.4-	0.2-	580223 760	2.8+	0.6+	850216 046	0.7+	2.2-
380224 062	0.2+	0.3+	580223 760	1.0+	0.3-	850216 046	0.0	3.2-
380307 062	0.5+	0.3+	720418 095	1.2+	1.3+	850220 046	2.4-	2.2+
380323 062	0.3-	0.3-	750304 095	3.6+	1.3+	850220 046	3.5-	2.5+
380404 062	1.0-	1.3+	801008 095	1.5-	2.5+	850418 801	1.4+	0.0

(3273)* 1975 TS2 = 1975 VA6 = 1979 HV
Discovered 1975 Oct. 3 by L. I. Chernykh at the Crimean Astrophysical Observatory. The double designation 1975 TS2 = 1975 VA6 is by B. G. Marsden (MPC 9024).
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

		(1950.0)	P	Q
M	5.62589			
n	0.15774460	Peri.	188.38414	-0.58088755	+0.79448335
a	3.3923427	Node	46.32852	-0.73185516	-0.41452396
e	0.0400157	Incl.	14.17308	-0.35631120	-0.44380862
P	6.25	B(1,0)	12.5		

Residuals in seconds of arc

751003 095	1.6+	0.7-	790419 807	0.4-	0.1+	850415 688	0.0	0.8-
751013 095	1.2-	0.3-	790426 807	0.2+	0.3+	850417 801	0.1+	0.9+
751105 095	0.6-	0.3+	790426 807	0.7+	0.4-	850525 801	2.2+	1.8-
751124 033	0.2-	0.2-	850319 801	0.7+	0.6+			
751125 033	0.0	0.7+	850415 688	3.5-	0.5+			

(3274)* 1981 QO2 = 1982 UK6
Discovered 1981 Aug. 23 by H. Debehogne at the European Southern Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	336.49018		(1950.0)		P		Q				
n	0.17576268	Peri.	230.05536		-0.20224109		+0.97927961				
a	3.1563484	Node	28.28180		-0.89159220		-0.17968046				
e	0.1021512	Incl.	1.26828		-0.40516895		-0.09341504				
P	5.61	B(1,0)	13.0								

Residuals in seconds of arc

810823	809	(4.3-	3.7-)	810827	809	0.5-	1.3+	810903	809	1.4+	1.2+
810823	809	(3.8-	4.4-)	810827	809	0.8-	1.3+	810905	809	2.2-	0.2-
810823	809	(3.5-	5.2-)	810828	809	0.6+	0.3+	810905	809	1.3-	0.2-
810824	809	0.8+	0.2+	810828	809	0.8+	0.1+	810905	809	1.6-	0.3-
810824	809	0.9+	0.3-	810828	809	1.0+	0.0	810906	809	0.0	0.3-
810824	809	0.7+	0.3+	810828	809	0.3-	1.5-	810906	809	0.9-	0.1-
810825	809	0.3-	0.3+	810828	809	0.3-	1.1-	810906	809	1.5-	0.1-
810825	809	0.8-	0.1+	810828	809	0.9-	0.9-	821020	095	0.4-	0.7+
810825	809	0.2-	0.1+	810828	809	0.5-	0.6-	821025	095	0.3-	0.7+
810826	809	0.4+	0.6-	810828	809	0.2-	0.6-	821109	095	1.0-	0.4+
810826	809	0.6+	0.3-	810828	809	0.2+	0.6-	821114	095	1.2+	0.4-
810826	809	0.2+	0.6-	810901	809	1.8+	1.6+	850322	801	1.0-	1.6+
810827	809	0.0	0.9+	810901	809	1.4+	1.4+	850322	688	1.5+	0.3-
810827	809	0.2+	0.2-	810901	809	0.0	0.8+	850322	688	0.6-	0.4+
810827	809	0.2+	1.1-	810903	809	0.1-	0.5+	850422	801	1.4+	1.1+
810827	809	0.6-	1.1+	810903	809	1.1+	0.5+				

(3275)* 1982 HE1 = 1939 FJ = 1964 EE

Discovered 1982 Apr. 25 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	354.01907		(1950.0)		P		Q				
n	0.27659742	Peri.	192.19651		-0.54338246		+0.83282857				
a	2.3329421	Node	45.00336		-0.75708990		-0.43186270				
e	0.1797569	Incl.	8.58074		-0.36269874		-0.34625306				
P	3.56	B(1,0)	14.5								

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

390321	062	3.0-	0.8+	820514	046	1.9+	0.4-	820620	688	0.6-	0.7+
390322	062	1.4+	0.1-	820515	046	2.6-	1.1-	831007	801	0.0	1.2+
640313	760	(0.06-	0.02+)X	820515	046	2.1-	1.1+	850121	688	1.1-	1.3-
640316	760	3.1+	1.0+	820516	046	1.0-	0.5+	850121	688	0.2-	0.5+
640316	760	1.7+	0.8+	820516	046	0.3+	0.7+	850221	801	0.4+	0.5-
820425	688	0.4+	2.0-	820521	688	0.9+	0.3-	850322	801	1.1-	0.1-
820425	688	0.8+	1.7-	820521	688	0.7+	0.5-				
820514	046	0.2-	0.8+	820620	688	0.7-	0.8+				

(3276)* 1982 RZ1 = 1974 HO1 = 1984 AA1

Discovered 1982 Sept. 15 by A. Mrkos at Klet.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	175.66255		(1950.0)		P		Q				
n	0.17939918	Peri.	342.56012		+0.59528185		-0.80230026				
a	3.1135493	Node	70.88504		+0.74264244		+0.52834647				
e	0.1759487	Incl.	2.68134		+0.30679263		+0.27778462				
P	5.49	B(1,0)	13.0								

Residuals in seconds of arc

740424	805	0.3+	0.6-	820917	046	0.9-	0.0	840126	688	0.3-	0.4-
740425	805	0.6-	0.1+	820917	046	1.3+	0.7-	840126	688	0.1-	0.3-
820915	046	1.4+	2.2+	820917	046	0.6-	0.5+	840204	688	0.5-	0.3+
820915	046	0.8+	0.5+	820918	046	1.4+	0.8-	840204	688	0.0	0.6+
820916	046	1.6-	0.0	820918	046	1.2-	0.7-	840308	801	0.4+	2.5+
820916	046	1.0+	0.4+	840108	688	1.4+	1.0-	850322	801	0.1+	0.0
820917	046	1.7-	0.8-	840108	688	0.9-	1.1-	850418	801	0.2+	0.6+

(3277)* 1984 AF1 = 1962 CF = 1971 UV2 = 1982 TU2

Discovered 1984 Jan. 8 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory. The identification 1984 AF1 = 1982 TU2 is by D. W. E. Green (MPC 9161).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	195.07228	(1950.0)	P	Q
n	0.17709499	Peri. 296.97842	+0.92042501	-0.36168251
a	3.1404980	Node 84.53533	+0.39015340	+0.82617923
e	0.2721998	Incl. 8.56975	+0.02445668	+0.43198799
P	5.57	B(1,0) 12.5		

Residuals in seconds of arc

620204	760	0.0	1.4+	840108	688	0.2+	1.0-	840204	688	1.4+	0.6-
620204	760	0.3-	0.7+	840108	688	1.6-	0.4+	840204	688	1.5+	0.1-
711021	095	1.7+	2.1-	840108	688	0.9+	1.2-	850322	801	1.1+	0.7+
821008	330	2.6-	4.2+	840126	688	0.5+	0.6-	850423	801	0.1-	0.5+
840108	688	2.4-	2.4+	840126	688	0.0	0.8+				

(3278)* 1984 BT = 1939 HE = 1953 VV1 = 1965 WN = 1982 XA2

Discovered 1984 Jan 27 by A. Mrkos at Klet. The key identification 1984 BT = 1982 XA2 is by T. Furuta (JAM 1580) and W. Landgraf (MPC 8795), who found it independently. Landgraf also independently found all the other identifications.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	116.69134	(1950.0)	P	Q
n	0.17131283	Peri. 51.26087	-0.63176540	-0.75747617
a	3.2107719	Node 78.72662	+0.64884389	-0.63295243
e	0.0387254	Incl. 9.66381	+0.42411564	-0.16000333
P	5.75	B(1,0) 12.5		

Residuals in seconds of arc

390420	024	0.8-	0.3-	821214	381	0.4+	0.5+	850325	801	1.1+	0.5+
531110	760	3.7+	1.9-	840127	046	3.1-	1.0+	850418	801	1.1+	0.0
531110	760	0.5+	2.4-	840128	046	0.8-	1.4+	850418	046	1.7-	1.1-
651120	760	0.4+	1.1+	840129	046	1.5-	3.3+	850419	046	1.9-	0.1-
651120	760	1.9-	0.4+	840201	046	1.8-	0.3-	850419	046	1.1-	1.2+
821110	330	1.8-	1.8-	840201	046	1.7+	1.0-	850419	046	0.2+	0.6-
821117	330	0.3+	0.1+	840204	046	2.0+	1.6-	850420	046	0.1+	1.1-
821213	381	0.2-	0.6+	840204	046	3.0+	1.6-	850420	046	1.3+	1.4-
821213	381	0.5-	0.4+	840221	046	1.9+	1.4-				
821214	381	0.3+	0.2+	840221	046	0.5-	1.1-				

(3279)* 9103 P-L = A924 RE = 1973 SF2 = 1983 TS = 1983 UE

Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels. The key identification 9103 P-L = 1983 UE is by E. Bowell (MPC 8401).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	253.73868	(1950.0)	P	Q
n	0.30158683	Peri. 166.42254	+0.99928069	+0.03628912
a	2.2022222	Node 191.51472	-0.03785215	+0.93684211
e	0.1739041	Incl. 3.16141	-0.00230413	+0.34786486
P	3.27	B(1,0) 14.5		

Residuals in seconds of arc

240906	094	(57.1-	10.2-)X	831007	046	4.8-	2.2-	831016	046	2.9-	0.8-
240910	094	(0.1-	2.0-)X	831007	046	2.6-	1.3+	831104	688	0.0	0.8+
601017	675	0.3-	0.7+	831011	688	2.1+	0.1+	831104	688	1.8+	0.0
601022	675	1.3-	1.1+	831011	688	1.7+	0.5-	850326	801	0.1+	0.1+
601024	675	0.2+	1.6+	831012	688	4.2+	0.3-	850421	801	0.4-	0.8-
601026	675	0.0	0.6+	831012	688	3.2+	0.1-				
730922	095	0.6+	1.7-	831016	046	2.1-	1.1-				

1933 FE1 = 1985 FD1

The identification is by E. Bowell.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	54.45104	(1950.0)		P	Q
n	0.28443237	Peri.	310.82096	-0.84220451	+0.53781706
a	2.2899055	Node	261.74663	-0.48236155	-0.78310118
e	0.2181293	Incl.	2.20086	-0.24087113	-0.31225846
P	3.47	B(1,0)	15.0		

Residuals in seconds of arc

330324	024	1.1+	1.0-	850321	688	0.8-	0.4-	850324	688	0.2+	1.2-
330328	024	0.8-	1.2+	850321	688	1.5-	1.0-	850519	801	0.8-	0.2-
330417	024	1.6+	4.5+	850324	688	0.6+	1.3-	850521	801	0.3+	0.4-

1976 GJ2 = 1985 HD

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	25.79745	(1950.0)		P	Q
n	0.22391060	Peri.	53.72339	-0.20745855	+0.97483055
a	2.6858833	Node	204.68343	-0.94846403	-0.22087832
e	0.1730680	Incl.	11.27478	-0.23953479	+0.03030128
P	4.40	B(1,0)	14.5		

Residuals in seconds of arc

760401	095	1.0-	1.4+	760429	808	0.4-	0.5+	850424	675	0.5-	0.9+
760404	095	1.9+	1.6-	760503	808	1.6+	1.5-	850425	675	2.8-	0.8+
760425	808	1.2+	2.8+	760503	808	(0.5-	26.7-)	850425	675	0.2-	0.8+
760429	808	0.6+	0.1+	850423	675	2.0+	0.6+				

1977 RG

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	356.28159	(1950.0)		P	Q
n	0.21154726	Peri.	82.88134	-0.34188672	+0.93903892
a	2.7895361	Node	166.94880	-0.91313255	-0.32282524
e	0.1074240	Incl.	9.25619	-0.22204144	-0.11827835
P	4.66	B(1,0)	14.5		

Residuals in seconds of arc

770908	801	0.1-	0.5-	770915	801	1.5+	1.3-	850322	688	0.2+	2.5+
770909	801	2.4-	0.2+	771007	801	1.6-	0.1+	850322	688	2.0-	2.0-
770911	801	1.8+	1.5+	771016	801	0.2+	0.3+	850425	801	2.1+	0.2-
770912	801	0.5+	0.2-	771211	801	0.4+	0.7+				

1981 EQ27

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	62.37888	(1950.0)		P	Q
n	0.24149962	Peri.	6.91782	-0.98646073	-0.16344503
a	2.5538337	Node	163.65672	+0.14807380	-0.92293407
e	0.1316579	Incl.	2.74006	+0.07049385	-0.34853753
P	4.08	B(1,0)	13.0		

Residuals in seconds of arc

810209	413	1.1+	1.4-	810311	413	0.0	0.4-	810407	413	0.2+	0.4-
810212	413	1.5+	0.7-	810315	413	0.6-	0.7-	810410	413	0.6-	1.1+
810213	413	0.6+	0.4+	810315	413	0.2+	0.2+	810410	413	0.7-	0.1+
810302	413	1.1-	0.4+	810405	413	0.7-	0.5+	850321	688	0.2-	1.6+
810302	413	0.1-	0.3-	810405	413	2.7+	1.3-	850321	688	0.3+	0.9+
810306	413	0.2+	0.4-	810406	413	0.7-	0.6+	850521	801	0.1-	1.3+
810306	413	0.5+	0.4-	810406	413	0.2+	0.5-				
810311	413	0.2-	0.5-	810407	413	1.7-	0.6+				

1982 HB2
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M 55.58746		(1950.0)	P	Q
n 0.30510600	Peri.	157.27110	-0.93918699	+0.33885264
a 2.1852598	Node	42.66490	-0.32634518	-0.83016845
e 0.0728503	Incl.	4.71758	-0.10689538	-0.44271800
P 3.23	B(1,0)	15.0		

Residuals in seconds of arc

820419 801	0.8-	1.4+	820429 801	2.6-	0.8-	850321 688	0.1+	0.7-
820420 801	1.6-	2.0+	820519 801	1.5+	1.1+	850525 801	0.4+	0.8-
820422 801	1.0-	1.9+	820527 801	1.1+	0.1-			
820423 801	3.2+	0.2-	850321 688	0.8+	0.4-			

1983 RL4 = 1983 TA1

The double designation 1983 RL4 = 1983 TA1 is by K. Hurukawa, W. Landgraf and F. Bowman, who all found it independently (MPC 9414). The 1981 observations of 1983 RL4 were located on UCAS plates by S. J. Bus and E. Bowell, following the suggestion of Landgraf.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M 177.74993		(1950.0)	P	Q
n 0.23074829	Peri.	212.77146	+0.94020095	-0.33269804
a 2.6325526	Node	166.08202	+0.33910600	+0.93444678
e 0.2743284	Incl.	17.67642	-0.03208256	+0.12696942
P 4.27	B(1,0)	15.0		

Residuals in seconds of arc

810202 413	1.0-	1.2+	830909 675	0.2+	1.5+	830912 688	0.1-	2.1-
810213 413	0.9+	2.2-	830911 688	0.2+	1.5-	831009 675	0.9+	1.0+
830908 675	0.0	0.6-	830911 688	0.3-	1.1-	831009 675	0.0	0.1-
830909 675	0.3-	1.7+	830912 688	0.4+	0.3+			

1985 FA = 1980 YF
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M 128.11199		(1950.0)	P	Q
n 0.28410432	Peri.	50.47897	-0.33966638	-0.86972397
a 2.2916679	Node	62.95136	+0.69124175	-0.48899824
e 0.2204692	Incl.	23.70541	+0.63781783	+0.06679023
P 3.47	B(1,0)	14.5		

Residuals in seconds of arc

801231 688	1.7+	0.7-	850331 688	0.7-	0.3-	850424 675	0.3+	0.0
801231 688	0.4+	0.2+	850331 688	1.3-	0.5-	850424 688	2.0+	1.3+
810109 688	1.1-	0.1+	850411 675	1.0+	0.8+	850424 688	1.1-	0.0
810109 688	1.0-	0.4+	850412 675	2.1+	0.4+	850425 675	1.2-	0.2+
850322 675	0.4+	1.4+	850415 675	0.6+	2.6+			
850322 675	0.2+	2.3-	850423 675	2.1-	4.0-			

1985 FE = 1978 VL6
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M 353.93478		(1950.0)	P	Q
n 0.21092501	Peri.	345.60691	-0.28212186	+0.95175567
a 2.7950197	Node	267.89757	-0.86779273	-0.30680685
e 0.1750806	Incl.	6.93717	-0.40907582	-0.00554011
P 4.67	B(1,0)	13.0		

Residuals in seconds of arc

781105 675	0.1-	0.5-	850324 474	1.0+	0.2-	850329 474	1.9+	0.2+
781106 675	0.1-	0.4-	850324 474	0.2+	0.3+	850329 474	1.9+	0.1+
781107 675	1.2-	0.1+	850325 474	0.1+	0.9-	850414 474	0.3-	0.2-
781108 675	0.9+	0.6-	850325 474	0.4-	0.4-	850414 474	0.7-	0.2+
850323 474	0.6-	0.5+	850327 474	1.3-	0.3-	850526 474	0.2+	0.8-
850323 474	0.9-	2.4+	850327 474	0.2+	1.1-	850526 474	0.2-	1.0-

1985 FU1 = 1974 CM
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M 55.00408	(1950.0)	P	Q
n 0.27530213	Peri. 64.12102	-0.95012917	+0.30729082
a 2.3402587	Node 133.72356	-0.30592667	-0.88532683
e 0.1055710	Incl. 4.21914	-0.06052629	-0.34895378
P 3.58	B(1,0) 14.5		

Residuals in seconds of arc

740214	095	1.0+	0.6-	850322	688	0.6-	1.2+	850411	675	0.7+	0.9-
740218	095	1.0-	0.3+	850322	688	0.7+	0.2+	850415	675	0.6-	0.5-

* * * * *

NEW NAMES OF MINOR PLANETS.

(2293) Guernica = 1977 EH1
Discovered 1977 Mar. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the town Guernica y Luno, Spain, historical center of Basque culture.

(2412) Wil = 3537 P-L
Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld at Leiden on Palomar Schmidt plates taken by T. Gehrels.
Named in honor of Wil van de Hulst, phychotherapist, married to the astronomer Henk C. van de Hulst.

(2476) Andersen = 1976 JF2
Discovered 1976 May 2 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for Hans Christian Andersen (1805-1875), great Danish writer of fairy tales.

(2492) Kutuzov = 1977 NT
Discovered 1977 July 14 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for Mikhail Illarionovich Kutuzov (1745-1813), military leader, commander-in-chief during the 1812 war against the troops of Napoleon.

(2529) Rockwell Kent = 1977 QL2
Discovered 1977 Aug. 21 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for Rockwell Kent (1882-1971), American artist and writer of travel books, whose works draw upon the experiences of his varied career as an architectural draftsman, a lobsterman and a carpenter on the coast of Maine. He also illustrated the works of Melville, Shakespeare and Chaucer.

(2579) Spartacus = 1977 PA2
Discovered 1977 Aug. 14 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the leader of a large-scale rebellion of the slaves in Rome in 73-71 B.C.

(2590) Mourao = 1980 KJ
Discovered 1980 May 22 by H. Debehogne at the European Southern Observatory.
Named in honor of R. R. de Freitas Mourao, astronomer at the National Observatory in Rio de Janeiro, known for his work on double stars, minor planets and comets. He has participated extensively in the discoverer’s

program of observations of minor planets at the European Southern Observatory, is the author of several astronomical books and is the leader of the Foundation of the Brazilian Museum for Astronomy.

(2633) Bishop = 1981 WR1

Discovered 1981 Nov. 24 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.

Named for George Bishop (1785-1861), from whose observatory in Regents Park, London, eleven minor planets were discovered. The proprietor of a wine-making business, Bishop served as president of the Royal Astronomical Society in 1857 and 1858. Citation prepared by B. Hetherington.

(2634) James Bradley = 1982 DL

Discovered 1982 Feb. 21 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.

Named for James Bradley (1693-1762), one of the greatest observers of his time and third Astronomer Royal, from 1742 until his death. Discoverer of aberration (1729) and nutation (1748), Bradley pioneered modern methods of determining instrumental effects on position measurements and published positions of some 3000 stars with an accuracy never before attained. Name suggested and citation prepared by B. Hetherington.

(2635) Huggins = 1982 DS

Discovered 1982 Feb. 21 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.

Named for William Huggins (1824-1910), pioneer in astronomical spectroscopy. Huggins stated that the chemical elements on the earth also existed in the stars, discovered the gaseous nature of bright nebulae, was the first to study the spectrum of a nova and measured the radial velocity of Sirius. As early as 1875 he had devised methods of photographing spectra, and this resulted in the publication of his Atlas of Representative Stellar Spectra in 1899. Name suggested and citation prepared by B. Hetherington.

(2636) Lassell = 1982 DZ

Discovered 1982 Feb. 20 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.

Named for William Lassell (1799-1880), discoverer of Neptune’s satellite Triton and Uranus’ satellites Ariel and Umbriel and an independent discoverer of Saturn’s satellite Hyperion. A brewer by trade, he also found some 600 nebulae. Name suggested and citation prepared by B. Hetherington.

(2703) Rodari = 1979 FT2

Discovered 1979 Mar. 29 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Named in memory of Gianni Rodari (1920-1980), Italian writer of children’s books.

(2707) Ueferji = 1981 QS3

Discovered 1981 Aug. 28 by H. Debehogne at the European Southern Observatory.

Named in honor of the Universidade Federal do Rio de Janeiro, which, through the Valongo Observatory, supports research in astrometry of minor planets in South America. Staff members have participated in the discoverer’s observing program at La Silla.

(2734) Hasek = 1976 GJ3

Discovered 1976 Apr. 1 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Named for Jaroslav Hasek (1883-1923), prominent Czech writer.

(2758) Cordelia = 1978 RF
Discovered 1978 Sept. 1 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the youngest daughter of King Lear in Shakespeare's tragedy.

(2793) Valdaj = 1977 QV
Discovered 1977 Aug. 19 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the Valdaj Hills, near Moscow, well known in Russian history. The discoverer also dedicates this name to the memory of his father, Stepan Semenovich Chernykh, who perished there on 1942 Mar. 3 in World War II.

(2795) Lepage = 1979 YM
Discovered 1979 Dec. 16 by H. Debehogne and E. R. Netto at the European Southern Observatory,
Named in honor of Theophile Lepage, professor of mathematics at the Universite de Liege during 1928-1930 and at the Universite de Bruxelles during 1931-1971. Known for his work in analysis, modern algebra, group theory and the theory of geodesic fields, he directed the doctoral studies of the first discoverer.

(2870) Haupt = 1981 LD
Discovered 1981 June 4 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named in honor of Hermann Haupt, director of the Institute for Astronomy, University of Graz. One of pioneers of photometry of minor planets, he made photoelectric observations while working at the Lick Observatory in 1951 and 1952. He found the peculiar brightness distribution in the near infrared and the reddening with phase of Vesta.

(2871) Schober = 1981 QC2
Discovered 1981 Aug. 30 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named in honor of Hans Josef Schober, astronomer at the Institute for Astronomy, University of Graz. Most of his research has been devoted to photoelectric photometry of minor planets, where he has made a major contribution to the study of lightcurves and rotation periods. He is known especially for discoveries of very slow-spinning minor planets and for studies of minor planets with complex lightcurve features.

(2923) Schuyler = 1977 DA
Discovered 1977 Feb. 22 at the Harvard College Observatory's Agassiz Station.
Named in honor of Catherine Schuyler on the occasion of the completion of her studies at Harvard University and in appreciation of her assistance with the administration of the Minor Planet Center and Central Bureau for Astronomical Telegrams during the past two years.

(3006) Livadia = 1979 SF11
Discovered 1979 Sept. 24 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for a suburb of the Crimean city of Yalta.

(3007) Reaves = 1979 UC
Discovered 1979 Oct. 17 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named in honor of Gibson Reaves, astronomer, historian and educator at the University of Southern California. Himself an expert on dwarf galaxies

in clusters, his students have made signal contributions to the study of minor planets. Citation prepared by D. T. Thompson.

(3009) Coventry = 1973 SM2
Discovered 1973 Sept. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the city in England, twin city of Volgograd.

(3012) Minsk = 1979 QU9
Discovered 1979 Aug. 27 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the capital city of the Byelorussian S.S.R.

(3018) Godiva = 1982 KM
Discovered 1982 May 21 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named for the wife of Leofric, earl of Mercia, who, it is said, rode naked, but for her long hair, through the streets of Coventry so that her husband would reduce the oppressive taxes he levied on the people of the city. In a later, embellished version of the legend, the populace was entreated to stay behind shuttered windows; but a tailor named Peeping Tom, who disobeyed, was instantly struck blind.

(3023) Heard = 1981 JS
Discovered 1981 May 5 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named in memory of John Frederick Heard (1907-1976), professor of astronomy at the University of Toronto and fourth director of the David Dunlap Observatory. An outstanding and meticulous spectroscopist, he specialized in spectroscopic binaries and stellar radial-velocity standards. In addition, he was a dedicated teacher who helped train many Canadian astronomers. Citation prepared by H. Guetter.

(3040) Kozai = 1979 BA
Discovered 1979 Jan. 23 by W. Liller at Cerro Tololo.
Named in honor of Yoshihide Kozai, astronomer and celestial mechanician at the Tokyo Observatory, whose interests include natural and artificial satellites, the motions of comets and minor planets, families of minor planets, and the use of satellite and lunar positions for astronomy and geodesy. His investigation of the theory of secular perturbations of minor planets of large orbital inclination or eccentricity led to the recognition of the first object known to exhibit argument-of-perihelion libration. Name proposed by J. G. Williams, who has found this object also to be an argument-of-perihelion librator.

(3041) Webb = 1980 GD
Discovered 1980 Apr. 15 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.
Named for Thomas William Webb, discoverer of S Ori. Like many other English clergymen of his day, he was a keen amateur astronomer. His observations of many years formed the basis of his Celestial Objects for Common Telescopes (1859), a work covering many aspects of astronomical observation and destined to become a classic handbook for the amateur astronomer. Name suggested and citation prepared by B. Hetherington.

(3053) Dresden = 1977 QS
Discovered 1977 Aug. 18 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the city in the German Democratic Republic.

(3054) Strugatskia = 1977 RE7
Discovered 1977 Sept. 11 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of the brothers Arkadij Natanovich and Boris Natanovich Strugatskij, well-known Soviet writers of science fiction.

(3072) Vilnius = 1978 RS1
Discovered 1978 Sept. 5 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the capital city of the Lithuanian S.S.R.

(3073) Kursk = 1979 SW11
Discovered 1979 Sept. 24 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for an old Russian city.

(3142) Kilopi = 1937 AC
Discovered 1937 Jan. 9 by A. Patry at Nice.
The name acknowledges the fact that the number of this planet is the approximate circumference of a circle of diameter 1000 units. Following a suggestion by J. G. Williams, this planet was named by B. G. Marsden, who made the identifications involving it.

(3181) Ahnert = 1964 EC
Discovered 1964 Mar. 8 by F. Borngen at Tautenburg.
Named in honor of Paul Ahnert, author since 1949 of the annual "Kalender fur Sternfreunde" and well known by professional and amateur astronomers alike in many countries. Although his principal aim is the popularization of astronomy, and he has published several books on the art of making observations, he has carried out research since 1938 at the Sonneberg Observatory on variable stars and on the physics of the solar system.

(3200) Phaethon = 1983 TB
Discovered 1983 Oct. 11 by the Infrared Astronomical Satellite.
This object associated with the Geminid meteor stream has the smallest known perihelion distance for a body in a short-period orbit and is named for the son of Helios, who operated the solar chariot for a day, lost control of it and almost set fire to the earth.

(3254) Bus = 1982 UM
Discovered 1982 Oct. 17 by E. Bowell at Lowell Observatory.
Named in honor of S. J. ("Bobby") Bus, currently a research assistant at Lowell Observatory. Bus has been largely responsible for the successful planning and carrying out of the U.K. Schmidt Telescope/California Institute of Technology Asteroid Survey (UCAS). Observations at Siding Spring and subsequent analysis at Caltech, the Jet Propulsion Laboratory and Lowell Observatory have led to the establishment of more than a thousand orbits of faint minor planets, almost all of which are potentially recoverable.

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(3271) 1982 RB a,e,i = 2.10, 0.39, 25 Elements MPC 9760

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	06 24	18 21.29	+40 32.9	0.603	1.390	116.0	41.1	18.6
1985	07 04	18 18.74	+40 23.3					

1985 07 14	18 16.94	+38 32.8	0.506	1.327	117.2	42.9	18.1
1985 07 24	18 17.70	+34 40.6					
1985 08 03	18 22.74	+28 27.2	0.420	1.286	121.7	42.2	17.6
1985 08 13	18 33.11	+19 40.5					
1985 08 23	18 49.47	+08 38.4	0.373	1.272	127.1	39.3	17.3
1985 09 02	19 11.80	-03 23.3					
1985 09 12	19 39.24	-14 32.0	0.409	1.286	125.2	39.8	17.5
1985 09 22	20 10.52	-23 20.1					
1985 10 02	20 43.90	-29 22.1	0.531	1.328	116.8	42.3	18.2
1985 10 12	21 17.56	-32 56.2					
1985 10 22	21 50.20	-34 33.7	0.708	1.392	108.5	42.7	18.9
1985 11 01	22 21.02	-34 45.0					
1985 11 11	22 49.71	-33 54.4	0.916	1.473	101.1	41.3	19.6
1985 11 21	23 16.38	-32 19.7					
1985 12 01	23 41.28	-30 14.7	1.145	1.565	94.2	38.9	20.2

Comet Machholz (1985e) Elements MPC 9753

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1985 07 04	07 55.51	+22 03.0	0.965	0.266	15.2	93.6	5.2
1985 07 09	08 59.88	+21 58.0					
1985 07 14	10 03.00	+20 32.2	0.823	0.589	35.4	90.5	8.3
1985 07 19	11 01.97	+17 52.9					
1985 07 24	11 53.20	+14 34.1	0.873	0.854	53.1	72.1	10.0
1985 07 29	12 35.57	+11 11.6					
1985 08 03	13 09.98	+08 06.4	1.043	1.087	63.7	56.9	11.5
1985 08 08	13 38.00	+05 25.4					
1985 08 13	14 01.17	+03 08.1	1.275	1.299	68.1	46.3	12.7
1985 08 18	14 20.69	+01 11.5					
1985 08 23	14 37.49	-00 28.0	1.535	1.497	68.5	38.9	13.7
1985 08 28	14 52.22	-01 53.5					
1985 09 02	15 05.36	-03 07.6	1.808	1.683	66.5	33.4	14.5
1985 09 07	15 17.26	-04 12.3					
1985 09 12	15 28.19	-05 09.3	2.085	1.861	63.1	28.8	15.3
1985 09 17	15 38.36	-05 59.7					
1985 09 22	15 47.90	-06 44.4	2.361	2.030	58.7	25.0	15.9
1985 09 27	15 56.92	-07 24.3					
1985 10 02	16 05.52	-07 59.8	2.632	2.193	53.7	21.6	16.5

Periodic Comet Shajn-Schaldach Elements NK 450

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1985 07 14	20 14.63	-13 05.1	2.112	3.110	166.4	4.4	21.1
1985 07 24	20 07.35	-13 36.1					
1985 08 03	19 59.82	-14 12.5	2.038	3.036	167.4	4.2	20.9
1985 08 13	19 52.83	-14 51.6					
1985 08 23	19 47.15	-15 30.5	2.069	2.963	146.1	11.0	20.8
1985 09 02	19 43.40	-16 06.6					
1985 09 12	19 41.94	-16 38.1	2.187	2.891	125.6	16.4	20.8
1985 09 22	19 42.95	-17 03.7					
1985 10 02	19 46.44	-17 22.1	2.360	2.821	107.1	19.8	20.9
1985 10 12	19 52.25	-17 32.8					
1985 10 22	20 00.21	-17 35.0	2.559	2.754	90.5	21.2	20.9
1985 11 01	20 10.08	-17 28.3					
1985 11 11	20 21.62	-17 12.2	2.758	2.689	75.6	20.9	21.0
1985 11 21	20 34.60	-16 46.5					
1985 12 01	20 48.79	-16 11.0	2.942	2.627	62.0	19.3	21.0
1985 12 11	21 04.00	-15 25.7					
1985 12 21	21 20.05	-14 30.8	3.100	2.570	49.3	16.9	21.1
1985 12 31	21 36.79	-13 26.6					
1986 01 10	21 54.09	-12 13.6	3.224	2.517	37.5	13.8	21.1

1981 CW a,e,i = 1.88, 0.37, 5 Elements MPC 6950

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	07 14	01 00.55	+01 05.1	1.838	2.201	-1.20	-7.4	21.2
1985	07 24	01 10.31	+01 33.8					
1985	08 03	01 18.50	+01 47.9	1.539	2.128	-1.49	-9.3	20.7
1985	08 13	01 24.73	+01 45.0					
1985	08 23	01 28.45	+01 22.4	1.265	2.049	-1.90	-11.7	20.1
1985	09 02	01 29.16	+00 38.3					
1985	09 12	01 26.35	-00 28.2	1.037	1.963	-2.39	-14.4	19.4
1985	09 22	01 19.72	-01 54.9					
1985	10 02	01 09.56	-03 34.5	0.882	1.873	-2.78	-15.7	18.7
1985	10 12	00 56.84	-05 14.6					
1985	10 22	00 43.36	-06 39.2	0.819	1.778	-2.76	-13.9	18.6
1985	11 01	00 31.33	-07 33.8					
1985	11 11	00 22.55	-07 51.0	0.839	1.680	-2.35	-10.9	18.8
1985	11 21	00 18.18	-07 29.6					
1985	12 01	00 18.55	-06 32.9	0.906	1.580	-1.91	-9.1	19.1
1985	12 11	00 23.44	-05 06.2					
1985	12 21	00 32.47	-03 13.9	0.986	1.482	-1.62	-8.8	19.3

1981 FD a,e,i = 3.23, 0.48, 3 Elements MPC 9687

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 03	02 34.37	+15 24.7	3.558	3.683	-0.51	-2.7	22.0
1985	08 13	02 38.91	+15 50.2					
1985	08 23	02 42.01	+16 09.2	3.189	3.605	-0.58	-3.0	21.7
1985	09 02	02 43.44	+16 20.9					
1985	09 12	02 43.00	+16 24.5	2.846	3.524	-0.66	-3.5	21.3
1985	09 22	02 40.54	+16 19.4					
1985	10 02	02 36.06	+16 05.1	2.561	3.441	-0.73	-3.9	20.9
1985	10 12	02 29.69	+15 41.4					
1985	10 22	02 21.82	+15 09.5	2.370	3.355	-0.76	-4.4	20.5
1985	11 01	02 13.08	+14 31.4					
1985	11 11	02 04.23	+13 50.6	2.297	3.266	-0.74	-4.6	20.4
1985	11 21	01 56.10	+13 11.3					
1985	12 01	01 49.42	+12 37.9	2.342	3.174	-0.67	-4.4	20.6
1985	12 11	01 44.70	+12 13.9					
1985	12 21	01 42.25	+12 01.7	2.475	3.080	-0.60	-4.1	20.8
1985	12 31	01 42.17	+12 02.1					
1986	01 10	01 44.39	+12 15.0	2.657	2.984	-0.55	-3.7	20.9

Periodic Comet Wirtanen Elements MPC 8274

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1985	08 23	21 32.03	-31 59.4	1.557	2.525	158.3	8.5	20.5
1985	09 02	21 19.21	-33 03.3					
1985	09 12	21 07.58	-33 40.5	1.528	2.372	137.9	16.5	20.2
1985	09 22	20 58.54	-33 50.1					
1985	10 02	20 53.04	-33 34.8	1.573	2.214	117.0	23.8	19.9
1985	10 12	20 51.48	-32 58.6					
1985	10 22	20 53.91	-32 05.0	1.651	2.052	98.6	28.7	19.7
1985	11 01	21 00.08	-30 56.5					
1985	11 11	21 09.63	-29 34.1	1.728	1.886	83.1	31.4	19.4
1985	11 21	21 22.19	-27 57.5					
1985	12 01	21 37.39	-26 06.0	1.780	1.718	70.2	32.7	19.1
1985	12 11	21 54.93	-23 58.1					
1985	12 21	22 14.58	-21 32.2	1.795	1.553	59.7	33.2	18.7
1985	12 31	22 36.13	-18 46.5					
1986	01 10	22 59.47	-15 39.5	1.774	1.395	51.6	33.5	18.2
1986	01 20	23 24.58	-12 10.0					
1986	01 30	23 51.43	-08 17.6	1.724	1.255	45.8	34.3	17.7

1986 02 09	00 20.14	-04 03.1					
1986 02 19	00 50.85	+00 30.9	1.661	1.148	42.5	35.6	17.2
1986 03 01	01 23.76	+05 19.2					
1986 03 11	01 59.11	+10 13.8	1.609	1.090	41.7	37.3	16.9
1986 03 21	02 37.14	+15 02.9					
1986 03 31	03 17.89	+19 32.2	1.594	1.095	42.8	38.3	16.9
1986 04 10	04 01.22	+23 26.1					
1986 04 20	04 46.53	+26 30.4	1.639	1.162	44.6	37.4	17.2
1986 04 30	05 32.74	+28 35.4					
1986 05 10	06 18.54	+29 38.4	1.754	1.276	45.8	34.6	17.8
1986 05 20	07 02.58	+29 43.2					
1986 05 30	07 43.86	+28 58.9	1.934	1.420	45.4	30.6	18.5
1986 06 09	08 21.86	+27 36.9					
1986 06 19	08 56.49	+25 48.0	2.163	1.579	43.0	26.0	19.2
1986 06 29	09 27.93	+23 41.7					
1986 07 09	09 56.55	+21 25.2	2.420	1.746	38.6	21.3	19.8
1986 07 19	10 22.74	+19 03.9					
1986 07 29	10 46.86	+16 41.5	2.688	1.913	32.7	16.6	20.5

Periodic Comet Kowal 2 (1979 II) Elements MPC 8273

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		m2
1985 09 12	09 04.39	+08 01.3	2.392	1.649	-1.23	+9.2	18.6	
1985 09 22	09 28.47	+05 11.7						
1985 10 02	09 51.11	+02 20.3	2.382	1.741	-1.10	+8.3	18.8	
1985 10 12	10 12.34	-00 30.7						
1985 10 22	10 32.19	-03 19.1	2.356	1.847	-0.99	+7.1	19.0	
1985 11 01	10 50.64	-06 03.3						
1985 11 11	11 07.68	-08 41.9	2.306	1.962	-0.93	+5.7	19.2	
1985 11 21	11 23.23	-11 13.6						
1985 12 01	11 37.17	-13 37.2	2.229	2.084	-0.90	+4.3	19.4	
1985 12 11	11 49.36	-15 51.8						
1985 12 21	11 59.58	-17 55.9	2.125	2.209	-0.91	+3.1	19.6	
1985 12 31	12 07.60	-19 47.9						
1986 01 10	12 13.16	-21 25.9	2.006	2.336	-0.98	+2.2	19.7	
1986 01 20	12 15.97	-22 46.9						
1986 01 30	12 15.88	-23 47.7	1.890	2.463	-1.09	+1.9	19.8	
1986 02 09	12 12.87	-24 24.4						
1986 02 19	12 07.16	-24 33.1	1.809	2.589	-1.22	+2.4	19.9	
1986 03 01	11 59.34	-24 11.7						
1986 03 11	11 50.28	-23 20.6	1.798	2.714	-1.29	+3.6	20.1	
1986 03 21	11 41.07	-22 04.0						
1986 03 31	11 32.76	-20 29.9	1.888	2.836	-1.25	+4.6	20.4	

Periodic Comet Gehrels 3 (1984l) Elements NK 458

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1985 09 12	09 23.44	+14 26.8	4.296	3.461	30.0	8.4	19.6	
1985 09 22	09 35.96	+13 24.7						
1985 10 02	09 47.94	+12 22.1	4.129	3.469	43.3	11.4	19.5	
1985 10 12	09 59.31	+11 19.9						
1985 10 22	10 09.97	+10 19.3	3.914	3.478	57.3	13.9	19.4	
1985 11 01	10 19.81	+09 21.2						
1985 11 11	10 28.71	+08 26.9	3.661	3.489	72.3	15.7	19.2	
1985 11 21	10 36.53	+07 37.7						
1985 12 01	10 43.10	+06 55.0	3.384	3.501	88.6	16.4	19.1	
1985 12 11	10 48.28	+06 20.0						
1985 12 21	10 51.87	+05 54.2	3.106	3.515	106.5	15.6	18.9	
1985 12 31	10 53.75	+05 38.7						
1986 01 10	10 53.80	+05 34.5	2.857	3.529	126.3	13.0	18.8	
1986 01 20	10 52.01	+05 42.0						

1986 01 30	10 48.48	+06 00.5	2.671	3.545	148.0	8.5	18.6
1986 02 09	10 43.50	+06 28.5					
1986 02 19	10 37.49	+07 03.3	2.582	3.562	171.1	2.5	18.6
1986 03 01	10 31.05	+07 41.4					
1986 03 11	10 24.81	+08 19.0	2.610	3.580	165.2	4.1	18.6
1986 03 21	10 19.38	+08 52.4					
1986 03 31	10 15.25	+09 18.9	2.751	3.598	142.8	9.7	18.8
1986 04 10	10 12.73	+09 36.7					
1986 04 20	10 11.96	+09 44.9	2.980	3.618	122.3	13.6	19.0
1986 04 30	10 12.95	+09 43.2					
1986 05 10	10 15.60	+09 32.1	3.263	3.639	103.8	15.6	19.2
1986 05 20	10 19.78	+09 12.1					
1986 05 30	10 25.29	+08 43.8	3.569	3.660	87.1	16.1	19.4
1986 06 09	10 31.96	+08 08.0					
1986 06 19	10 39.62	+07 25.5	3.872	3.682	71.7	15.2	19.6
1986 06 29	10 48.10	+06 36.9					
1986 07 09	10 57.27	+05 43.0	4.153	3.705	57.4	13.4	19.8
1986 07 19	11 07.02	+04 44.4					
1986 07 29	11 17.23	+03 41.9	4.396	3.728	43.6	10.8	19.9
1986 08 08	11 27.82	+02 35.9					
1986 08 18	11 38.72	+01 27.2	4.591	3.752	30.3	7.8	20.1

Comet Shoemaker (1984f) Elements MPC 9426

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1985 09 12	11 08.82	-35 13.2	3.393	2.697	39.8	13.8	11.0
1985 09 22	11 09.73	-36 48.6					
1985 10 02	11 10.21	-38 40.5	3.403	2.712	39.8	13.7	11.0
1985 10 12	11 09.87	-40 48.9					
1985 10 22	11 08.20	-43 14.2	3.325	2.742	46.8	15.3	11.0
1985 11 01	11 04.55	-45 55.9					
1985 11 11	10 58.00	-48 52.9	3.178	2.787	58.2	17.6	11.0
1985 11 21	10 47.29	-52 02.0					
1985 12 01	10 30.67	-55 16.1	2.998	2.846	71.7	19.2	10.9
1985 12 11	10 05.89	-58 22.1					
1985 12 21	09 30.75	-60 56.7	2.835	2.919	85.0	19.6	10.9
1985 12 31	08 44.97	-62 27.7					
1986 01 10	07 52.82	-62 22.6	2.748	3.003	95.3	19.0	11.0
1986 01 20	07 02.77	-60 28.7					
1986 01 30	06 21.91	-57 03.1	2.785	3.098	99.1	18.3	11.1
1986 02 09	05 52.21	-52 39.8					
1986 02 19	05 32.23	-47 52.3	2.957	3.202	95.2	17.9	11.4
1986 03 01	05 19.62	-43 05.1					
1986 03 11	05 12.32	-38 33.4	3.239	3.314	85.6	17.4	11.8
1986 03 21	05 08.84	-34 25.2					
1986 03 31	05 08.08	-30 43.9	3.579	3.432	73.5	16.2	12.1
1986 04 10	05 09.28	-27 29.6					
1986 04 20	05 11.89	-24 41.4	3.929	3.557	61.2	14.3	12.5
1986 04 30	05 15.50	-22 17.4					
1986 05 10	05 19.80	-20 15.4	4.250	3.686	50.2	12.1	12.8
1986 05 20	05 24.55	-18 33.5					
1986 05 30	05 29.54	-17 09.8	4.512	3.819	42.0	10.2	13.1
1986 06 09	05 34.60	-16 02.7					
1986 06 19	05 39.59	-15 10.7	4.698	3.956	38.6	9.2	13.3
1986 06 29	05 44.35	-14 32.5					
1986 07 09	05 48.74	-14 07.1	4.799	4.095	41.6	9.5	13.5
1986 07 19	05 52.63	-13 53.4					
1986 07 29	05 55.87	-13 50.4	4.815	4.237	50.1	10.6	13.7
1986 08 08	05 58.31	-13 57.4					
1986 08 18	05 59.79	-14 13.2	4.754	4.380	62.5	11.8	13.8

1986 08 28	06 00.14	-14 36.6					
1986 09 07	05 59.18	-15 06.5	4.636	4.525	77.4	12.6	13.9
1986 09 17	05 56.74	-15 40.9					
1986 09 27	05 52.69	-16 17.8	4.490	4.671	94.1	12.4	14.0
1986 10 07	05 46.91	-16 54.6					
1986 10 17	05 39.36	-17 27.8	4.358	4.818	111.8	11.1	14.0
1986 10 27	05 30.12	-17 54.0					
1986 11 06	05 19.41	-18 09.5	4.288	4.965	128.4	9.0	14.1

Periodic Comet Tsuchinshan 2 (1985d) Elements MPC 7658

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1985 11 11	12 54.77	-10 56.6	2.832	2.055	31.5	14.6	19.9
1985 11 21	13 14.68	-13 11.3					
1985 12 01	13 33.98	-15 17.4	2.783	2.141	41.1	17.6	20.0
1985 12 11	13 52.61	-17 14.5					
1985 12 21	14 10.44	-19 01.9	2.703	2.235	51.9	20.3	20.2
1985 12 31	14 27.35	-20 39.4					
1986 01 10	14 43.16	-22 07.1	2.591	2.333	64.0	22.3	20.2
1986 01 20	14 57.65	-23 25.1					
1986 01 30	15 10.60	-24 33.6	2.450	2.434	77.5	23.3	20.3
1986 02 09	15 21.73	-25 32.9					
1986 02 19	15 30.75	-26 23.1	2.291	2.538	92.7	22.9	20.3
1986 03 01	15 37.35	-27 04.3					
1986 03 11	15 41.26	-27 36.2	2.133	2.643	110.0	20.7	20.4
1986 03 21	15 42.26	-27 57.8					
1986 03 31	15 40.31	-28 08.0	2.001	2.748	129.7	16.3	20.4

1981 EB19 a,e,i = 2.25, 0.23, 2 Elements MPC 9751

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 06 24	19 34.29	-18 06.7	0.780	1.768	159.3	11.7	17.1
1985 07 04	19 27.85	-18 20.9					
1985 07 14	19 19.79	-18 44.0	0.731	1.746	176.0	2.3	16.5
1985 07 24	19 11.90	-19 11.9					
1985 08 03	19 06.05	-19 40.4	0.759	1.733	155.3	14.2	17.0
1985 08 13	19 03.54	-20 06.0					
1985 08 23	19 05.06	-20 26.4	0.854	1.730	135.9	24.0	17.5
1985 09 02	19 10.67	-20 39.2					
1985 09 12	19 19.97	-20 42.9	0.997	1.735	120.0	30.2	18.0
1985 09 22	19 32.47	-20 35.6					
1985 10 02	19 47.55	-20 16.1	1.173	1.749	106.9	33.2	18.4

1977 DO4 a,e,i = 2.25, 0.07, 3 Elements MPC 9753

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 06 24	23 00.51	-09 00.9	1.864	2.398	109.1	23.6	19.3
1985 07 04	23 04.42	-08 38.5					
1985 07 14	23 05.78	-08 30.9	1.643	2.394	126.7	19.9	18.9
1985 07 24	23 04.35	-08 39.1					
1985 08 03	23 00.08	-09 02.6	1.472	2.389	147.3	13.3	18.5
1985 08 13	22 53.16	-09 39.2					
1985 08 23	22 44.17	-10 24.4	1.380	2.383	170.5	4.0	18.1
1985 09 02	22 34.13	-11 11.6					
1985 09 12	22 24.27	-11 53.7	1.390	2.375	164.7	6.4	18.2
1985 09 22	22 15.81	-12 25.0					
1985 10 02	22 09.73	-12 41.8	1.499	2.367	141.6	15.2	18.6
1985 10 12	22 06.53	-12 42.8					
1985 10 22	22 06.37	-12 28.2	1.683	2.357	121.2	21.2	19.0
1985 11 01	22 09.12	-11 59.1					
1985 11 11	22 14.45	-11 16.8	1.909	2.346	103.4	24.2	19.3

1978 LB a,e,i = 3.18, 0.13, 18 Elements MPC 6638

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 06 24	00 03.87	-19 56.8	2.858	3.177	98.8	18.4	17.7
1985 07 04	00 09.60	-20 31.7					
1985 07 14	00 13.53	-21 20.1	2.638	3.202	114.9	16.7	17.5
1985 07 24	00 15.46	-22 20.9					
1985 08 03	00 15.25	-23 31.6	2.459	3.227	131.9	13.5	17.3
1985 08 13	00 12.85	-24 48.3					
1985 08 23	00 08.36	-26 05.3	2.351	3.251	147.8	9.5	17.1
1985 09 02	00 02.11	-27 15.7					
1985 09 12	23 54.64	-28 13.0	2.337	3.275	154.7	7.5	17.1
1985 09 22	23 46.69	-28 51.4					
1985 10 02	23 39.07	-29 07.7	2.426	3.299	145.3	9.9	17.2
1985 10 12	23 32.52	-29 01.2					
1985 10 22	23 27.60	-28 33.3	2.608	3.322	128.7	13.5	17.5
1985 11 01	23 24.66	-27 47.0					
1985 11 11	23 23.79	-26 45.8	2.857	3.344	111.1	16.0	17.8
1985 11 21	23 24.96	-25 32.8					
1985 12 01	23 28.00	-24 10.9	3.144	3.366	94.3	17.0	18.0

1981 EJ5 a,e,i = 2.20, 0.23, 5 Elements MPC 9683

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 07 14	00 27.23	+08 36.6	1.273	1.778	101.3	34.1	18.2
1985 07 24	00 36.90	+10 25.7					
1985 08 03	00 43.71	+11 58.6	1.134	1.815	115.2	30.4	17.9
1985 08 13	00 47.21	+13 12.0					
1985 08 23	00 47.03	+14 01.6	1.019	1.858	132.5	23.7	17.5
1985 09 02	00 43.15	+14 23.8					
1985 09 12	00 35.95	+14 16.1	0.952	1.905	153.1	13.8	17.2
1985 09 22	00 26.47	+13 39.1					
1985 10 02	00 16.31	+12 39.2	0.962	1.955	170.0	5.1	17.0
1985 10 12	00 07.14	+11 27.0					
1985 10 22	00 00.36	+10 15.1	1.063	2.007	154.5	12.3	17.5
1985 11 01	23 56.78	+09 14.2					
1985 11 11	23 56.56	+08 30.6	1.246	2.060	134.0	20.2	18.1
1985 11 21	23 59.54	+08 07.1					
1985 12 01	00 05.31	+08 03.6	1.487	2.114	116.0	24.8	18.7
1985 12 11	00 13.43	+08 18.1					
1985 12 21	00 23.50	+08 48.3	1.764	2.167	100.3	26.5	19.1

1983 BM a,e,i = 2.66, 0.10, 11 Elements MPC 9677

Date ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985 07 14	00 45.81	+10 00.1	2.621	2.917	-0.65	-6.3	18.4
1985 07 24	00 49.47	+11 05.9					
1985 08 03	00 51.16	+12 02.8	2.364	2.921	-0.74	-6.9	18.1
1985 08 13	00 50.68	+12 49.3					
1985 08 23	00 47.88	+13 23.3	2.142	2.923	-0.84	-7.7	17.8
1985 09 02	00 42.78	+13 43.1					
1985 09 12	00 35.65	+13 47.5	1.989	2.924	-0.93	-8.6	17.5
1985 09 22	00 27.00	+13 36.3					
1985 10 02	00 17.65	+13 11.4	1.934	2.924	-0.96	-9.2	17.3
1985 10 12	00 08.53	+12 36.7					
1985 10 22	00 00.55	+11 57.6	1.992	2.922	-0.92	-9.2	17.5
1985 11 01	23 54.45	+11 20.0					
1985 11 11	23 50.63	+10 49.0	2.151	2.919	-0.83	-8.5	17.8
1985 11 21	23 49.28	+10 28.0					
1985 12 01	23 50.34	+10 19.4	2.380	2.914	-0.73	-7.6	18.1
1985 12 11	23 53.65	+10 23.5					
1985 12 21	23 58.96	+10 40.5	2.646	2.909	-0.65	-6.7	18.4

(3017) 1981 UL a,e,i = 2.61, 0.13, 12 Elements MPC 8670

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 36.50	+18 17.9	2.452	2.738	95.2	21.7	18.1
1985	07 24	00 41.86	+19 35.3					
1985	08 03	00 45.33	+20 42.8	2.182	2.713	110.8	20.5	17.8
1985	08 13	00 46.64	+21 37.9					
1985	08 23	00 45.56	+22 17.0	1.942	2.687	128.1	17.2	17.5
1985	09 02	00 42.05	+22 36.4					
1985	09 12	00 36.25	+22 32.5	1.760	2.661	147.0	11.9	17.1
1985	09 22	00 28.64	+22 03.1					
1985	10 02	00 20.08	+21 08.7	1.664	2.634	162.0	6.8	16.8
1985	10 12	00 11.59	+19 53.4					
1985	10 22	00 04.23	+18 24.9	1.671	2.606	154.7	9.4	16.9
1985	11 01	23 58.90	+16 52.9					
1985	11 11	23 56.11	+15 26.4	1.778	2.578	135.4	15.6	17.2
1985	11 21	23 56.08	+14 12.5					
1985	12 01	23 58.76	+13 15.4	1.957	2.550	116.2	20.3	17.5
1985	12 11	00 03.93	+12 36.8					
1985	12 21	00 11.33	+12 16.6	2.177	2.522	98.8	22.7	17.7

1983 EV a,e,i = 2.72, 0.11, 4 Elements MPC 8213

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 49.27	+03 56.0	2.697	3.014	98.2	19.5	19.0
1985	07 24	00 53.40	+04 26.0					
1985	08 03	00 55.69	+04 45.1	2.428	3.007	115.5	17.7	18.7
1985	08 13	00 55.94	+04 52.2					
1985	08 23	00 54.01	+04 46.8	2.197	2.999	135.0	13.8	18.4
1985	09 02	00 49.91	+04 28.9					
1985	09 12	00 43.85	+03 59.8	2.037	2.989	157.0	7.5	18.1
1985	09 22	00 36.28	+03 21.7					
1985	10 02	00 27.90	+02 39.1	1.977	2.978	179.1	0.3	17.5
1985	10 12	00 19.56	+01 56.6					
1985	10 22	00 12.10	+01 19.6	2.033	2.966	155.3	8.1	18.1
1985	11 01	00 06.24	+00 52.2					
1985	11 11	00 02.43	+00 37.3	2.189	2.952	132.8	14.3	18.4
1985	11 21	00 00.91	+00 36.1					
1985	12 01	00 01.68	+00 48.9	2.416	2.937	112.5	18.1	18.7
1985	12 11	00 04.60	+01 14.7					
1985	12 21	00 09.48	+01 52.5	2.677	2.922	94.4	19.6	18.9

1969 DA a,e,i = 2.79, 0.13, 8 Elements MPC 8148

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 49.16	+15 05.9	2.808	3.048	93.8	19.4	18.1
1985	07 24	00 53.27	+16 01.6					
1985	08 03	00 55.53	+16 47.0	2.560	3.066	110.5	18.1	17.9
1985	08 13	00 55.76	+17 20.4					
1985	08 23	00 53.85	+17 39.6	2.343	3.083	129.2	14.7	17.6
1985	09 02	00 49.83	+17 42.6					
1985	09 12	00 43.92	+17 28.1	2.188	3.098	149.6	9.5	17.4
1985	09 22	00 36.58	+16 56.1					
1985	10 02	00 28.52	+16 08.5	2.128	3.111	167.1	4.1	17.1
1985	10 12	00 20.53	+15 09.6					
1985	10 22	00 13.43	+14 04.9	2.181	3.124	157.6	7.0	17.3
1985	11 01	00 07.89	+13 01.2					
1985	11 11	00 04.31	+12 03.8	2.339	3.135	136.7	12.5	17.6
1985	11 21	00 02.93	+11 17.1					
1985	12 01	00 03.72	+10 43.6	2.577	3.144	116.5	16.3	17.9
1985	12 11	00 06.57	+10 24.1					
1985	12 21	00 11.28	+10 18.6	2.860	3.152	98.1	18.0	18.2

(3202) A908 AA a,e,i = 3.94, 0.10, 11 Elements MPC 9461

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 44.73	+10 15.7	3.841	4.086	96.7	14.3	17.8
1985	07 24	00 47.49	+10 31.3					
1985	08 03	00 48.87	+10 37.3	3.541	4.070	114.6	13.1	17.6
1985	08 13	00 48.78	+10 32.8					
1985	08 23	00 47.18	+10 16.9	3.283	4.054	134.3	10.3	17.4
1985	09 02	00 44.17	+09 49.7					
1985	09 12	00 39.91	+09 11.7	3.100	4.037	155.5	5.9	17.1
1985	09 22	00 34.72	+08 24.4					
1985	10 02	00 29.04	+07 30.6	3.021	4.020	175.8	1.1	16.7
1985	10 12	00 23.35	+06 33.7					
1985	10 22	00 18.18	+05 37.7	3.062	4.003	158.1	5.3	17.0
1985	11 01	00 13.96	+04 46.5					
1985	11 11	00 11.04	+04 03.1	3.213	3.986	136.0	9.9	17.3
1985	11 21	00 09.62	+03 29.9					
1985	12 01	00 09.81	+03 07.9	3.446	3.968	115.2	13.0	17.5
1985	12 11	00 11.58	+02 57.4					
1985	12 21	00 14.85	+02 58.1	3.724	3.951	96.0	14.3	17.7

1984 FK a,e,i = 2.28, 0.08, 5 Elements MPC 9064

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	07 14	00 43.34	+04 48.5	1.903	2.296	-1.12	-5.2	18.3
1985	07 24	00 50.49	+05 14.4					
1985	08 03	00 55.41	+05 23.5	1.692	2.315	-1.28	-6.0	18.0
1985	08 13	00 57.79	+05 14.2					
1985	08 23	00 57.37	+04 45.1	1.511	2.333	-1.48	-7.2	17.7
1985	09 02	00 54.09	+03 56.4					
1985	09 12	00 48.19	+02 50.3	1.393	2.350	-1.67	-8.4	17.3
1985	09 22	00 40.24	+01 32.0					
1985	10 02	00 31.26	+00 09.6	1.367	2.367	-1.74	-8.8	16.9
1985	10 12	00 22.43	-01 07.6					
1985	10 22	00 14.91	-02 11.2	1.446	2.382	-1.63	-8.2	17.4
1985	11 01	00 09.58	-02 55.4					
1985	11 11	00 06.90	-03 18.0	1.618	2.397	-1.42	-6.9	17.9
1985	11 21	00 07.01	-03 19.2					
1985	12 01	00 09.76	-03 01.0	1.851	2.410	-1.20	-5.8	18.3
1985	12 11	00 14.89	-02 25.9					
1985	12 21	00 22.10	-01 36.6	2.116	2.423	-1.03	-5.0	18.6

(2975) 1970 AF1 a,e,i = 2.25, 0.10, 7 Elements MPC 8396

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 48.73	+12 57.5	2.141	2.444	94.7	24.5	17.7
1985	07 24	00 55.35	+13 56.4					
1985	08 03	00 59.90	+14 42.5	1.905	2.452	110.5	22.8	17.4
1985	08 13	01 02.10	+15 13.6					
1985	08 23	01 01.65	+15 26.8	1.695	2.457	128.7	18.7	17.0
1985	09 02	00 58.46	+15 19.4					
1985	09 12	00 52.66	+14 49.6	1.539	2.461	149.7	11.9	16.7
1985	09 22	00 44.71	+13 57.2					
1985	10 02	00 35.53	+12 45.6	1.470	2.462	170.4	3.9	16.3
1985	10 12	00 26.24	+11 21.4					
1985	10 22	00 18.02	+09 53.9	1.508	2.462	158.8	8.4	16.5
1985	11 01	00 11.83	+08 32.6					
1985	11 11	00 08.25	+07 24.9	1.646	2.460	136.5	16.1	16.9
1985	11 21	00 07.51	+06 35.4					
1985	12 01	00 09.53	+06 05.8	1.855	2.456	116.3	21.1	17.3
1985	12 11	00 14.07	+05 55.5					
1985	12 21	00 20.84	+06 03.1	2.102	2.451	98.6	23.4	17.6

1983 CN a,e,i = 2.53, 0.03, 15 Elements MPC 8062

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 57.57	+10 18.6	2.320	2.593	93.8	23.0	18.4
1985	07 24	01 03.09	+11 50.8					
1985	08 03	01 06.59	+13 16.4	2.067	2.590	109.6	21.7	18.1
1985	08 13	01 07.78	+14 34.0					
1985	08 23	01 06.35	+15 41.4	1.842	2.586	127.6	18.0	17.8
1985	09 02	01 02.18	+16 35.9					
1985	09 12	00 55.34	+17 14.7	1.675	2.582	147.7	12.0	17.5
1985	09 22	00 46.26	+17 35.1					
1985	10 02	00 35.79	+17 36.8	1.596	2.578	165.6	5.5	17.2
1985	10 12	00 25.05	+17 21.6					
1985	10 22	00 15.29	+16 54.3	1.625	2.573	157.6	8.5	17.3
1985	11 01	00 07.54	+16 22.3					
1985	11 11	00 02.46	+15 52.2	1.754	2.568	137.0	15.3	17.6
1985	11 21	00 00.33	+15 29.9					
1985	12 01	00 01.13	+15 19.2	1.956	2.563	117.3	20.0	18.0
1985	12 11	00 04.62	+15 21.7					
1985	12 21	00 10.53	+15 37.8	2.198	2.557	99.9	22.3	18.3

1984 EU a,e,i = 2.19, 0.11, 4 Elements MPC 8796

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 49.74	+00 46.0	1.699	2.115	99.3	28.3	17.9
1985	07 24	00 58.22	+01 10.3					
1985	08 03	01 04.31	+01 17.3	1.509	2.141	114.7	25.5	17.6
1985	08 13	01 07.65	+01 05.9					
1985	08 23	01 07.91	+00 35.3	1.347	2.168	133.1	19.9	17.3
1985	09 02	01 04.99	-00 13.1					
1985	09 12	00 59.03	-01 15.6	1.242	2.195	154.7	11.3	16.9
1985	09 22	00 50.65	-02 25.7					
1985	10 02	00 40.93	-03 34.2	1.224	2.221	172.7	3.3	16.7
1985	10 12	00 31.21	-04 31.9					
1985	10 22	00 22.83	-05 11.3	1.308	2.246	154.2	11.1	17.1
1985	11 01	00 16.78	-05 28.3					
1985	11 11	00 13.58	-05 22.8	1.481	2.271	132.6	18.7	17.6
1985	11 21	00 13.37	-04 56.4					
1985	12 01	00 15.97	-04 12.0	1.714	2.295	113.6	23.2	18.0
1985	12 11	00 21.07	-03 12.9					
1985	12 21	00 28.33	-02 01.8	1.980	2.317	97.1	24.9	18.4

(3123) 1981 QF2 a,e,i = 2.46, 0.13, 2 Elements MPC 9156

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 43.79	+02 56.9	1.712	2.135	99.8	28.0	17.5
1985	07 24	00 53.24	+03 42.3					
1985	08 03	01 00.57	+04 12.5	1.504	2.135	114.5	25.6	17.1
1985	08 13	01 05.40	+04 25.8					
1985	08 23	01 07.37	+04 20.7	1.326	2.139	132.1	20.5	16.7
1985	09 02	01 06.31	+03 57.0					
1985	09 12	01 02.25	+03 16.3	1.201	2.147	152.9	12.3	16.3
1985	09 22	00 55.64	+02 22.3					
1985	10 02	00 47.43	+01 22.4	1.159	2.158	175.3	2.2	15.9
1985	10 12	00 38.88	+00 25.1					
1985	10 22	00 31.33	-00 20.7	1.214	2.171	158.7	9.6	16.3
1985	11 01	00 25.88	-00 48.8					
1985	11 11	00 23.17	-00 56.3	1.359	2.188	136.8	18.0	16.8
1985	11 21	00 23.42	-00 43.1					
1985	12 01	00 26.54	-00 10.7	1.569	2.207	117.7	23.3	17.2
1985	12 11	00 32.24	+00 38.0					
1985	12 21	00 40.19	+01 40.4	1.816	2.229	101.3	25.6	17.6

(3070) 1949 GK a,e,i = 2.30, 0.20, 2 Elements MPC 8897

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 04.60	+06 40.8	2.279	2.553	93.6	23.4	19.4
1985	07 24	01 10.78	+07 10.9					
1985	08 03	01 14.90	+07 27.5	2.056	2.586	110.0	21.6	19.1
1985	08 13	01 16.70	+07 29.1					
1985	08 23	01 15.96	+07 14.7	1.858	2.616	129.1	17.5	18.8
1985	09 02	01 12.60	+06 43.8					
1985	09 12	01 06.77	+05 57.5	1.718	2.644	151.0	10.6	18.5
1985	09 22	00 58.89	+04 58.6					
1985	10 02	00 49.77	+03 52.2	1.670	2.669	175.1	1.8	18.1
1985	10 12	00 40.38	+02 45.2					
1985	10 22	00 31.78	+01 44.6	1.734	2.691	159.9	7.3	18.5
1985	11 01	00 24.86	+00 56.5					
1985	11 11	00 20.18	+00 24.4	1.903	2.710	136.7	14.5	18.9
1985	11 21	00 18.01	+00 09.9					
1985	12 01	00 18.35	+00 12.5	2.145	2.726	116.0	19.0	19.3
1985	12 11	00 21.03	+00 30.8					
1985	12 21	00 25.80	+01 03.0	2.427	2.739	97.8	20.8	19.6

1981 VN a,e,i = 2.62, 0.11, 16 Elements MPC 6514

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	07 14	01 04.86	-09 32.3	2.116	2.494	-0.94	-11.1	18.2
1985	07 24	01 11.87	-09 11.4					
1985	08 03	01 16.79	-09 02.0	1.869	2.473	-1.08	-12.8	17.8
1985	08 13	01 19.28	-09 03.8					
1985	08 23	01 19.02	-09 15.5	1.655	2.454	-1.27	-14.7	17.4
1985	09 02	01 15.83	-09 34.0					
1985	09 12	01 09.73	-09 55.0	1.501	2.435	-1.45	-16.1	17.1
1985	09 22	01 01.13	-10 12.1					
1985	10 02	00 50.86	-10 18.6	1.435	2.417	-1.53	-16.3	16.8
1985	10 12	00 40.10	-10 08.6					
1985	10 22	00 30.14	-09 38.7	1.474	2.401	-1.45	-15.3	17.0
1985	11 01	00 22.11	-08 48.5					
1985	11 11	00 16.73	-07 40.0	1.607	2.387	-1.26	-13.8	17.3
1985	11 21	00 14.31	-06 16.2					
1985	12 01	00 14.84	-04 40.3	1.807	2.374	-1.07	-12.4	17.7
1985	12 11	00 18.07	-02 55.1					
1985	12 21	00 23.73	-01 02.8	2.042	2.364	-0.92	-11.2	18.0

(3012) Minsk a,e,i = 3.22, 0.06, 18 Elements MPC 8669

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 10.21	+09 44.5	2.963	3.151	91.1	18.8	17.3
1985	07 24	01 14.64	+10 58.1					
1985	08 03	01 17.37	+12 05.9	2.680	3.141	107.7	17.9	17.0
1985	08 13	01 18.18	+13 06.8					
1985	08 23	01 16.88	+13 59.6	2.426	3.130	126.1	15.1	16.8
1985	09 02	01 13.37	+14 42.7					
1985	09 12	01 07.73	+15 14.7	2.231	3.120	146.5	10.3	16.4
1985	09 22	01 00.25	+15 34.4					
1985	10 02	00 51.50	+15 41.7	2.128	3.110	166.5	4.3	16.1
1985	10 12	00 42.25	+15 37.8					
1985	10 22	00 33.39	+15 25.8	2.139	3.101	162.2	5.6	16.2
1985	11 01	00 25.77	+15 10.0					
1985	11 11	00 20.00	+14 55.0	2.259	3.092	141.0	11.6	16.5
1985	11 21	00 16.48	+14 44.8					
1985	12 01	00 15.34	+14 42.8	2.465	3.084	120.4	16.0	16.8
1985	12 11	00 16.52	+14 50.5					
1985	12 21	00 19.86	+15 08.9	2.720	3.076	101.8	18.2	17.0

1984 GA a,e,i = 2.15, 0.05, 3 Elements MPC 9019

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 01.18	+05 51.7	1.871	2.201	94.7	27.4	18.7
1985	07 24	01 09.63	+06 54.0					
1985	08 03	01 15.96	+07 44.2	1.654	2.212	109.7	25.6	18.4
1985	08 13	01 19.81	+08 20.7					
1985	08 23	01 20.78	+08 41.7	1.458	2.222	127.4	21.2	18.0
1985	09 02	01 18.65	+08 46.0					
1985	09 12	01 13.37	+08 32.8	1.311	2.232	148.5	13.6	17.6
1985	09 22	01 05.32	+08 03.0					
1985	10 02	00 55.36	+07 20.4	1.244	2.241	172.6	3.3	17.2
1985	10 12	00 44.76	+06 31.2					
1985	10 22	00 34.95	+05 43.2	1.280	2.248	162.1	7.8	17.5
1985	11 01	00 27.19	+05 04.5					
1985	11 11	00 22.24	+04 40.4	1.413	2.255	138.9	16.8	17.9
1985	11 21	00 20.45	+04 33.7					
1985	12 01	00 21.76	+04 45.0	1.616	2.261	118.6	22.5	18.3
1985	12 11	00 25.89	+05 13.0					
1985	12 21	00 32.52	+05 55.8	1.858	2.265	101.2	25.2	18.7

1969 TE2 a,e,i = 2.53, 0.12, 3 Elements MPC 7227

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	00 57.63	+07 24.1	2.222	2.521	94.9	23.7	18.7
1985	07 24	01 05.52	+08 06.2					
1985	08 03	01 11.66	+08 35.8	1.954	2.495	110.3	22.4	18.4
1985	08 13	01 15.75	+08 51.2					
1985	08 23	01 17.46	+08 50.6	1.714	2.469	128.1	18.8	18.0
1985	09 02	01 16.61	+08 32.7					
1985	09 12	01 13.14	+07 56.9	1.527	2.444	148.8	12.3	17.5
1985	09 22	01 07.26	+07 04.6					
1985	10 02	00 59.61	+05 59.8	1.423	2.419	172.2	3.2	17.1
1985	10 12	00 51.14	+04 49.0					
1985	10 22	00 43.00	+03 40.4	1.424	2.394	163.3	6.9	17.2
1985	11 01	00 36.31	+02 42.4					
1985	11 11	00 31.87	+02 00.9	1.524	2.370	140.0	15.6	17.5
1985	11 21	00 30.16	+01 39.0					
1985	12 01	00 31.29	+01 37.6	1.699	2.348	119.6	21.4	17.9
1985	12 11	00 35.12	+01 55.3					
1985	12 21	00 41.42	+02 30.1	1.915	2.326	101.9	24.4	18.2

1983 FC a,e,i = 2.69, 0.13, 11 Elements MPC 8062

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 15.82	+14 20.6	2.873	3.016	88.1	19.7	18.6
1985	07 24	01 21.18	+15 32.6					
1985	08 03	01 24.85	+16 38.0	2.596	3.010	104.2	19.1	18.4
1985	08 13	01 26.59	+17 35.4					
1985	08 23	01 26.14	+18 23.0	2.340	3.003	122.2	16.6	18.1
1985	09 02	01 23.39	+18 58.8					
1985	09 12	01 18.32	+19 20.7	2.135	2.994	142.1	11.9	17.8
1985	09 22	01 11.18	+19 26.6					
1985	10 02	01 02.50	+19 16.0	2.015	2.983	162.2	5.9	17.5
1985	10 12	00 53.07	+18 50.1					
1985	10 22	00 43.85	+18 12.2	2.003	2.971	163.6	5.4	17.5
1985	11 01	00 35.79	+17 28.2					
1985	11 11	00 29.58	+16 43.9	2.102	2.958	143.5	11.5	17.7
1985	11 21	00 25.71	+16 05.3					
1985	12 01	00 24.34	+15 36.5	2.290	2.943	122.8	16.4	18.0
1985	12 11	00 25.42	+15 19.9					
1985	12 21	00 28.80	+15 16.7	2.531	2.927	103.9	19.0	18.3

(3063) 1983 PV a,e,i = 5.15, 0.06, 12 Elements MPC 8791

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 15.24	+21 10.8	5.248	5.270	85.7	11.1	17.5
1985	07 24	01 17.82	+21 50.3					
1985	08 03	01 19.28	+22 24.3	4.941	5.262	103.0	10.8	17.3
1985	08 13	01 19.55	+22 51.7					
1985	08 23	01 18.58	+23 11.6	4.656	5.254	121.3	9.5	17.2
1985	09 02	01 16.41	+23 22.9					
1985	09 12	01 13.12	+23 24.9	4.429	5.245	140.5	7.0	17.0
1985	09 22	01 08.89	+23 16.9					
1985	10 02	01 04.00	+22 59.3	4.292	5.237	158.7	4.0	16.8
1985	10 12	00 58.80	+22 32.8					
1985	10 22	00 53.66	+21 59.3	4.266	5.228	163.5	3.1	16.7
1985	11 01	00 48.97	+21 21.1					
1985	11 11	00 45.06	+20 41.0	4.358	5.219	147.4	5.9	16.9
1985	11 21	00 42.20	+20 01.9					
1985	12 01	00 40.55	+19 26.5	4.551	5.210	127.5	8.6	17.1
1985	12 11	00 40.21	+18 56.7					
1985	12 21	00 41.18	+18 34.0	4.816	5.202	107.8	10.4	17.2

1979 OM15 a,e,i = 3.14, 0.19, 1 Elements MPC 6517

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	07 14	01 03.16	+06 56.5	2.270	2.548	93.8	23.5	17.9
1985	07 24	01 11.28	+07 45.1					
1985	08 03	01 17.60	+08 22.1	2.037	2.555	109.1	22.0	17.6
1985	08 13	01 21.85	+08 46.0					
1985	08 23	01 23.76	+08 55.6	1.831	2.566	126.6	18.4	17.3
1985	09 02	01 23.19	+08 50.3					
1985	09 12	01 20.17	+08 30.2	1.677	2.580	147.0	12.3	17.0
1985	09 22	01 14.97	+07 56.5					
1985	10 02	01 08.19	+07 12.8	1.605	2.596	169.8	3.9	16.6
1985	10 12	01 00.69	+06 24.1					
1985	10 22	00 53.46	+05 36.7	1.638	2.616	166.4	5.1	16.7
1985	11 01	00 47.46	+04 56.8					
1985	11 11	00 43.35	+04 28.9	1.775	2.638	143.7	12.8	17.1
1985	11 21	00 41.56	+04 15.9					
1985	12 01	00 42.18	+04 18.6	1.993	2.663	123.1	18.1	17.5
1985	12 11	00 45.12	+04 36.3					
1985	12 21	00 50.20	+05 07.6	2.263	2.691	105.0	20.7	17.9

1967 UT a,e,i = 2.39, 0.06, 3 Elements MPC 9031

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 31.23	+04 48.9	1.773	2.288	107.2	25.1	18.2
1985	08 13	01 36.79	+05 01.2					
1985	08 23	01 39.77	+04 57.9	1.570	2.297	124.2	21.3	17.9
1985	09 02	01 39.91	+04 38.7					
1985	09 12	01 37.08	+04 04.6	1.412	2.306	144.3	14.7	17.5
1985	09 22	01 31.42	+03 17.9					
1985	10 02	01 23.53	+02 23.9	1.330	2.316	166.7	5.7	17.1
1985	10 12	01 14.37	+01 29.4					
1985	10 22	01 05.18	+00 42.2	1.348	2.327	166.0	5.9	17.2
1985	11 01	00 57.23	+00 09.4					
1985	11 11	00 51.42	-00 05.3	1.467	2.338	143.4	14.6	17.6
1985	11 21	00 48.34	-00 00.1					
1985	12 01	00 48.14	+00 24.1	1.663	2.349	122.9	20.6	18.0
1985	12 11	00 50.69	+01 04.9					
1985	12 21	00 55.75	+02 00.1	1.907	2.361	105.0	23.7	18.4
1985	12 31	01 02.99	+03 06.7					
1986	01 10	01 12.10	+04 22.3	2.171	2.374	89.3	24.5	18.7

(3094) 1979 FE2 a,e,i = 2.65, 0.07, 15 Elements MPC 9022

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 33.23	+05 59.9	2.331	2.792	106.3	20.4	17.5
1985	08 13	01 37.15	+05 29.2					
1985	08 23	01 38.91	+04 41.5	2.101	2.801	124.5	17.3	17.2
1985	09 02	01 38.39	+03 37.1					
1985	09 12	01 35.55	+02 17.6	1.924	2.809	145.1	11.8	16.9
1985	09 22	01 30.58	+00 46.4					
1985	10 02	01 23.97	-00 50.4	1.835	2.816	166.0	4.9	16.6
1985	10 12	01 16.39	-02 25.2					
1985	10 22	01 08.74	-03 50.2	1.856	2.822	162.9	5.9	16.7
1985	11 01	01 01.91	-04 58.5					
1985	11 11	00 56.61	-05 46.2	1.986	2.827	141.4	12.6	17.0
1985	11 21	00 53.34	-06 11.8					
1985	12 01	00 52.32	-06 16.3	2.199	2.832	120.7	17.4	17.4
1985	12 11	00 53.55	-06 02.0					
1985	12 21	00 56.91	-05 31.5	2.460	2.835	102.1	19.8	17.7
1985	12 31	01 02.19	-04 48.0					
1986	01 10	01 09.16	-03 54.0	2.738	2.837	85.6	20.2	17.9

1974 VG a,e,i = 3.17, 0.08, 10 Elements MPC 9354

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 41.36	+01 29.5	2.574	3.014	105.9	18.9	17.9
1985	08 13	01 44.64	+01 40.5					
1985	08 23	01 45.89	+01 41.5	2.319	3.001	123.7	16.3	17.6
1985	09 02	01 44.97	+01 33.3					
1985	09 12	01 41.82	+01 16.9	2.117	2.988	143.7	11.5	17.3
1985	09 22	01 36.58	+00 54.5					
1985	10 02	01 29.64	+00 29.7	1.998	2.976	164.9	5.0	16.9
1985	10 12	01 21.62	+00 06.4					
1985	10 22	01 13.35	-00 11.1	1.987	2.964	166.6	4.5	16.9
1985	11 01	01 05.70	-00 18.9					
1985	11 11	00 59.42	-00 14.4	2.087	2.953	145.1	11.1	17.2
1985	11 21	00 55.07	+00 03.5					
1985	12 01	00 52.93	+00 34.8	2.276	2.943	124.0	16.1	17.5
1985	12 11	00 53.06	+01 18.3					
1985	12 21	00 55.40	+02 12.9	2.522	2.934	105.0	18.9	17.8
1985	12 31	00 59.75	+03 16.8					
1986	01 10	01 05.90	+04 28.4	2.792	2.927	88.0	19.6	18.0

4122 P-L a,e,i = 2.91, 0.06, 1 Elements MPC 9300

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 36.21	+10 50.9	2.377	2.799	103.9	20.6	18.0
1985	08 13	01 40.54	+11 15.0					
1985	08 23	01 42.79	+11 26.8	2.127	2.790	121.4	18.0	17.7
1985	09 02	01 42.77	+11 25.3					
1985	09 12	01 40.39	+11 09.9	1.924	2.782	141.4	13.1	17.3
1985	09 22	01 35.78	+10 40.7					
1985	10 02	01 29.32	+09 59.8	1.799	2.775	163.9	5.7	17.0
1985	10 12	01 21.69	+09 10.5					
1985	10 22	01 13.76	+08 18.0	1.779	2.768	172.1	2.8	16.8
1985	11 01	01 06.51	+07 28.5					
1985	11 11	01 00.73	+06 47.5	1.868	2.762	148.6	10.8	17.2
1985	11 21	00 57.03	+06 19.1					
1985	12 01	00 55.69	+06 05.8	2.049	2.757	126.9	16.6	17.5
1985	12 11	00 56.75	+06 07.8					
1985	12 21	01 00.11	+06 24.6	2.288	2.752	107.7	19.9	17.9
1985	12 31	01 05.57	+06 54.7					
1986	01 10	01 12.87	+07 36.0	2.554	2.748	90.7	21.0	18.1

6591 P-L a,e,i = 5.29, 0.01, 7 Elements MPC 4831

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 39.44	+09 59.6	4.976	5.304	103.4	10.7	19.9
1985	08 13	01 40.11	+10 10.3					
1985	08 23	01 39.60	+10 14.6	4.690	5.303	122.5	9.3	19.7
1985	09 02	01 37.91	+10 12.6					
1985	09 12	01 35.11	+10 04.6	4.463	5.302	143.0	6.6	19.5
1985	09 22	01 31.33	+09 51.0					
1985	10 02	01 26.81	+09 33.0	4.329	5.300	164.6	2.9	19.3
1985	10 12	01 21.82	+09 12.0					
1985	10 22	01 16.71	+08 49.7	4.310	5.299	173.0	1.3	19.1
1985	11 01	01 11.86	+08 28.3					
1985	11 11	01 07.58	+08 09.6	4.413	5.298	150.6	5.3	19.4
1985	11 21	01 04.17	+07 55.5					
1985	12 01	01 01.82	+07 47.1	4.620	5.297	129.0	8.3	19.6
1985	12 11	01 00.65	+07 45.4					
1985	12 21	01 00.71	+07 50.8	4.901	5.295	108.4	10.2	19.8
1985	12 31	01 01.99	+08 03.2					
1986	01 10	01 04.42	+08 22.3	5.217	5.294	89.1	10.7	20.0

1982 UG7 a,e,i = 2.15, 0.19, 2 Elements MPC 8891

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 03	01 24.03	+11 15.2	1.163	1.747	-2.15	-10.5	17.8
1985	08 13	01 35.14	+12 13.7					
1985	08 23	01 43.36	+12 51.8	1.014	1.760	-2.54	-11.9	17.4
1985	09 02	01 48.20	+13 07.3					
1985	09 12	01 49.25	+12 58.1	0.894	1.779	-3.03	-14.4	17.0
1985	09 22	01 46.38	+12 23.3					
1985	10 02	01 40.12	+11 25.5	0.829	1.804	-3.44	-17.3	16.6
1985	10 12	01 31.63	+10 11.5					
1985	10 22	01 22.60	+08 52.3	0.842	1.835	-3.45	-18.4	16.4
1985	11 01	01 14.85	+07 41.2					
1985	11 11	01 09.70	+06 48.2	0.943	1.870	-3.01	-16.3	17.1
1985	11 21	01 07.89	+06 19.1					
1985	12 01	01 09.52	+06 15.0	1.118	1.909	-2.44	-13.1	17.7
1985	12 11	01 14.34	+06 33.4					
1985	12 21	01 21.94	+07 11.0	1.343	1.951	-1.96	-10.2	18.2
1985	12 31	01 31.88	+08 03.7					
1986	01 10	01 43.74	+09 07.7	1.597	1.994	-1.61	-7.9	18.7

(3083) 1974 MH a,e,i = 2.28, 0.15, 6 Elements MPC 8903

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 55.66	+14 47.3	2.042	2.404	98.0	24.7	19.5
1985	08 13	02 00.95	+15 47.8					
1985	08 23	02 03.77	+16 37.5	1.831	2.434	114.7	22.2	19.3
1985	09 02	02 03.82	+17 15.0					
1985	09 12	02 00.89	+17 38.4	1.653	2.463	134.2	17.0	18.9
1985	09 22	01 54.99	+17 45.6					
1985	10 02	01 46.51	+17 35.6	1.539	2.489	156.5	9.2	18.6
1985	10 12	01 36.27	+17 09.2					
1985	10 22	01 25.42	+16 29.5	1.524	2.514	172.7	2.9	18.4
1985	11 01	01 15.29	+15 42.9					
1985	11 11	01 06.96	+14 56.7	1.618	2.537	152.2	10.5	18.8
1985	11 21	01 01.22	+14 17.6					
1985	12 01	00 58.38	+13 50.6	1.807	2.557	130.2	17.1	19.2
1985	12 11	00 58.43	+13 37.8					
1985	12 21	01 01.18	+13 40.0	2.058	2.575	110.6	20.9	19.6
1985	12 31	01 06.31	+13 56.3					
1986	01 10	01 13.50	+14 25.0	2.339	2.591	93.5	22.3	19.9

1948 WF a,e,i = 2.25, 0.27, 9 Elements MPC 9685

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 11.66	-04 33.5	0.942	1.650	114.8	33.9	16.2
1985	08 13	01 25.66	-05 10.9					
1985	08 23	01 36.67	-06 12.8	0.816	1.642	127.7	29.2	15.8
1985	09 02	01 44.12	-07 36.3					
1985	09 12	01 47.51	-09 14.7	0.729	1.647	142.7	21.7	15.4
1985	09 22	01 46.72	-10 56.2					
1985	10 02	01 42.30	-12 24.3	0.697	1.663	156.2	14.0	15.1
1985	10 12	01 35.48	-13 22.9					
1985	10 22	01 28.02	-13 39.7	0.734	1.690	155.2	14.3	15.3
1985	11 01	01 21.79	-13 10.8					
1985	11 11	01 18.08	-12 01.0	0.840	1.726	141.0	21.1	15.8
1985	11 21	01 17.56	-10 18.6					
1985	12 01	01 20.34	-08 13.4	1.006	1.771	125.5	26.9	16.4
1985	12 11	01 26.12	-05 53.9					
1985	12 21	01 34.53	-03 26.5	1.217	1.823	111.5	30.1	16.9
1985	12 31	01 45.13	-00 56.1					
1986	01 10	01 57.54	+01 33.7	1.459	1.880	98.8	31.1	17.4

1964 UQ a,e,i = 2.61, 0.12, 13 Elements MPC 9160

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 43.66	+24 06.5	2.099	2.443	97.2	24.3	17.6
1985	08 13	01 50.24	+25 00.3					
1985	08 23	01 54.46	+25 39.7	1.888	2.466	113.0	22.2	17.4
1985	09 02	01 56.06	+26 01.9					
1985	09 12	01 54.85	+26 03.8	1.707	2.490	131.3	17.7	17.0
1985	09 22	01 50.85	+25 42.1					
1985	10 02	01 44.48	+24 55.0	1.586	2.514	151.9	10.8	16.8
1985	10 12	01 36.48	+23 43.1					
1985	10 22	01 27.92	+22 10.7	1.557	2.539	168.0	4.7	16.5
1985	11 01	01 20.01	+20 26.4					
1985	11 11	01 13.73	+18 40.3	1.636	2.564	154.2	9.7	16.8
1985	11 21	01 09.78	+17 02.2					
1985	12 01	01 08.47	+15 39.5	1.814	2.589	133.0	16.2	17.2
1985	12 11	01 09.79	+14 35.7					
1985	12 21	01 13.58	+13 52.1	2.061	2.614	113.5	20.2	17.6
1985	12 31	01 19.55	+13 27.4					
1986	01 10	01 27.41	+13 19.6	2.345	2.639	96.2	21.7	18.0

1979 YB a,e,i = 2.14, 0.28, 26 Elements MPC 7600

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 50.41	+41 15.1	2.242	2.447	89.1	24.5	19.8
1985	08 13	01 59.09	+43 15.0					
1985	08 23	02 05.66	+45 08.6	1.977	2.395	101.6	24.4	19.4
1985	09 02	02 09.55	+46 52.6					
1985	09 12	02 10.12	+48 22.5	1.727	2.340	115.2	22.9	19.1
1985	09 22	02 06.81	+49 31.1					
1985	10 02	01 59.42	+50 09.0	1.511	2.282	129.5	19.8	18.6
1985	10 12	01 48.38	+50 05.3					
1985	10 22	01 35.03	+49 09.8	1.353	2.220	141.6	16.2	18.3
1985	11 01	01 21.54	+47 18.9					
1985	11 11	01 10.12	+44 37.8	1.276	2.156	143.9	15.7	18.1
1985	11 21	01 02.50	+41 21.4					
1985	12 01	00 59.43	+37 50.1	1.289	2.090	133.0	20.2	18.1
1985	12 11	01 00.88	+34 22.7					
1985	12 21	01 06.44	+31 13.6	1.378	2.022	116.8	25.7	18.3
1985	12 31	01 15.49	+28 30.6					
1986	01 10	01 27.43	+26 15.9	1.515	1.954	100.7	29.6	18.5

1984 GF a,e,i = 2.20, 0.10, 6 Elements MPC 8901

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 57.99	+07 34.7	1.849	2.258	100.0	26.3	18.2
1985	08 13	02 05.24	+07 39.1					
1985	08 23	02 10.06	+07 27.1	1.644	2.280	116.3	23.4	17.9
1985	09 02	02 12.11	+06 58.3					
1985	09 12	02 11.13	+06 12.8	1.472	2.302	135.6	17.8	17.6
1985	09 22	02 07.08	+05 12.2					
1985	10 02	02 00.25	+04 01.0	1.365	2.322	157.5	9.5	17.2
1985	10 12	01 51.36	+02 45.6					
1985	10 22	01 41.51	+01 34.5	1.353	2.340	170.8	3.9	17.0
1985	11 01	01 32.03	+00 36.4					
1985	11 11	01 24.08	-00 02.7	1.446	2.358	150.3	12.0	17.4
1985	11 21	01 18.54	-00 19.5					
1985	12 01	01 15.82	-00 14.1	1.628	2.373	128.7	18.9	17.9
1985	12 11	01 15.96	+00 11.2					
1985	12 21	01 18.82	+00 53.6	1.867	2.387	109.8	22.8	18.3
1985	12 31	01 24.09	+01 49.6					
1986	01 10	01 31.46	+02 56.3	2.132	2.399	93.3	24.2	18.6

1982 FT a,e,i = 1.77, 0.28, 20 Elements MPC 8538

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 23.67	+24 54.1	1.956	2.178	88.4	27.7	19.8
1985	08 13	02 30.32	+27 09.2					
1985	08 23	02 34.42	+29 22.3	1.746	2.211	103.4	26.4	19.5
1985	09 02	02 35.38	+31 31.9					
1985	09 12	02 32.60	+33 34.7	1.552	2.237	120.4	22.8	19.2
1985	09 22	02 25.54	+35 24.5					
1985	10 02	02 14.11	+36 52.4	1.405	2.257	138.8	17.0	18.9
1985	10 12	01 58.84	+37 48.2					
1985	10 22	01 41.23	+38 03.3	1.339	2.270	152.7	11.6	18.7
1985	11 01	01 23.56	+37 36.8					
1985	11 11	01 08.07	+36 36.4	1.375	2.277	148.2	13.2	18.8
1985	11 21	00 56.42	+35 16.3					
1985	12 01	00 49.34	+33 52.4	1.504	2.277	131.1	19.0	19.1
1985	12 11	00 46.75	+32 36.5					
1985	12 21	00 48.25	+31 36.2	1.697	2.271	113.1	23.5	19.5
1985	12 31	00 53.24	+30 54.6					
1986	01 10	01 01.16	+30 31.9	1.920	2.258	96.8	25.6	19.8

1976 SVA a,e,i = 2.73, 0.07, 2 Elements MPC 9753

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 02.50	+14 51.6	2.346	2.659	96.5	22.3	18.0
1985	08 13	02 08.52	+15 32.6					
1985	08 23	02 12.46	+16 02.7	2.112	2.674	113.0	20.4	17.7
1985	09 02	02 14.04	+16 20.9					
1985	09 12	02 13.10	+16 25.9	1.909	2.689	132.0	16.1	17.4
1985	09 22	02 09.56	+16 16.8					
1985	10 02	02 03.70	+15 53.4	1.770	2.705	153.8	9.4	17.1
1985	10 12	01 56.02	+15 17.1					
1985	10 22	01 47.37	+14 31.0	1.726	2.720	176.2	1.4	16.7
1985	11 01	01 38.81	+13 40.5					
1985	11 11	01 31.30	+12 51.6	1.794	2.735	157.6	7.9	17.1
1985	11 21	01 25.66	+12 10.1					
1985	12 01	01 22.36	+11 40.5	1.963	2.751	135.1	14.7	17.5
1985	12 11	01 21.57	+11 24.7					
1985	12 21	01 23.25	+11 23.5	2.204	2.766	114.9	18.8	17.9
1985	12 31	01 27.22	+11 36.1					
1986	01 10	01 33.21	+12 00.8	2.483	2.781	97.0	20.5	18.2

1977 DD3 a,e,i = 5.25, 0.08, 15 Elements MPC 9465

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 09.01	+24 54.1	4.837	4.968	91.5	11.8	18.7
1985	08 13	02 11.14	+25 38.6					
1985	08 23	02 11.96	+26 18.0	4.533	4.958	109.2	11.1	18.5
1985	09 02	02 11.41	+26 51.2					
1985	09 12	02 09.46	+27 17.2	4.265	4.948	127.9	9.2	18.3
1985	09 22	02 06.16	+27 34.8					
1985	10 02	02 01.69	+27 43.0	4.067	4.938	147.2	6.3	18.1
1985	10 12	01 56.31	+27 41.5					
1985	10 22	01 50.39	+27 30.3	3.968	4.929	163.2	3.3	17.9
1985	11 01	01 44.40	+27 10.7					
1985	11 11	01 38.78	+26 44.6	3.985	4.920	158.5	4.2	18.0
1985	11 21	01 33.95	+26 14.8					
1985	12 01	01 30.26	+25 44.4	4.117	4.911	139.8	7.5	18.2
1985	12 11	01 27.91	+25 16.0					
1985	12 21	01 27.03	+24 52.1	4.339	4.902	119.8	10.0	18.4
1985	12 31	01 27.65	+24 34.4					
1986	01 10	01 29.71	+24 23.8	4.617	4.894	100.6	11.4	18.5

(3104) 1982 BB1 a,e,i = 2.96, 0.09, 24 Elements MPC 9028

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	01 58.25	-00 52.5	2.347	2.753	102.6	21.1	17.0
1985	08 13	02 04.99	-02 04.0					
1985	08 23	02 09.81	-03 34.6	2.105	2.743	119.1	18.8	16.7
1985	09 02	02 12.48	-05 23.2					
1985	09 12	02 12.83	-07 26.8	1.915	2.734	136.5	14.7	16.4
1985	09 22	02 10.81	-09 39.9					
1985	10 02	02 06.62	-11 54.1	1.804	2.727	151.7	10.0	16.2
1985	10 12	02 00.70	-13 59.5					
1985	10 22	01 53.78	-15 45.9	1.794	2.721	153.4	9.4	16.2
1985	11 01	01 46.78	-17 05.2					
1985	11 11	01 40.58	-17 53.1	1.885	2.716	139.6	13.7	16.4
1985	11 21	01 35.95	-18 09.2					
1985	12 01	01 33.38	-17 56.3	2.056	2.712	122.1	17.9	16.6
1985	12 11	01 33.09	-17 18.9					
1985	12 21	01 35.11	-16 21.6	2.278	2.710	105.4	20.5	16.9
1985	12 31	01 39.29	-15 09.4					
1986	01 10	01 45.42	-13 46.2	2.522	2.709	90.1	21.3	17.2

1982 UM7 a,e,i = 2.19, 0.10, 3 Elements MPC 8891

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 03	02 08.56	+13 17.1	2.038	2.364	-1.00	-4.4	18.0
1985	08 13	02 16.02	+13 45.9					
1985	08 23	02 21.26	+14 01.3	1.810	2.377	-1.15	-4.9	17.7
1985	09 02	02 23.93	+14 02.2					
1985	09 12	02 23.73	+13 47.5	1.608	2.388	-1.34	-5.7	17.4
1985	09 22	02 20.50	+13 16.3					
1985	10 02	02 14.40	+12 29.4	1.464	2.398	-1.52	-6.8	17.0
1985	10 12	02 05.93	+11 29.2					
1985	10 22	01 56.04	+10 20.9	1.410	2.405	-1.61	-7.7	16.4
1985	11 01	01 46.02	+09 12.0					
1985	11 11	01 37.10	+08 10.6	1.466	2.410	-1.53	-7.6	16.9
1985	11 21	01 30.32	+07 23.5					
1985	12 01	01 26.28	+06 54.6	1.620	2.413	-1.34	-6.7	17.4
1985	12 11	01 25.17	+06 44.9					
1985	12 21	01 26.92	+06 53.8	1.840	2.415	-1.14	-5.6	17.7
1985	12 31	01 31.28	+07 19.0					
1986	01 10	01 37.93	+07 57.8	2.093	2.414	-0.99	-4.7	18.1

(3089) 1981 XK2 a,e,i = 2.93, 0.19, 17 Elements MPC 8905

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 20.07	-05 47.5	2.561	2.898	98.9	20.2	16.8
1985	08 13	02 25.01	-06 12.5					
1985	08 23	02 27.86	-06 48.7	2.358	2.936	115.3	18.1	16.6
1985	09 02	02 28.45	-07 34.2					
1985	09 12	02 26.67	-08 26.2	2.193	2.973	133.1	14.3	16.4
1985	09 22	02 22.53	-09 20.3					
1985	10 02	02 16.30	-10 11.1	2.099	3.010	150.4	9.5	16.2
1985	10 12	02 08.49	-10 52.4					
1985	10 22	01 59.81	-11 18.8	2.102	3.046	157.6	7.2	16.2
1985	11 01	01 51.16	-11 26.1					
1985	11 11	01 43.33	-11 13.0	2.213	3.081	145.5	10.5	16.4
1985	11 21	01 37.03	-10 39.9					
1985	12 01	01 32.68	-09 49.4	2.419	3.115	127.1	14.6	16.7
1985	12 11	01 30.47	-08 44.6					
1985	12 21	01 30.40	-07 28.7	2.691	3.148	108.7	17.2	17.0
1985	12 31	01 32.35	-06 04.8					
1986	01 10	01 36.12	-04 35.3	2.997	3.179	91.5	18.0	17.3

1981 JH a,e,i = 2.22, 0.19, 4 Elements MPC 9683

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 11.83	+09 54.4	1.606	1.987	96.0	30.5	18.0
1985	08 13	02 21.48	+10 45.4					
1985	08 23	02 28.53	+11 23.2	1.437	2.029	110.8	27.8	17.8
1985	09 02	02 32.56	+11 47.3					
1985	09 12	02 33.20	+11 57.1	1.288	2.073	128.9	22.2	17.4
1985	09 22	02 30.20	+11 52.4					
1985	10 02	02 23.75	+11 34.3	1.188	2.118	150.7	13.4	17.1
1985	10 12	02 14.46	+11 05.0					
1985	10 22	02 03.52	+10 29.0	1.170	2.163	175.2	2.2	16.7
1985	11 01	01 52.50	+09 53.3					
1985	11 11	01 42.89	+09 24.4	1.254	2.208	159.2	9.2	17.2
1985	11 21	01 35.81	+09 08.0					
1985	12 01	01 31.86	+09 07.1	1.433	2.252	136.4	17.6	17.7
1985	12 11	01 31.11	+09 22.0					
1985	12 21	01 33.39	+09 51.9	1.678	2.295	116.7	22.5	18.2
1985	12 31	01 38.34	+10 34.5					
1986	01 10	01 45.57	+11 27.4	1.960	2.336	99.7	24.5	18.7

(3086) 1980 XE a,e,i = 1.94, 0.03, 19 Elements MPC 8904

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 06.72	+34 42.9	1.726	1.980	88.5	30.8	18.4
1985	08 13	02 18.91	+37 31.4					
1985	08 23	02 29.14	+40 14.9	1.538	1.983	100.1	30.1	18.1
1985	09 02	02 36.78	+42 51.5					
1985	09 12	02 41.05	+45 17.9	1.364	1.985	112.9	27.8	17.8
1985	09 22	02 41.10	+47 28.1					
1985	10 02	02 36.29	+49 13.4	1.218	1.987	126.8	23.8	17.5
1985	10 12	02 26.51	+50 21.9					
1985	10 22	02 12.72	+50 40.6	1.122	1.988	139.7	18.9	17.2
1985	11 01	01 57.22	+50 01.6					
1985	11 11	01 42.92	+48 26.5	1.095	1.988	144.8	16.7	17.1
1985	11 21	01 32.37	+46 08.4					
1985	12 01	01 26.91	+43 27.9	1.147	1.987	137.1	19.7	17.2
1985	12 11	01 26.65	+40 44.7					
1985	12 21	01 31.12	+38 13.9	1.271	1.985	122.9	24.6	17.6
1985	12 31	01 39.53	+36 04.1					
1986	01 10	01 51.12	+34 17.7	1.445	1.983	108.0	28.1	17.9

1976 SP4 a,e,i = 2.69, 0.14, 3 Elements MPC 9595

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 11.19	+12 33.1	2.033	2.354	95.3	25.4	17.1
1985	08 13	02 20.29	+13 30.1					
1985	08 23	02 27.45	+14 17.4	1.792	2.341	110.2	23.9	16.8
1985	09 02	02 32.31	+14 54.6					
1985	09 12	02 34.52	+15 20.6	1.577	2.331	127.6	20.0	16.4
1985	09 22	02 33.77	+15 34.5					
1985	10 02	02 30.05	+15 35.7	1.414	2.324	148.1	13.2	16.0
1985	10 12	02 23.62	+15 24.4					
1985	10 22	02 15.22	+15 02.2	1.332	2.320	171.3	3.7	15.6
1985	11 01	02 06.01	+14 33.3					
1985	11 11	01 57.31	+14 03.0	1.351	2.319	164.0	6.7	15.7
1985	11 21	01 50.34	+13 37.7					
1985	12 01	01 45.95	+13 22.7	1.470	2.321	141.1	15.5	16.1
1985	12 11	01 44.53	+13 21.0					
1985	12 21	01 46.15	+13 33.9	1.663	2.327	120.9	21.3	16.5
1985	12 31	01 50.60	+14 00.6					
1986	01 10	01 57.59	+14 39.3	1.900	2.335	103.5	24.2	16.9

1983 CZ2 a,e,i = 2.41, 0.18, 6 Elements MPC 8138

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 22.14	+20 28.3	2.456	2.660	90.2	22.4	19.6
1985	08 13	02 29.67	+21 34.5					
1985	08 23	02 35.40	+22 34.0	2.171	2.631	105.6	21.7	19.3
1985	09 02	02 38.99	+23 25.9					
1985	09 12	02 40.06	+24 08.4	1.908	2.599	123.2	18.9	18.9
1985	09 22	02 38.32	+24 39.0					
1985	10 02	02 33.65	+24 55.2	1.693	2.566	143.3	13.5	18.5
1985	10 12	02 26.23	+24 53.9					
1985	10 22	02 16.67	+24 33.2	1.559	2.531	164.2	6.1	18.1
1985	11 01	02 06.05	+23 54.2					
1985	11 11	01 55.67	+23 01.2	1.530	2.495	163.3	6.5	18.0
1985	11 21	01 46.83	+22 01.5					
1985	12 01	01 40.53	+21 03.8	1.607	2.457	141.6	14.4	18.3
1985	12 11	01 37.27	+20 15.1					
1985	12 21	01 37.23	+19 40.2	1.764	2.419	120.7	20.5	18.6
1985	12 31	01 40.26	+19 21.4					
1986	01 10	01 46.07	+19 18.4	1.965	2.380	102.5	23.8	18.9

1978 VB5 a,e,i = 2.38, 0.11, 7 Elements MPC 7140

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 30.16	+07 41.6	2.372	2.619	92.4	22.8	19.5
1985	08 13	02 37.19	+08 03.4					
1985	08 23	02 42.26	+08 14.9	2.122	2.624	108.4	21.4	19.2
1985	09 02	02 45.06	+08 15.8					
1985	09 12	02 45.33	+08 06.4	1.896	2.627	126.9	17.8	18.9
1985	09 22	02 42.85	+07 47.2					
1985	10 02	02 37.65	+07 19.9	1.725	2.628	148.1	11.6	18.5
1985	10 12	02 30.03	+06 47.1					
1985	10 22	02 20.64	+06 12.9	1.642	2.628	169.9	3.8	18.2
1985	11 01	02 10.51	+05 42.2					
1985	11 11	02 00.76	+05 19.9	1.670	2.625	160.8	7.1	18.4
1985	11 21	01 52.45	+05 10.1					
1985	12 01	01 46.37	+05 15.1	1.804	2.621	138.1	14.6	18.7
1985	12 11	01 42.91	+05 35.1					
1985	12 21	01 42.20	+06 09.3	2.014	2.615	117.3	19.5	19.1
1985	12 31	01 44.12	+06 56.1					
1986	01 10	01 48.42	+07 53.3	2.266	2.608	99.0	21.9	19.4

1981 SH1 a,e,i = 2.50, 0.31, 5 Elements MPC 6879

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 03	01 43.12	+08 34.4	1.281	1.805	-2.05	-16.3	18.1
1985	08 13	01 57.26	+10 22.5					
1985	08 23	02 09.63	+12 04.2	1.082	1.765	-2.47	-18.5	17.6
1985	09 02	02 19.72	+13 38.8					
1985	09 12	02 26.94	+15 05.4	0.913	1.736	-3.05	-21.1	17.1
1985	09 22	02 30.67	+16 22.4					
1985	10 02	02 30.54	+17 28.1	0.789	1.718	-3.72	-24.4	16.6
1985	10 12	02 26.58	+18 19.8					
1985	10 22	02 19.54	+18 55.3	0.726	1.713	-4.19	-28.1	16.1
1985	11 01	02 11.04	+19 15.3					
1985	11 11	02 03.08	+19 23.6	0.743	1.720	-4.07	-29.4	16.2
1985	11 21	01 57.54	+19 27.4					
1985	12 01	01 55.64	+19 34.4	0.838	1.739	-3.45	-26.5	16.8
1985	12 11	01 57.75	+19 49.7					
1985	12 21	02 03.75	+20 15.8	0.995	1.770	-2.77	-21.4	17.3
1985	12 31	02 13.18	+20 52.5					
1986	01 10	02 25.49	+21 37.7	1.197	1.811	-2.25	-16.2	17.9

3524 P-L a,e,i = 2.57, 0.04, 14 Elements MPC 9299

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 30.39	+23 56.2	2.503	2.656	87.2	22.4	18.6
1985	08 13	02 37.85	+25 30.8					
1985	08 23	02 43.41	+27 01.2	2.254	2.661	102.4	21.8	18.4
1985	09 02	02 46.72	+28 26.5					
1985	09 12	02 47.41	+29 44.9	2.024	2.666	119.4	19.2	18.1
1985	09 22	02 45.16	+30 53.6					
1985	10 02	02 39.89	+31 48.6	1.839	2.671	138.3	14.4	17.8
1985	10 12	02 31.79	+32 25.5					
1985	10 22	02 21.51	+32 40.1	1.732	2.674	156.5	8.5	17.5
1985	11 01	02 10.18	+32 31.1					
1985	11 11	01 59.12	+32 00.5	1.728	2.677	159.4	7.5	17.5
1985	11 21	01 49.66	+31 14.6					
1985	12 01	01 42.75	+30 21.8	1.829	2.680	142.5	12.9	17.7
1985	12 11	01 38.89	+29 30.2					
1985	12 21	01 38.19	+28 46.4	2.015	2.681	123.0	17.9	18.1
1985	12 31	01 40.49	+28 14.2					
1986	01 10	01 45.48	+27 55.1	2.253	2.682	105.1	20.7	18.4

1981 EO27 a,e,i = 2.14, 0.20, 7 Elements MPC 8288

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 16.48	+14 12.0	1.565	1.916	93.5	31.9	19.1
1985	08 13	02 28.19	+14 35.8					
1985	08 23	02 37.39	+14 41.4	1.402	1.962	107.7	29.4	18.9
1985	09 02	02 43.64	+14 27.9					
1985	09 12	02 46.54	+13 54.5	1.254	2.010	125.2	24.1	18.6
1985	09 22	02 45.77	+13 00.9					
1985	10 02	02 41.38	+11 48.8	1.149	2.058	146.5	15.6	18.2
1985	10 12	02 33.83	+10 22.3					
1985	10 22	02 24.14	+08 49.1	1.120	2.107	170.0	4.7	17.9
1985	11 01	02 13.79	+07 19.5					
1985	11 11	02 04.31	+06 03.8	1.191	2.155	162.0	8.2	18.2
1985	11 21	01 56.97	+05 09.4					
1985	12 01	01 52.51	+04 39.7	1.359	2.201	139.1	17.0	18.8
1985	12 11	01 51.16	+04 33.9					
1985	12 21	01 52.83	+04 49.5	1.596	2.246	119.2	22.5	19.3
1985	12 31	01 57.21	+05 22.5					
1986	01 10	02 03.92	+06 09.1	1.873	2.289	102.0	24.8	19.7

1974 SD5 a,e,i = 3.05, 0.20, 15 Elements MPC 7598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 03	02 32.77	+19 46.4	2.316	2.496	88.0	24.0	17.4
1985	08 13	02 41.16	+21 29.4					
1985	08 23	02 47.63	+23 08.3	2.093	2.518	102.8	23.1	17.1
1985	09 02	02 51.81	+24 42.4					
1985	09 12	02 53.35	+26 10.6	1.890	2.543	119.7	20.1	16.9
1985	09 22	02 51.93	+27 30.4					
1985	10 02	02 47.44	+28 38.7	1.732	2.570	138.7	14.9	16.6
1985	10 12	02 40.09	+29 31.4					
1985	10 22	02 30.50	+30 04.7	1.651	2.600	157.9	8.3	16.3
1985	11 01	02 19.77	+30 16.9					
1985	11 11	02 09.21	+30 09.6	1.672	2.632	162.3	6.6	16.4
1985	11 21	02 00.12	+29 47.8					
1985	12 01	01 53.47	+29 19.0	1.798	2.666	144.9	12.3	16.7
1985	12 11	01 49.75	+28 50.1					
1985	12 21	01 49.10	+28 26.8	2.011	2.702	125.3	17.3	17.1
1985	12 31	01 51.37	+28 12.6					
1986	01 10	01 56.25	+28 08.9	2.279	2.739	107.4	20.0	17.4

1978 QX a,e,i = 2.20, 0.14, 1 Elements MPC 8910

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 49.03	+17 13.2	1.891	2.355	104.3	24.6	18.8
1985	09 02	02 53.48	+17 37.5					
1985	09 12	02 55.12	+17 49.7	1.688	2.380	122.1	21.0	18.5
1985	09 22	02 53.67	+17 48.6					
1985	10 02	02 49.07	+17 33.3	1.527	2.404	143.1	14.5	18.2
1985	10 12	02 41.57	+17 03.6					
1985	10 22	02 31.87	+16 21.1	1.445	2.426	167.1	5.2	17.8
1985	11 01	02 21.13	+15 29.9					
1985	11 11	02 10.68	+14 36.1	1.470	2.445	167.3	5.1	17.9
1985	11 21	02 01.78	+13 46.9					
1985	12 01	01 55.35	+13 08.6	1.601	2.462	143.2	13.9	18.3
1985	12 11	01 51.83	+12 44.8					
1985	12 21	01 51.32	+12 37.3	1.814	2.477	121.8	19.7	18.7
1985	12 31	01 53.64	+12 45.3					
1986	01 10	01 58.50	+13 07.1	2.073	2.489	103.2	22.6	19.1
1986	01 20	02 05.57	+13 40.6					
1986	01 30	02 14.55	+14 23.3	2.350	2.499	86.9	23.2	19.4

1975 VS5 a,e,i = 2.26, 0.16, 6 Elements MPC 7140

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 25.41	+10 42.4	1.362	1.974	111.7	28.4	18.3
1985	09 02	02 34.02	+10 30.7					
1985	09 12	02 39.87	+09 58.8	1.165	1.951	127.8	24.1	17.8
1985	09 22	02 42.49	+09 06.4					
1985	10 02	02 41.64	+07 55.4	1.015	1.933	147.0	16.4	17.3
1985	10 12	02 37.41	+06 30.2					
1985	10 22	02 30.44	+04 59.3	0.935	1.919	167.2	6.6	16.9
1985	11 01	02 22.01	+03 34.4					
1985	11 11	02 13.69	+02 27.3	0.946	1.909	161.0	9.7	17.0
1985	11 21	02 07.06	+01 46.9					
1985	12 01	02 03.27	+01 37.0	1.041	1.905	139.9	19.5	17.4
1985	12 11	02 02.81	+01 56.2					
1985	12 21	02 05.78	+02 40.6	1.200	1.905	121.2	26.2	17.9
1985	12 31	02 11.94	+03 44.8					
1986	01 10	02 20.90	+05 03.6	1.396	1.911	105.5	29.7	18.3
1986	01 20	02 32.29	+06 32.3					
1986	01 30	02 45.73	+08 06.7	1.612	1.921	92.2	30.8	18.7

1958 GQ a,e,i = 2.62, 0.28, 13 Elements MPC 9416

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 57.99	+22 39.8	2.852	3.198	100.7	18.1	18.7
1985	09 02	02 59.50	+23 25.8					
1985	09 12	02 58.78	+24 05.0	2.612	3.226	119.3	15.8	18.5
1985	09 22	02 55.65	+24 35.6					
1985	10 02	02 50.14	+24 56.0	2.421	3.252	140.0	11.4	18.2
1985	10 12	02 42.50	+25 04.4					
1985	10 22	02 33.23	+24 59.5	2.315	3.275	161.6	5.5	18.0
1985	11 01	02 23.14	+24 42.1					
1985	11 11	02 13.13	+24 14.3	2.324	3.295	166.5	4.0	17.9
1985	11 21	02 04.11	+23 40.3					
1985	12 01	01 56.84	+23 05.2	2.451	3.312	145.6	9.7	18.3
1985	12 11	01 51.73	+22 33.6					
1985	12 21	01 49.01	+22 09.2	2.674	3.326	124.0	14.2	18.6
1985	12 31	01 48.65	+21 54.4					
1986	01 10	01 50.50	+21 49.9	2.956	3.337	104.3	16.6	18.9
1986	01 20	01 54.35	+21 55.7					
1986	01 30	01 59.96	+22 11.1	3.260	3.345	86.4	17.1	19.1

(3068) 1982 YJ1 a,e,i = 2.23, 0.10, 6 Elements MPC 8894

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 56.58	+16 56.1	1.932	2.369	102.7	24.6	18.4
1985	09 02	03 02.36	+17 44.9					
1985	09 12	03 05.60	+18 26.1	1.685	2.350	119.5	21.9	18.0
1985	09 22	03 05.89	+18 58.7					
1985	10 02	03 02.94	+19 21.6	1.478	2.331	139.4	16.2	17.6
1985	10 12	02 56.70	+19 33.0					
1985	10 22	02 47.54	+19 31.7	1.342	2.310	162.4	7.5	17.1
1985	11 01	02 36.42	+19 18.3					
1985	11 11	02 24.73	+18 55.3	1.305	2.288	170.9	3.9	16.9
1985	11 21	02 14.04	+18 28.2					
1985	12 01	02 05.69	+18 03.9	1.374	2.265	146.9	13.8	17.3
1985	12 11	02 00.51	+17 48.2					
1985	12 21	01 58.83	+17 45.2	1.527	2.242	125.1	21.0	17.7
1985	12 31	02 00.59	+17 56.3					
1986	01 10	02 05.50	+18 21.0	1.729	2.218	106.5	25.2	18.0
1986	01 20	02 13.21	+18 57.8					
1986	01 30	02 23.35	+19 44.5	1.949	2.195	90.7	26.7	18.3

9507 P-L a,e,i = 5.24, 0.08, 5 Elements MPC 9761

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 53.62	+16 35.6	4.504	4.840	103.5	11.7	18.5
1985	09 02	02 54.72	+16 46.2					
1985	09 12	02 54.46	+16 51.2	4.230	4.847	122.5	10.1	18.3
1985	09 22	02 52.82	+16 50.6					
1985	10 02	02 49.88	+16 44.5	4.015	4.853	143.2	7.1	18.1
1985	10 12	02 45.81	+16 33.3					
1985	10 22	02 40.86	+16 17.8	3.892	4.860	165.2	3.0	17.8
1985	11 01	02 35.41	+15 59.2					
1985	11 11	02 29.87	+15 39.2	3.885	4.868	172.1	1.6	17.7
1985	11 21	02 24.67	+15 19.8					
1985	12 01	02 20.20	+15 03.0	4.000	4.876	149.5	5.9	18.1
1985	12 11	02 16.76	+14 50.4					
1985	12 21	02 14.58	+14 43.4	4.219	4.884	127.8	9.2	18.3
1985	12 31	02 13.76	+14 42.7					
1986	01 10	02 14.33	+14 48.6	4.507	4.892	107.4	11.1	18.5
1986	01 20	02 16.26	+15 01.1					
1986	01 30	02 19.45	+15 19.5	4.829	4.901	88.4	11.6	18.6

1983 AU2 a,e,i = 2.22, 0.10, 3 Elements MPC 8212

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 08 23	02 43.82	+19 43.1	1.554	2.059	104.7	28.4	18.2
1985 09 02	02 52.39	+20 42.4					
1985 09 12	02 58.34	+21 30.6	1.341	2.042	120.2	25.2	17.8
1985 09 22	03 01.13	+22 05.9					
1985 10 02	03 00.37	+22 26.2	1.163	2.027	138.9	18.9	17.3
1985 10 12	02 55.95	+22 28.7					
1985 10 22	02 48.24	+22 11.4	1.048	2.015	160.9	9.3	16.8
1985 11 01	02 38.33	+21 34.9					
1985 11 11	02 27.84	+20 43.8	1.021	2.006	171.1	4.4	16.6
1985 11 21	02 18.57	+19 46.5					
1985 12 01	02 12.02	+18 53.5	1.090	1.999	148.5	14.9	17.0
1985 12 11	02 08.99	+18 12.8					
1985 12 21	02 09.75	+17 49.4	1.236	1.995	127.6	23.0	17.5
1985 12 31	02 14.11	+17 44.2					
1986 01 10	02 21.66	+17 55.7	1.431	1.995	110.0	27.6	17.9
1986 01 20	02 32.00	+18 21.4					
1986 01 30	02 44.69	+18 57.6	1.650	1.997	95.2	29.4	18.3

2594 P-L a,e,i = 2.90, 0.05, 3 Elements MPC 9298

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 08 23	02 56.95	+14 15.7	2.495	2.900	103.3	19.8	20.2
1985 09 02	03 00.85	+14 20.7					
1985 09 12	03 02.58	+14 15.8	2.256	2.910	121.4	17.2	19.9
1985 09 22	03 01.93	+14 00.9					
1985 10 02	02 58.89	+13 36.3	2.066	2.919	141.9	12.2	19.6
1985 10 12	02 53.63	+13 03.1					
1985 10 22	02 46.56	+12 23.5	1.957	2.929	164.6	5.2	19.3
1985 11 01	02 38.44	+11 41.0					
1985 11 11	02 30.12	+10 59.8	1.958	2.938	170.0	3.3	19.2
1985 11 21	02 22.52	+10 24.5					
1985 12 01	02 16.45	+09 59.0	2.071	2.946	146.8	10.6	19.6
1985 12 11	02 12.39	+09 45.6					
1985 12 21	02 10.64	+09 45.5	2.277	2.955	125.2	15.8	19.9
1985 12 31	02 11.21	+09 58.1					
1986 01 10	02 14.00	+10 22.2	2.540	2.963	105.8	18.6	20.2
1986 01 20	02 18.82	+10 56.3					
1986 01 30	02 25.44	+11 38.2	2.828	2.971	88.6	19.4	20.5

1932 CQ a,e,i = 2.62, 0.10, 13 Elements MPC 9206

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 08 23	03 06.45	+23 57.8	2.404	2.742	98.4	21.4	18.1
1985 09 02	03 10.60	+25 08.2					
1985 09 12	03 12.33	+26 13.3	2.169	2.759	115.7	19.2	17.8
1985 09 22	03 11.33	+27 11.3					
1985 10 02	03 07.43	+27 59.9	1.973	2.774	135.2	14.7	17.5
1985 10 12	03 00.72	+28 36.0					
1985 10 22	02 51.59	+28 56.4	1.851	2.789	156.0	8.4	17.3
1985 11 01	02 40.90	+28 59.4					
1985 11 11	02 29.81	+28 45.4	1.832	2.803	166.2	4.8	17.1
1985 11 21	02 19.54	+28 18.1					
1985 12 01	02 11.20	+27 43.7	1.925	2.816	148.9	10.4	17.4
1985 12 11	02 05.44	+27 08.9					
1985 12 21	02 02.60	+26 39.2	2.114	2.828	128.0	15.9	17.7
1985 12 31	02 02.66	+26 18.6					
1986 01 10	02 05.41	+26 08.7	2.364	2.838	108.8	19.2	18.1
1986 01 20	02 10.59	+26 10.0					
1986 01 30	02 17.88	+26 21.7	2.643	2.847	91.7	20.2	18.3

1983 AK a,e,i = 2.29, 0.15, 7 Elements MPC 9755

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 05.21	+09 20.1	2.103	2.526	102.7	23.0	18.9
1985	09 02	03 10.74	+09 20.6					
1985	09 12	03 13.94	+09 10.6	1.844	2.501	119.7	20.4	18.5
1985	09 22	03 14.44	+08 50.5					
1985	10 02	03 12.04	+08 21.4	1.627	2.475	139.5	15.2	18.1
1985	10 12	03 06.68	+07 45.3					
1985	10 22	02 58.68	+07 05.7	1.483	2.446	161.2	7.5	17.7
1985	11 01	02 48.80	+06 27.6					
1985	11 11	02 38.15	+05 56.5	1.441	2.416	167.3	5.2	17.5
1985	11 21	02 28.05	+05 37.9					
1985	12 01	02 19.71	+05 35.6	1.506	2.385	145.5	13.5	17.8
1985	12 11	02 13.97	+05 50.9					
1985	12 21	02 11.25	+06 23.6	1.656	2.352	124.0	20.3	18.1
1985	12 31	02 11.63	+07 11.6					
1986	01 10	02 14.93	+08 12.4	1.856	2.318	105.3	24.2	18.4
1986	01 20	02 20.91	+09 23.3					
1986	01 30	02 29.25	+10 41.7	2.074	2.283	89.1	25.6	18.7

(3232) 1974 SL a,e,i = 3.02, 0.08, 10 Elements MPC 9586

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 04.31	+14 04.7	2.589	2.964	101.7	19.5	17.9
1985	09 02	03 08.71	+13 48.8					
1985	09 12	03 11.01	+13 21.7	2.351	2.980	119.6	17.1	17.6
1985	09 22	03 11.03	+12 43.3					
1985	10 02	03 08.75	+11 54.7	2.161	2.996	139.9	12.4	17.3
1985	10 12	03 04.30	+10 57.5					
1985	10 22	02 58.06	+09 54.7	2.051	3.012	161.8	5.9	17.1
1985	11 01	02 50.68	+08 50.9					
1985	11 11	02 42.94	+07 51.0	2.050	3.029	169.5	3.4	17.0
1985	11 21	02 35.71	+07 00.1					
1985	12 01	02 29.74	+06 22.0	2.163	3.045	148.0	9.9	17.3
1985	12 11	02 25.55	+05 58.8					
1985	12 21	02 23.47	+05 51.0	2.371	3.061	126.5	15.0	17.6
1985	12 31	02 23.58	+05 57.7					
1986	01 10	02 25.79	+06 17.1	2.640	3.076	107.1	17.8	18.0
1986	01 20	02 29.96	+06 47.1					
1986	01 30	02 35.88	+07 25.3	2.936	3.092	89.7	18.6	18.2

1981 RF a,e,i = 2.43, 0.19, 3 Elements MPC 8908

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 53.82	+11 54.4	1.474	1.988	104.7	29.5	18.0
1985	09 02	03 03.11	+12 11.6					
1985	09 12	03 09.58	+12 15.1	1.300	2.005	120.2	25.7	17.7
1985	09 22	03 12.76	+12 05.0					
1985	10 02	03 12.39	+11 42.6	1.161	2.026	139.0	18.9	17.3
1985	10 12	03 08.46	+11 10.0					
1985	10 22	03 01.43	+10 30.9	1.085	2.052	161.0	9.1	16.9
1985	11 01	02 52.38	+09 51.3					
1985	11 11	02 42.77	+09 17.4	1.098	2.082	170.8	4.4	16.8
1985	11 21	02 34.14	+08 55.8					
1985	12 01	02 27.79	+08 50.7	1.209	2.115	148.8	14.0	17.4
1985	12 11	02 24.41	+09 03.2					
1985	12 21	02 24.26	+09 32.6	1.399	2.151	128.2	21.1	17.9
1985	12 31	02 27.21	+10 16.5					
1986	01 10	02 32.95	+11 11.6	1.643	2.190	110.5	24.9	18.4
1986	01 20	02 41.12	+12 15.0					
1986	01 30	02 51.36	+13 23.6	1.915	2.230	95.1	26.1	18.8

1978 QQ2 a,e,i = 2.25, 0.13, 3 Elements MPC 9682

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	02 49.19	+14 49.1	1.533	2.043	105.0	28.6	17.9
1985	09 02	02 58.78	+15 08.3					
1985	09 12	03 05.90	+15 12.6	1.316	2.021	120.3	25.5	17.5
1985	09 22	03 10.02	+15 01.3					
1985	10 02	03 10.77	+14 34.0	1.135	2.001	138.9	19.2	17.0
1985	10 12	03 07.95	+13 51.4					
1985	10 22	03 01.81	+12 56.0	1.017	1.984	160.9	9.5	16.5
1985	11 01	02 53.24	+11 53.2					
1985	11 11	02 43.66	+10 51.0	0.985	1.971	172.2	3.9	16.3
1985	11 21	02 34.77	+09 58.9					
1985	12 01	02 28.09	+09 24.6	1.048	1.961	149.2	14.9	16.7
1985	12 11	02 24.57	+09 12.2					
1985	12 21	02 24.62	+09 22.3	1.187	1.955	128.2	23.3	17.2
1985	12 31	02 28.19	+09 52.6					
1986	01 10	02 34.96	+10 39.3	1.375	1.953	110.8	28.1	17.6
1986	01 20	02 44.55	+11 38.5					
1986	01 30	02 56.56	+12 46.1	1.587	1.955	96.1	30.1	18.0

1979 QP8 a,e,i = 3.14, 0.19, 2 Elements MPC 9681

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 06.76	+18 32.3	2.393	2.754	99.9	21.2	18.1
1985	09 02	03 11.93	+18 50.9					
1985	09 12	03 14.83	+18 59.7	2.179	2.788	117.3	18.7	17.8
1985	09 22	03 15.23	+18 58.2					
1985	10 02	03 13.08	+18 46.1	2.005	2.823	137.3	13.9	17.6
1985	10 12	03 08.50	+18 23.5					
1985	10 22	03 01.90	+17 51.1	1.905	2.860	159.9	6.9	17.3
1985	11 01	02 54.00	+17 11.5					
1985	11 11	02 45.69	+16 28.1	1.909	2.897	175.9	1.4	17.0
1985	11 21	02 37.94	+15 45.6					
1985	12 01	02 31.61	+15 08.7	2.027	2.935	152.1	9.0	17.6
1985	12 11	02 27.25	+14 41.1					
1985	12 21	02 25.18	+14 24.9	2.243	2.973	130.1	14.7	18.0
1985	12 31	02 25.46	+14 20.9					
1986	01 10	02 27.96	+14 28.3	2.524	3.012	110.4	17.8	18.3
1986	01 20	02 32.50	+14 46.1					
1986	01 30	02 38.85	+15 12.3	2.839	3.050	92.8	18.8	18.6

1981 SM a,e,i = 2.44, 0.13, 3 Elements MPC 6514

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 23	02 55.08	+21 01.7	1.699	2.148	-1.46	-6.1	17.9
1985	09 02	03 04.19	+21 59.2					
1985	09 12	03 10.86	+22 46.5	1.480	2.135	-1.74	-6.4	17.6
1985	09 22	03 14.60	+23 22.0					
1985	10 02	03 15.02	+23 44.0	1.294	2.125	-2.07	-7.3	17.1
1985	10 12	03 11.95	+23 50.3					
1985	10 22	03 05.60	+23 38.5	1.168	2.119	-2.36	-9.1	16.7
1985	11 01	02 56.82	+23 08.6					
1985	11 11	02 46.98	+22 23.1	1.129	2.116	-2.43	-10.9	16.4
1985	11 21	02 37.70	+21 28.6					
1985	12 01	02 30.52	+20 34.3	1.190	2.117	-2.23	-11.1	16.8
1985	12 11	02 26.37	+19 48.3					
1985	12 21	02 25.71	+19 16.3	1.336	2.121	-1.90	-9.7	17.2
1985	12 31	02 28.51	+19 00.8					
1986	01 10	02 34.44	+19 01.1	1.538	2.128	-1.61	-7.8	17.7
1986	01 20	02 43.16	+19 15.3					
1986	01 30	02 54.25	+19 40.5	1.772	2.139	-1.39	-6.0	18.0

(2987) Sarabhai a,e,i = 2.89, 0.07, 1 Elements MPC 8400

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 10.18	+16 55.9	2.608	2.950	99.6	19.8	18.4
1985	09 02	03 15.05	+17 10.7					
1985	09 12	03 17.87	+17 16.9	2.340	2.937	117.0	17.8	18.1
1985	09 22	03 18.40	+17 14.1					
1985	10 02	03 16.51	+17 01.9	2.112	2.925	137.0	13.5	17.8
1985	10 12	03 12.23	+16 40.4					
1985	10 22	03 05.84	+16 10.5	1.959	2.912	159.4	6.9	17.4
1985	11 01	02 57.93	+15 34.1					
1985	11 11	02 49.34	+14 54.6	1.910	2.899	176.1	1.3	17.0
1985	11 21	02 41.03	+14 16.1					
1985	12 01	02 33.92	+13 43.3	1.976	2.885	152.2	9.2	17.5
1985	12 11	02 28.71	+13 19.8					
1985	12 21	02 25.83	+13 08.1	2.141	2.872	129.8	15.2	17.8
1985	12 31	02 25.42	+13 09.0					
1986	01 10	02 27.43	+13 21.9	2.370	2.859	109.9	18.9	18.1
1986	01 20	02 31.71	+13 45.8					
1986	01 30	02 38.03	+14 18.8	2.630	2.846	92.3	20.2	18.3

1949 PL a,e,i = 2.49, 0.04, 2 Elements MPC 8212

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 11.78	+15 56.0	2.217	2.583	99.4	22.7	17.8
1985	09 02	03 17.75	+16 08.5					
1985	09 12	03 21.42	+16 10.9	1.977	2.588	116.5	20.4	17.5
1985	09 22	03 22.47	+16 02.7					
1985	10 02	03 20.74	+15 44.0	1.774	2.591	136.3	15.5	17.2
1985	10 12	03 16.20	+15 15.0					
1985	10 22	03 09.18	+14 37.1	1.641	2.594	158.9	7.9	16.8
1985	11 01	03 00.37	+13 53.3					
1985	11 11	02 50.77	+13 07.7	1.609	2.596	175.1	1.9	16.5
1985	11 21	02 41.57	+12 25.8					
1985	12 01	02 33.86	+11 52.8	1.688	2.598	151.5	10.4	17.0
1985	12 11	02 28.38	+11 32.4					
1985	12 21	02 25.59	+11 26.5	1.862	2.598	129.2	17.1	17.3
1985	12 31	02 25.56	+11 35.1					
1986	01 10	02 28.17	+11 57.0	2.097	2.598	109.6	20.9	17.7
1986	01 20	02 33.21	+12 30.2					
1986	01 30	02 40.37	+13 12.3	2.360	2.597	92.5	22.3	17.9

(3166) 1940 FG a,e,i = 2.24, 0.12, 5 Elements MPC 9305

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 17.68	+13 45.7	2.125	2.486	98.6	23.7	18.2
1985	09 02	03 23.98	+14 05.3					
1985	09 12	03 27.97	+14 16.3	1.873	2.477	115.4	21.5	17.8
1985	09 22	03 29.26	+14 18.4					
1985	10 02	03 27.58	+14 11.9	1.655	2.466	135.0	16.7	17.4
1985	10 12	03 22.81	+13 57.3					
1985	10 22	03 15.16	+13 35.5	1.503	2.453	157.6	8.9	17.0
1985	11 01	03 05.29	+13 09.0					
1985	11 11	02 54.28	+12 41.3	1.449	2.437	175.1	2.0	16.6
1985	11 21	02 43.47	+12 17.2					
1985	12 01	02 34.18	+12 01.5	1.507	2.420	151.6	11.2	17.1
1985	12 11	02 27.36	+11 57.7					
1985	12 21	02 23.57	+12 07.8	1.657	2.401	129.0	18.6	17.4
1985	12 31	02 22.93	+12 31.9					
1986	01 10	02 25.31	+13 08.6	1.866	2.381	109.4	22.9	17.8
1986	01 20	02 30.45	+13 56.2					
1986	01 30	02 38.03	+14 52.3	2.101	2.359	92.5	24.7	18.0

1978 SZ7 a,e,i = 2.26, 0.10, 5 Elements MPC 7835

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 09.73	+21 56.3	1.941	2.314	98.3	25.6	18.4
1985	09 02	03 17.78	+22 55.8					
1985	09 12	03 23.54	+23 48.2	1.691	2.293	114.0	23.6	18.0
1985	09 22	03 26.50	+24 32.5					
1985	10 02	03 26.26	+25 07.1	1.472	2.271	132.4	19.0	17.6
1985	10 12	03 22.56	+25 29.4					
1985	10 22	03 15.47	+25 36.2	1.312	2.249	153.8	11.3	17.1
1985	11 01	03 05.66	+25 25.4					
1985	11 11	02 54.33	+24 56.9	1.241	2.226	172.0	3.5	16.7
1985	11 21	02 43.11	+24 14.4					
1985	12 01	02 33.65	+23 25.7	1.274	2.204	154.1	11.3	17.0
1985	12 11	02 27.13	+22 39.4					
1985	12 21	02 24.19	+22 02.7	1.398	2.182	131.9	19.6	17.4
1985	12 31	02 24.93	+21 40.1					
1986	01 10	02 29.11	+21 32.6	1.581	2.161	112.8	24.8	17.7
1986	01 20	02 36.39	+21 39.5					
1986	01 30	02 46.37	+21 58.5	1.792	2.140	96.5	27.2	18.0

(3163) 1981 QM a,e,i = 2.40, 0.33, 3 Elements MPC 9295

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 16.79	+17 48.7	1.436	1.865	97.8	32.5	17.9
1985	09 02	03 26.89	+18 06.4					
1985	09 12	03 33.76	+18 09.0	1.307	1.938	113.2	28.5	17.7
1985	09 22	03 36.95	+17 56.7					
1985	10 02	03 36.22	+17 29.8	1.199	2.014	132.3	21.6	17.4
1985	10 12	03 31.59	+16 49.1					
1985	10 22	03 23.57	+15 56.7	1.145	2.091	155.3	11.5	17.2
1985	11 01	03 13.29	+14 57.2					
1985	11 11	03 02.25	+13 57.0	1.180	2.169	176.7	1.5	16.9
1985	11 21	02 52.06	+13 03.6					
1985	12 01	02 44.05	+12 23.5	1.319	2.247	154.0	11.1	17.6
1985	12 11	02 38.93	+12 00.2					
1985	12 21	02 36.97	+11 54.4	1.547	2.323	132.0	18.4	18.2
1985	12 31	02 38.03	+12 04.8					
1986	01 10	02 41.81	+12 28.7	1.837	2.398	112.9	22.2	18.7
1986	01 20	02 47.93	+13 03.2					
1986	01 30	02 56.03	+13 45.4	2.160	2.470	96.3	23.4	19.2

(3168) 1980 XM a,e,i = 2.99, 0.10, 11 Elements MPC 9352

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 26.13	+21 14.9	2.698	2.960	94.8	19.9	17.5
1985	09 02	03 31.09	+22 04.8					
1985	09 12	03 33.96	+22 49.6	2.453	2.979	112.0	18.3	17.2
1985	09 22	03 34.45	+23 28.8					
1985	10 02	03 32.42	+24 01.4	2.241	2.999	131.5	14.5	17.0
1985	10 12	03 27.85	+24 25.9					
1985	10 22	03 20.95	+24 40.8	2.097	3.018	153.2	8.6	16.7
1985	11 01	03 12.31	+24 45.1					
1985	11 11	03 02.74	+24 38.9	2.053	3.037	172.6	2.4	16.4
1985	11 21	02 53.25	+24 24.3					
1985	12 01	02 44.85	+24 04.9	2.126	3.056	156.6	7.4	16.7
1985	12 11	02 38.29	+23 45.1					
1985	12 21	02 34.07	+23 28.8	2.305	3.075	134.4	13.2	17.1
1985	12 31	02 32.39	+23 19.3					
1986	01 10	02 33.19	+23 18.0	2.558	3.093	114.1	16.9	17.4
1986	01 20	02 36.32	+23 25.6					
1986	01 30	02 41.55	+23 41.5	2.850	3.110	95.9	18.4	17.7

(3107) 1981 JG2 a,e,i = 2.20, 0.21, 2 Elements MPC 9070

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 13.83	+20 00.5	1.479	1.903	97.9	31.8	17.5
1985	09 02	03 24.36	+20 45.1					
1985	09 12	03 31.95	+21 17.0	1.321	1.946	112.8	28.5	17.2
1985	09 22	03 36.06	+21 35.4					
1985	10 02	03 36.31	+21 39.7	1.185	1.993	131.3	22.2	16.9
1985	10 12	03 32.55	+21 28.7					
1985	10 22	03 25.08	+21 01.5	1.100	2.041	153.7	12.5	16.5
1985	11 01	03 14.89	+20 19.4					
1985	11 11	03 03.50	+19 26.7	1.100	2.089	177.7	1.1	16.1
1985	11 21	02 52.70	+18 30.6					
1985	12 01	02 44.06	+17 39.8	1.201	2.139	155.7	10.9	16.8
1985	12 11	02 38.50	+17 00.9					
1985	12 21	02 36.41	+16 38.0	1.392	2.187	133.4	19.1	17.4
1985	12 31	02 37.69	+16 31.8					
1986	01 10	02 42.00	+16 40.6	1.643	2.235	114.3	23.6	17.9
1986	01 20	02 48.93	+17 02.0					
1986	01 30	02 58.08	+17 33.1	1.928	2.282	97.9	25.3	18.3

1981 QP a,e,i = 2.43, 0.13, 9 Elements MPC 6514

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 23	03 26.06	+09 18.1	1.845	2.220	-1.07	-8.3	17.9
1985	09 02	03 34.25	+09 36.6					
1985	09 12	03 39.92	+09 46.4	1.647	2.245	-1.22	-9.2	17.6
1985	09 22	03 42.68	+09 48.5					
1985	10 02	03 42.24	+09 44.3	1.477	2.272	-1.42	-10.4	17.3
1985	10 12	03 38.46	+09 36.0					
1985	10 22	03 31.55	+09 26.0	1.366	2.300	-1.61	-11.5	16.9
1985	11 01	03 22.20	+09 17.6					
1985	11 11	03 11.50	+09 14.4	1.344	2.328	-1.69	-12.0	16.7
1985	11 21	03 00.87	+09 19.8					
1985	12 01	02 51.68	+09 36.3	1.430	2.358	-1.58	-11.4	17.1
1985	12 11	02 44.89	+10 04.7					
1985	12 21	02 41.07	+10 45.0	1.610	2.387	-1.36	-10.1	17.5
1985	12 31	02 40.34	+11 35.8					
1986	01 10	02 42.55	+12 35.2	1.855	2.417	-1.13	-8.7	18.0
1986	01 20	02 47.42	+13 41.1					
1986	01 30	02 54.60	+14 51.5	2.134	2.446	-0.96	-7.3	18.3

(3072) Vilnius a,e,i = 2.24, 0.18, 6 Elements MPC 8898

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 28.08	+13 17.0	1.844	2.198	96.3	27.2	18.7
1985	09 02	03 36.37	+13 12.0					
1985	09 12	03 42.07	+12 54.6	1.655	2.240	112.3	24.6	18.4
1985	09 22	03 44.77	+12 25.2					
1985	10 02	03 44.22	+11 44.8	1.493	2.280	131.3	19.3	18.1
1985	10 12	03 40.34	+10 55.3					
1985	10 22	03 33.37	+09 59.9	1.388	2.320	153.1	11.2	17.8
1985	11 01	03 24.04	+09 03.6					
1985	11 11	03 13.48	+08 12.2	1.376	2.358	170.6	3.9	17.6
1985	11 21	03 03.05	+07 32.0					
1985	12 01	02 54.06	+07 07.7	1.472	2.395	153.5	10.6	18.0
1985	12 11	02 47.44	+07 01.3					
1985	12 21	02 43.68	+07 12.9	1.662	2.429	131.7	17.6	18.4
1985	12 31	02 42.90	+07 40.3					
1986	01 10	02 44.93	+08 20.7	1.915	2.462	112.3	21.7	18.9
1986	01 20	02 49.50	+09 11.2					
1986	01 30	02 56.28	+10 08.9	2.199	2.492	95.3	23.2	19.2

1977 EN1 a,e,i = 3.13, 0.15, 2 Elements MPC 9593

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 38.75	+18 09.0	3.284	3.481	92.7	16.9	19.7
1985	09 02	03 42.96	+18 22.6					
1985	09 12	03 45.38	+18 30.2	3.016	3.497	110.4	15.7	19.5
1985	09 22	03 45.83	+18 31.8					
1985	10 02	03 44.22	+18 27.1	2.781	3.511	130.2	12.6	19.2
1985	10 12	03 40.56	+18 16.1					
1985	10 22	03 35.02	+17 59.2	2.613	3.525	152.2	7.6	19.0
1985	11 01	03 28.01	+17 37.2					
1985	11 11	03 20.09	+17 11.7	2.549	3.537	175.8	1.2	18.6
1985	11 21	03 11.99	+16 45.0					
1985	12 01	03 04.46	+16 19.9	2.605	3.547	160.0	5.4	18.9
1985	12 11	02 58.12	+15 59.2					
1985	12 21	02 53.47	+15 45.3	2.773	3.557	137.0	10.9	19.2
1985	12 31	02 50.78	+15 39.5					
1986	01 10	02 50.11	+15 42.3	3.025	3.565	115.9	14.4	19.5
1986	01 20	02 51.43	+15 53.6					
1986	01 30	02 54.61	+16 12.5	3.321	3.572	96.7	15.9	19.7

1984 FO a,e,i = 2.39, 0.25, 22 Elements MPC 9211

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	08 23	03 42.36	+04 17.4	2.288	2.578	-0.83	+0.2	18.4
1985	09 02	03 48.99	+02 58.0					
1985	09 12	03 53.35	+01 24.1	2.091	2.627	-0.91	-0.3	18.2
1985	09 22	03 55.16	-00 22.5					
1985	10 02	03 54.28	-02 18.4	1.930	2.673	-1.02	-1.0	18.0
1985	10 12	03 50.69	-04 18.2					
1985	10 22	03 44.58	-06 14.5	1.836	2.716	-1.13	-1.4	17.8
1985	11 01	03 36.50	-07 58.6					
1985	11 11	03 27.27	-09 22.2	1.839	2.756	-1.18	-1.4	17.7
1985	11 21	03 17.87	-10 19.0					
1985	12 01	03 09.33	-10 46.2	1.946	2.794	-1.13	-0.9	18.0
1985	12 11	03 02.43	-10 44.9					
1985	12 21	02 57.72	-10 18.5	2.143	2.828	-1.01	-0.4	18.3
1985	12 31	02 55.42	-09 32.1					
1986	01 10	02 55.51	-08 30.8	2.399	2.859	-0.88	-0.2	18.6
1986	01 20	02 57.86	-07 19.2					
1986	01 30	03 02.25	-06 01.2	2.684	2.888	-0.76	-0.2	18.9

(3129) 1979 MK2 a,e,i = 2.70, 0.22, 7 Elements MPC 9159

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 45.56	+12 21.6	3.044	3.246	92.3	18.1	18.9
1985	09 02	03 50.56	+12 17.8					
1985	09 12	03 53.77	+12 06.9	2.753	3.233	109.6	17.1	18.6
1985	09 22	03 54.96	+11 49.1					
1985	10 02	03 53.96	+11 25.0	2.493	3.217	128.9	14.0	18.3
1985	10 12	03 50.70	+10 55.6					
1985	10 22	03 45.27	+10 22.6	2.297	3.199	150.2	8.9	18.0
1985	11 01	03 38.02	+09 48.4					
1985	11 11	03 29.51	+09 15.7	2.200	3.179	169.7	3.2	17.7
1985	11 21	03 20.52	+08 48.0					
1985	12 01	03 11.94	+08 28.6	2.222	3.157	157.8	6.8	17.9
1985	12 11	03 04.54	+08 19.6					
1985	12 21	02 58.94	+08 22.5	2.353	3.132	135.6	12.7	18.1
1985	12 31	02 55.52	+08 37.3					
1986	01 10	02 54.40	+09 03.1	2.563	3.105	114.7	16.7	18.4
1986	01 20	02 55.56	+09 38.5					
1986	01 30	02 58.85	+10 21.9	2.814	3.076	96.0	18.6	18.6

(3143) 1980 UA a,e,i = 2.85, 0.08, 3 Elements MPC 9212

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 35.71	+16 43.6	2.353	2.620	93.7	22.7	18.5
1985	09 02	03 43.70	+17 08.4					
1985	09 12	03 49.68	+17 25.7	2.101	2.617	109.6	21.2	18.2
1985	09 22	03 53.33	+17 35.8					
1985	10 02	03 54.37	+17 38.6	1.877	2.615	128.0	17.5	17.9
1985	10 12	03 52.61	+17 34.5					
1985	10 22	03 48.09	+17 23.7	1.709	2.615	149.3	11.2	17.5
1985	11 01	03 41.19	+17 07.2					
1985	11 11	03 32.63	+16 46.7	1.631	2.616	172.7	2.7	17.1
1985	11 21	03 23.43	+16 25.0					
1985	12 01	03 14.79	+16 05.9	1.662	2.618	162.3	6.6	17.3
1985	12 11	03 07.72	+15 52.9					
1985	12 21	03 02.98	+15 49.0	1.797	2.622	139.2	14.2	17.7
1985	12 31	03 00.95	+15 55.7					
1986	01 10	03 01.68	+16 13.0	2.010	2.628	118.7	19.2	18.1
1986	01 20	03 05.07	+16 40.1					
1986	01 30	03 10.86	+17 15.2	2.267	2.634	100.7	21.6	18.4

1980 TF4 a,e,i = 2.76, 0.10, 4 Elements MPC 7614

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 42.58	+19 02.4	2.445	2.672	91.6	22.2	18.1
1985	09 02	03 49.97	+19 36.1					
1985	09 12	03 55.29	+20 03.5	2.208	2.692	107.8	20.9	17.8
1985	09 22	03 58.21	+20 24.7					
1985	10 02	03 58.47	+20 39.5	1.994	2.712	126.5	17.3	17.6
1985	10 12	03 55.93	+20 47.5					
1985	10 22	03 50.65	+20 48.1	1.836	2.732	148.0	11.1	17.3
1985	11 01	03 43.04	+20 41.2					
1985	11 11	03 33.83	+20 27.3	1.769	2.752	171.9	2.9	16.9
1985	11 21	03 24.07	+20 08.4					
1985	12 01	03 14.91	+19 47.8	1.813	2.772	163.3	5.9	17.1
1985	12 11	03 07.34	+19 29.4					
1985	12 21	03 02.06	+19 16.8	1.967	2.792	140.0	13.1	17.5
1985	12 31	02 59.43	+19 12.5					
1986	01 10	02 59.49	+19 17.6	2.200	2.812	119.0	17.8	17.9
1986	01 20	03 02.11	+19 31.9					
1986	01 30	03 07.06	+19 54.3	2.480	2.831	100.6	20.0	18.2

1981 PM a,e,i = 2.25, 0.17, 5 Elements MPC 9072

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 45.42	+21 51.9	2.184	2.411	90.3	24.8	18.7
1985	09 02	03 53.95	+22 10.4					
1985	09 12	04 00.19	+22 19.8	1.962	2.442	106.2	23.3	18.4
1985	09 22	04 03.76	+22 19.6					
1985	10 02	04 04.34	+22 09.3	1.758	2.471	124.9	19.4	18.1
1985	10 12	04 01.73	+21 48.2					
1985	10 22	03 55.96	+21 15.5	1.605	2.497	146.7	12.6	17.8
1985	11 01	03 47.49	+20 31.6					
1985	11 11	03 37.18	+19 38.3	1.538	2.521	171.4	3.4	17.4
1985	11 21	03 26.26	+18 39.8					
1985	12 01	03 16.09	+17 42.1	1.583	2.542	163.1	6.5	17.7
1985	12 11	03 07.79	+16 51.2					
1985	12 21	03 02.12	+16 12.0	1.735	2.561	139.1	14.6	18.1
1985	12 31	02 59.41	+15 47.2					
1986	01 10	02 59.64	+15 36.9	1.965	2.578	118.0	19.7	18.5
1986	01 20	03 02.60	+15 40.1					
1986	01 30	03 07.99	+15 54.6	2.236	2.591	99.7	22.0	18.8

6624 P-L a,e,i = 2.32, 0.09, 3 Elements MPC 9303

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 30.40	+16 58.3	1.763	2.105	94.9	28.6	20.5
1985	09 02	03 41.61	+17 41.1					
1985	09 12	03 50.64	+18 15.4	1.546	2.104	109.2	26.9	20.2
1985	09 22	03 57.00	+18 41.6					
1985	10 02	04 00.23	+18 59.9	1.351	2.105	126.4	22.5	19.8
1985	10 12	03 59.94	+19 10.4					
1985	10 22	03 55.96	+19 12.8	1.203	2.109	147.1	14.8	19.4
1985	11 01	03 48.62	+19 07.3					
1985	11 11	03 38.79	+18 54.7	1.131	2.115	171.2	4.1	18.9
1985	11 21	03 27.90	+18 37.4					
1985	12 01	03 17.69	+18 20.2	1.159	2.124	163.6	7.5	19.1
1985	12 11	03 09.63	+18 07.8					
1985	12 21	03 04.73	+18 04.9	1.283	2.134	140.3	17.1	19.6
1985	12 31	03 03.41	+18 13.7					
1986	01 10	03 05.58	+18 34.2	1.476	2.147	120.2	23.3	20.0
1986	01 20	03 10.98	+19 05.2					
1986	01 30	03 19.21	+19 44.4	1.710	2.161	103.3	26.3	20.4

(3219) 1934 CX a,e,i = 3.03, 0.13, 7 Elements MPC 9470

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 56.77	+26 52.0	3.338	3.432	86.7	17.1	18.2
1985	09 02	04 02.61	+27 20.4					
1985	09 12	04 06.73	+27 44.3	3.050	3.429	103.6	16.6	18.0
1985	09 22	04 08.87	+28 03.0					
1985	10 02	04 08.83	+28 15.7	2.782	3.425	122.4	14.3	17.7
1985	10 12	04 06.51	+28 21.3					
1985	10 22	04 01.93	+28 18.3	2.569	3.419	143.3	10.0	17.4
1985	11 01	03 55.38	+28 05.4					
1985	11 11	03 47.35	+27 42.0	2.446	3.412	165.2	4.2	17.1
1985	11 21	03 38.58	+27 08.7					
1985	12 01	03 29.95	+26 28.1	2.438	3.404	166.4	3.9	17.1
1985	12 11	03 22.29	+25 43.6					
1985	12 21	03 16.27	+24 59.6	2.548	3.395	144.2	9.8	17.4
1985	12 31	03 12.34	+24 20.1					
1986	01 10	03 10.67	+23 47.8	2.751	3.384	122.6	14.2	17.7
1986	01 20	03 11.29	+23 24.3					
1986	01 30	03 14.06	+23 10.0	3.012	3.372	103.0	16.5	17.9

1981 JD3 a,e,i = 2.16, 0.18, 4 Elements MPC 9755

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	08 23	03 34.03	+15 50.3	1.472	1.847	94.3	33.1	18.3
1985	09 02	03 47.67	+16 03.7					
1985	09 12	03 58.77	+16 03.0	1.307	1.877	107.7	30.7	18.1
1985	09 22	04 06.80	+15 48.7					
1985	10 02	04 11.28	+15 22.0	1.158	1.910	124.3	25.6	17.7
1985	10 12	04 11.81	+14 44.3					
1985	10 22	04 08.26	+13 57.8	1.048	1.947	144.7	17.2	17.3
1985	11 01	04 01.02	+13 06.5					
1985	11 11	03 51.11	+12 15.4	1.009	1.986	167.2	6.3	17.0
1985	11 21	03 40.08	+11 31.2					
1985	12 01	03 29.78	+11 00.3	1.064	2.027	162.8	8.3	17.3
1985	12 11	03 21.68	+10 46.7					
1985	12 21	03 16.76	+10 52.0	1.212	2.069	140.6	17.6	17.8
1985	12 31	03 15.35	+11 14.7					
1986	01 10	03 17.32	+11 51.6	1.429	2.111	121.0	23.6	18.3
1986	01 20	03 22.37	+12 39.5					
1986	01 30	03 30.07	+13 34.7	1.687	2.153	104.2	26.3	18.8

(3114) 1980 FB12 a,e,i = 2.42, 0.20, 2 Elements MPC 9075

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 11.88	+19 09.8	2.137	2.574	104.1	22.3	18.7
1985	09 22	04 15.49	+19 07.3					
1985	10 02	04 16.34	+18 57.3	1.933	2.612	122.7	18.8	18.4
1985	10 12	04 14.24	+18 39.7					
1985	10 22	04 09.20	+18 14.8	1.776	2.648	144.2	12.7	18.2
1985	11 01	04 01.57	+17 43.5					
1985	11 11	03 52.05	+17 07.5	1.706	2.682	168.1	4.4	17.8
1985	11 21	03 41.68	+16 29.7					
1985	12 01	03 31.65	+15 54.2	1.747	2.714	165.9	5.1	18.0
1985	12 11	03 23.05	+15 25.1					
1985	12 21	03 16.66	+15 05.7	1.900	2.744	142.1	12.7	18.4
1985	12 31	03 12.92	+14 57.7					
1986	01 10	03 11.91	+15 01.2	2.137	2.771	120.7	17.8	18.8
1986	01 20	03 13.53	+15 15.5					
1986	01 30	03 17.52	+15 38.8	2.422	2.795	101.8	20.2	19.1
1986	02 09	03 23.60	+16 09.2					
1986	02 19	03 31.52	+16 44.6	2.724	2.817	85.1	20.5	19.4

1974 SU1 a,e,i = 2.34, 0.19, 1 Elements MPC 9473

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 03.31	+19 43.3	1.492	2.017	106.0	28.7	18.1
1985	09 22	04 10.65	+19 53.0					
1985	10 02	04 14.66	+19 52.5	1.329	2.052	122.9	24.2	17.7
1985	10 12	04 14.97	+19 42.1					
1985	10 22	04 11.43	+19 22.0	1.205	2.091	143.5	16.4	17.4
1985	11 01	04 04.42	+18 53.3					
1985	11 11	03 54.79	+18 17.7	1.154	2.131	167.5	5.8	17.1
1985	11 21	03 43.98	+17 38.9					
1985	12 01	03 33.68	+17 02.6	1.202	2.173	166.8	5.9	17.2
1985	12 11	03 25.33	+16 34.1					
1985	12 21	03 19.90	+16 17.7	1.349	2.216	143.2	15.4	17.7
1985	12 31	03 17.80	+16 15.0					
1986	01 10	03 18.98	+16 25.5	1.571	2.260	122.7	21.5	18.2
1986	01 20	03 23.18	+16 47.6					
1986	01 30	03 30.02	+17 18.5	1.840	2.303	105.2	24.4	18.7
1986	02 09	03 39.09	+17 55.6					
1986	02 19	03 50.07	+18 36.3	2.130	2.346	89.8	24.9	19.1

1981 QE a,e,i = 2.41, 0.22, 1 Elements MPC 6463

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	09 12	03 56.98	+20 18.4	1.347	1.907	-1.90	-5.3	18.2
1985	09 22	04 06.30	+20 37.0					
1985	10 02	04 12.31	+20 44.4	1.187	1.927	-2.23	-5.5	17.9
1985	10 12	04 14.55	+20 40.8					
1985	10 22	04 12.76	+20 26.4	1.065	1.954	-2.60	-6.5	17.5
1985	11 01	04 07.19	+20 02.0					
1985	11 11	03 58.66	+19 29.0	1.010	1.986	-2.84	-8.2	17.1
1985	11 21	03 48.62	+18 51.2					
1985	12 01	03 38.91	+18 14.2	1.047	2.022	-2.74	-9.2	17.2
1985	12 11	03 31.11	+17 44.2					
1985	12 21	03 26.32	+17 25.9	1.178	2.063	-2.37	-8.5	17.8
1985	12 31	03 25.02	+17 21.7					
1986	01 10	03 27.15	+17 31.0	1.384	2.107	-1.95	-6.9	18.3
1986	01 20	03 32.44	+17 52.0					
1986	01 30	03 40.47	+18 21.9	1.637	2.153	-1.61	-5.2	18.8
1986	02 09	03 50.79	+18 57.5					
1986	02 19	04 03.05	+19 36.0	1.915	2.201	-1.37	-3.7	19.2

(3131) 1982 BM1 a,e,i = 2.92, 0.04, 2 Elements MPC 9160

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 13.52	+21 16.9	2.629	3.024	103.4	18.9	17.9
1985	09 22	04 17.04	+21 31.7					
1985	10 02	04 18.28	+21 41.4	2.370	3.019	121.8	16.4	17.6
1985	10 12	04 17.07	+21 45.6					
1985	10 22	04 13.34	+21 44.0	2.161	3.014	142.7	11.5	17.3
1985	11 01	04 07.30	+21 36.3					
1985	11 11	03 59.41	+21 22.4	2.038	3.008	165.9	4.6	17.0
1985	11 21	03 50.44	+21 03.3					
1985	12 01	03 41.38	+20 41.3	2.026	3.001	169.6	3.4	16.9
1985	12 11	03 33.17	+20 19.3					
1985	12 21	03 26.67	+20 00.7	2.129	2.994	145.8	10.7	17.3
1985	12 31	03 22.42	+19 48.4					
1986	01 10	03 20.66	+19 44.0	2.324	2.987	124.0	15.8	17.6
1986	01 20	03 21.42	+19 48.3					
1986	01 30	03 24.59	+20 00.9	2.575	2.980	104.6	18.7	17.9
1986	02 09	03 29.92	+20 20.5					
1986	02 19	03 37.21	+20 45.9	2.848	2.972	87.4	19.4	18.1

(3156) 1953 EE a,e,i = 2.86, 0.20, 16 Elements MPC 9293

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 11.58	+32 57.7	2.266	2.655	101.4	21.8	16.9
1985	09 22	04 17.56	+34 30.5					
1985	10 02	04 21.01	+36 03.5	1.995	2.615	117.7	19.8	16.5
1985	10 12	04 21.48	+37 35.3					
1985	10 22	04 18.54	+39 02.1	1.769	2.576	135.6	15.7	16.2
1985	11 01	04 12.08	+40 18.6					
1985	11 11	04 02.39	+41 17.9	1.618	2.538	152.7	10.3	15.8
1985	11 21	03 50.43	+41 53.2					
1985	12 01	03 37.77	+42 01.3	1.563	2.502	157.3	8.8	15.7
1985	12 11	03 26.18	+41 43.9					
1985	12 21	03 17.25	+41 07.5	1.610	2.467	142.9	13.9	15.8
1985	12 31	03 11.99	+40 21.6					
1986	01 10	03 10.72	+39 34.7	1.739	2.435	124.5	19.5	16.1
1986	01 20	03 13.39	+38 52.8					
1986	01 30	03 19.64	+38 19.2	1.921	2.405	107.3	23.0	16.4
1986	02 09	03 29.03	+37 54.3					
1986	02 19	03 41.15	+37 37.5	2.126	2.378	92.1	24.5	16.6

2091 P-L a,e,i = 2.32, 0.12, 4 Elements MPC 9297

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 02.57	+23 18.3	1.546	2.058	105.5	28.1	20.0
1985	09 22	04 11.00	+23 35.5					
1985	10 02	04 16.35	+23 41.8	1.355	2.066	121.8	24.3	19.6
1985	10 12	04 18.17	+23 36.6					
1985	10 22	04 16.18	+23 19.0	1.202	2.077	141.7	17.3	19.2
1985	11 01	04 10.54	+22 48.5					
1985	11 11	04 01.92	+22 05.5	1.118	2.090	165.2	7.0	18.8
1985	11 21	03 51.64	+21 12.8					
1985	12 01	03 41.41	+20 16.3	1.130	2.107	169.5	4.9	18.8
1985	12 11	03 32.83	+19 23.4					
1985	12 21	03 27.12	+18 40.9	1.240	2.126	145.6	15.2	19.3
1985	12 31	03 24.84	+18 13.0					
1986	01 10	03 26.05	+18 00.8	1.428	2.146	124.8	22.1	19.7
1986	01 20	03 30.53	+18 03.0					
1986	01 30	03 37.87	+18 17.1	1.663	2.169	107.2	25.7	20.2
1986	02 09	03 47.67	+18 39.7					
1986	02 19	03 59.55	+19 07.9	1.921	2.193	92.1	26.8	20.5

(3171) 1979 WO a,e,i = 3.19, 0.13, 11 Elements MPC 9353

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 13.19	+24 22.6	2.383	2.785	102.9	20.6	16.6
1985	09 22	04 17.84	+25 16.9					
1985	10 02	04 20.07	+26 08.7	2.139	2.784	120.5	18.0	16.3
1985	10 12	04 19.58	+26 57.5					
1985	10 22	04 16.25	+27 41.4	1.943	2.784	140.5	13.1	16.0
1985	11 01	04 10.21	+28 18.3					
1985	11 11	04 01.93	+28 45.7	1.828	2.787	162.1	6.3	15.7
1985	11 21	03 52.26	+29 01.6					
1985	12 01	03 42.38	+29 06.2	1.820	2.791	167.7	4.3	15.6
1985	12 11	03 33.46	+29 01.7					
1985	12 21	03 26.54	+28 52.2	1.923	2.797	146.7	11.1	15.9
1985	12 31	03 22.24	+28 42.3					
1986	01 10	03 20.84	+28 35.6	2.116	2.805	125.7	16.5	16.2
1986	01 20	03 22.33	+28 34.5					
1986	01 30	03 26.51	+28 39.9	2.366	2.815	106.9	19.6	16.6
1986	02 09	03 33.11	+28 51.6					
1986	02 19	03 41.83	+29 08.6	2.642	2.827	90.3	20.5	16.8

(3120) 1979 RZ a,e,i = 3.03, 0.09, 13 Elements MPC 9155

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 14.55	+19 58.0	2.427	2.834	103.4	20.2	17.7
1985	09 22	04 19.01	+19 29.6					
1985	10 02	04 21.08	+18 51.4	2.195	2.850	121.6	17.4	17.4
1985	10 12	04 20.61	+18 04.0					
1985	10 22	04 17.58	+17 07.9	2.013	2.866	142.3	12.3	17.1
1985	11 01	04 12.25	+16 04.9					
1985	11 11	04 05.11	+14 57.9	1.915	2.882	164.8	5.2	16.8
1985	11 21	03 56.96	+13 50.8					
1985	12 01	03 48.75	+12 48.6	1.929	2.900	167.5	4.2	16.8
1985	12 11	03 41.42	+11 55.7					
1985	12 21	03 35.73	+11 15.6	2.057	2.918	145.0	11.2	17.1
1985	12 31	03 32.18	+10 49.8					
1986	01 10	03 30.97	+10 38.3	2.274	2.936	123.7	16.2	17.5
1986	01 20	03 32.13	+10 39.7					
1986	01 30	03 35.51	+10 51.8	2.546	2.954	104.7	18.8	17.8
1986	02 09	03 40.89	+11 12.2					
1986	02 19	03 48.05	+11 38.7	2.840	2.973	87.9	19.4	18.1

(3176) 1980 VR1 a,e,i = 2.88, 0.03, 18 Elements MPC 9358

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 26.32	+19 31.6	2.432	2.800	100.7	20.7	16.6
1985	09 22	04 30.57	+20 22.4					
1985	10 02	04 32.43	+21 13.1	2.176	2.797	118.6	18.3	16.3
1985	10 12	04 31.60	+22 03.7					
1985	10 22	04 27.89	+22 53.6	1.965	2.794	139.2	13.5	16.0
1985	11 01	04 21.37	+23 41.6					
1985	11 11	04 12.41	+24 25.3	1.834	2.793	162.1	6.2	15.7
1985	11 21	04 01.80	+25 02.6					
1985	12 01	03 50.67	+25 32.4	1.813	2.791	171.0	3.2	15.5
1985	12 11	03 40.26	+25 55.3					
1985	12 21	03 31.67	+26 13.6	1.908	2.790	147.7	10.8	15.9
1985	12 31	03 25.69	+26 30.6					
1986	01 10	03 22.64	+26 49.1	2.097	2.789	125.8	16.6	16.2
1986	01 20	03 22.61	+27 11.4					
1986	01 30	03 25.43	+27 38.4	2.345	2.789	106.5	19.8	16.5
1986	02 09	03 30.83	+28 10.0					
1986	02 19	03 38.52	+28 45.7	2.616	2.789	89.5	20.8	16.8

1983 BA a,e,i = 2.24, 0.04, 7 Elements MPC 7769

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 23.86	+29 42.3	1.950	2.338	99.5	25.1	18.1
1985	09 22	04 31.38	+30 33.4					
1985	10 02	04 36.13	+31 19.9	1.718	2.336	115.9	22.7	17.7
1985	10 12	04 37.63	+32 00.9					
1985	10 22	04 35.46	+32 33.8	1.520	2.333	135.1	17.5	17.4
1985	11 01	04 29.56	+32 54.9					
1985	11 11	04 20.29	+32 59.6	1.388	2.329	156.4	9.8	17.0
1985	11 21	04 08.65	+32 44.1					
1985	12 01	03 56.25	+32 08.1	1.351	2.324	167.6	5.2	16.8
1985	12 11	03 44.85	+31 15.9					
1985	12 21	03 35.97	+30 15.7	1.421	2.318	148.6	12.8	17.1
1985	12 31	03 30.54	+29 16.4					
1986	01 10	03 28.84	+28 24.7	1.579	2.312	127.4	19.8	17.5
1986	01 20	03 30.79	+27 44.5					
1986	01 30	03 36.03	+27 16.7	1.791	2.305	108.7	23.9	17.8
1986	02 09	03 44.11	+27 00.1					
1986	02 19	03 54.64	+26 52.6	2.029	2.297	92.6	25.5	18.1

(3151) 1983 HF a,e,i = 2.76, 0.14, 19 Elements MPC 9289

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 30.85	+14 55.7	2.777	3.118	100.3	18.5	18.1
1985	09 22	04 34.47	+14 04.3					
1985	10 02	04 35.95	+13 03.9	2.521	3.126	118.6	16.3	17.9
1985	10 12	04 35.13	+11 55.6					
1985	10 22	04 31.98	+10 40.8	2.315	3.133	138.8	12.1	17.6
1985	11 01	04 26.66	+09 22.4					
1985	11 11	04 19.56	+08 03.9	2.193	3.138	159.1	6.5	17.3
1985	11 21	04 11.30	+06 50.3					
1985	12 01	04 02.71	+05 46.1	2.185	3.142	163.1	5.2	17.3
1985	12 11	03 54.63	+04 55.4					
1985	12 21	03 47.82	+04 20.7	2.293	3.143	144.1	10.6	17.5
1985	12 31	03 42.84	+04 02.5					
1986	01 10	03 39.99	+03 59.8	2.494	3.144	123.3	15.2	17.8
1986	01 20	03 39.38	+04 10.5					
1986	01 30	03 40.95	+04 31.9	2.752	3.142	104.2	17.7	18.1
1986	02 09	03 44.54	+05 01.4					
1986	02 19	03 49.97	+05 36.5	3.030	3.139	87.1	18.3	18.3

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

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 43.52	+22 31.0	3.255	3.511	96.3	16.6	19.6
1985	09 22	04 47.06	+22 42.7					
1985	10 02	04 48.65	+22 51.3	2.972	3.509	114.6	15.0	19.3
1985	10 12	04 48.13	+22 56.7					
1985	10 22	04 45.39	+22 58.6	2.730	3.506	135.2	11.5	19.1
1985	11 01	04 40.53	+22 56.6					
1985	11 11	04 33.81	+22 50.2	2.565	3.502	157.8	6.1	18.8
1985	11 21	04 25.72	+22 39.5					
1985	12 01	04 16.98	+22 25.1	2.511	3.496	177.8	0.6	18.3
1985	12 11	04 08.39	+22 08.5					
1985	12 21	04 00.76	+21 51.8	2.578	3.489	153.9	7.1	18.8
1985	12 31	03 54.72	+21 37.6					
1986	01 10	03 50.67	+21 27.7	2.753	3.480	131.2	12.3	19.1
1986	01 20	03 48.83	+21 23.6					
1986	01 30	03 49.21	+21 25.7	2.999	3.469	110.5	15.4	19.3
1986	02 09	03 51.68	+21 33.8					
1986	02 19	03 56.10	+21 47.3	3.281	3.458	91.9	16.6	19.6

1978 RA6 a,e,i = 2.26, 0.12, 6 Elements MPC 7839

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 22.48	+23 20.8	1.559	2.010	101.0	29.4	18.7
1985	09 22	04 33.42	+24 21.7					
1985	10 02	04 41.76	+25 19.6	1.347	1.998	115.9	26.8	18.3
1985	10 12	04 46.92	+26 15.3					
1985	10 22	04 48.30	+27 08.4	1.166	1.989	133.8	21.2	17.8
1985	11 01	04 45.55	+27 57.1					
1985	11 11	04 38.71	+28 37.7	1.042	1.984	155.1	12.1	17.4
1985	11 21	04 28.51	+29 05.4					
1985	12 01	04 16.59	+29 16.8	1.001	1.983	172.1	3.9	17.0
1985	12 11	04 04.99	+29 12.4					
1985	12 21	03 55.73	+28 57.2	1.057	1.985	153.0	13.0	17.4
1985	12 31	03 50.19	+28 38.9					
1986	01 10	03 48.89	+28 23.5	1.195	1.990	131.8	21.6	17.9
1986	01 20	03 51.81	+28 14.8					
1986	01 30	03 58.53	+28 13.8	1.388	1.999	113.8	26.8	18.3
1986	02 09	04 08.52	+28 19.1					
1986	02 19	04 21.29	+28 28.7	1.609	2.012	98.7	29.1	18.7

(3162) 1980 YH a,e,i = 3.16, 0.14, 18 Elements MPC 9295

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 33.82	+01 03.8	2.420	2.793	101.0	20.7	17.1
1985	09 22	04 39.61	+00 17.2					
1985	10 02	04 43.25	-00 35.1	2.178	2.775	116.7	18.8	16.8
1985	10 12	04 44.53	-01 30.2					
1985	10 22	04 43.28	-02 24.1	1.978	2.760	133.5	15.2	16.5
1985	11 01	04 39.56	-03 11.5					
1985	11 11	04 33.64	-03 46.8	1.849	2.746	149.2	10.6	16.3
1985	11 21	04 26.09	-04 04.4					
1985	12 01	04 17.76	-04 00.1	1.813	2.735	154.2	9.0	16.2
1985	12 11	04 09.62	-03 32.0					
1985	12 21	04 02.62	-02 41.1	1.879	2.726	142.4	12.7	16.3
1985	12 31	03 57.50	-01 30.7					
1986	01 10	03 54.72	-00 05.4	2.033	2.718	124.9	17.3	16.6
1986	01 20	03 54.46	+01 30.1					
1986	01 30	03 56.69	+03 11.3	2.248	2.713	107.6	20.2	16.9
1986	02 09	04 01.25	+04 54.7					
1986	02 19	04 07.94	+06 37.5	2.496	2.711	91.7	21.4	17.1

(3126) 1969 TP1 a,e,i = 3.01, 0.10, 10 Elements MPC 9158

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 37.06	+17 42.3	2.438	2.770	98.4	21.1	17.1
1985	09 22	04 43.10	+17 15.0					
1985	10 02	04 46.86	+16 40.0	2.201	2.785	115.7	18.9	16.9
1985	10 12	04 48.13	+15 57.8					
1985	10 22	04 46.77	+15 09.7	2.004	2.801	135.4	14.5	16.6
1985	11 01	04 42.86	+14 17.4					
1985	11 11	04 36.73	+13 23.4	1.880	2.817	156.9	7.9	16.3
1985	11 21	04 28.99	+12 31.0					
1985	12 01	04 20.55	+11 44.1	1.859	2.835	170.0	3.5	16.1
1985	12 11	04 12.39	+11 06.3					
1985	12 21	04 05.43	+10 40.4	1.951	2.853	151.2	9.6	16.4
1985	12 31	04 00.39	+10 27.8					
1986	01 10	03 57.65	+10 28.2	2.141	2.872	129.8	15.2	16.8
1986	01 20	03 57.37	+10 40.3					
1986	01 30	03 59.47	+11 02.0	2.395	2.891	110.5	18.6	17.1
1986	02 09	04 03.78	+11 31.0					
1986	02 19	04 10.08	+12 04.8	2.682	2.911	93.2	19.8	17.4

(3152) 1983 LF a,e,i = 2.63, 0.09, 11 Elements MPC 9289

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 46.66	+33 58.7	2.609	2.862	94.0	20.5	17.3
1985	09 22	04 53.19	+34 35.7					
1985	10 02	04 57.34	+35 09.3	2.348	2.861	110.8	19.1	17.1
1985	10 12	04 58.73	+35 38.4					
1985	10 22	04 57.09	+36 01.2	2.118	2.858	129.7	15.5	16.8
1985	11 01	04 52.35	+36 14.5					
1985	11 11	04 44.72	+36 14.7	1.951	2.855	150.4	9.9	16.5
1985	11 21	04 34.85	+35 58.2					
1985	12 01	04 23.84	+35 23.7	1.882	2.850	166.3	4.7	16.2
1985	12 11	04 12.97	+34 32.6					
1985	12 21	04 03.53	+33 29.9	1.927	2.843	153.9	8.8	16.4
1985	12 31	03 56.48	+32 22.5					
1986	01 10	03 52.34	+31 16.9	2.075	2.836	132.7	14.8	16.7
1986	01 20	03 51.27	+30 18.0					
1986	01 30	03 53.13	+29 28.6	2.296	2.827	112.8	18.7	17.0
1986	02 09	03 57.63	+28 49.3					
1986	02 19	04 04.48	+28 19.6	2.553	2.817	95.0	20.5	17.3

(3084) 1977 QB1 a,e,i = 2.44, 0.23, 4 Elements MPC 8903

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 46.81	+19 11.9	1.846	2.192	96.0	27.2	18.2
1985	09 22	04 55.44	+19 01.4					
1985	10 02	05 01.26	+18 43.4	1.665	2.242	112.1	24.4	17.9
1985	10 12	05 03.90	+18 19.2					
1985	10 22	05 03.10	+17 49.7	1.510	2.293	131.4	19.0	17.6
1985	11 01	04 58.86	+17 16.5					
1985	11 11	04 51.50	+16 41.0	1.414	2.344	153.9	10.7	17.3
1985	11 21	04 41.83	+16 05.5					
1985	12 01	04 31.09	+15 33.1	1.412	2.395	173.7	2.6	17.1
1985	12 11	04 20.69	+15 07.1					
1985	12 21	04 11.92	+14 50.6	1.520	2.445	154.5	10.0	17.6
1985	12 31	04 05.69	+14 45.3					
1986	01 10	04 02.41	+14 51.4	1.723	2.494	132.3	17.0	18.1
1986	01 20	04 02.17	+15 07.9					
1986	01 30	04 04.76	+15 32.8	1.992	2.541	112.8	20.9	18.5
1986	02 09	04 09.86	+16 03.8					
1986	02 19	04 17.16	+16 38.6	2.293	2.587	95.8	22.3	18.9

(3141) 1984 RH a,e,i = 3.41, 0.07, 11 Elements MPC 9210

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 47.75	+34 12.0	2.990	3.217	93.8	18.2	16.8
1985	09 22	04 53.87	+34 53.1					
1985	10 02	04 57.87	+35 31.7	2.717	3.209	110.6	17.0	16.6
1985	10 12	04 59.48	+36 07.1					
1985	10 22	04 58.46	+36 37.4	2.478	3.202	129.3	13.9	16.3
1985	11 01	04 54.79	+37 00.3					
1985	11 11	04 48.63	+37 12.7	2.304	3.195	149.2	9.1	16.0
1985	11 21	04 40.51	+37 11.5					
1985	12 01	04 31.27	+36 55.1	2.228	3.190	164.7	4.7	15.8
1985	12 11	04 21.96	+36 24.0					
1985	12 21	04 13.65	+35 40.9	2.265	3.184	155.1	7.5	16.0
1985	12 31	04 07.20	+34 50.9					
1986	01 10	04 03.17	+33 59.1	2.408	3.180	135.0	12.6	16.2
1986	01 20	04 01.80	+33 09.9					
1986	01 30	04 03.07	+32 26.4	2.628	3.177	115.3	16.3	16.5
1986	02 09	04 06.79	+31 49.9					
1986	02 19	04 12.74	+31 20.8	2.893	3.174	97.3	18.0	16.7

1984 QC a,e,i = 3.09, 0.04, 12 Elements MPC 9208

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 56.64	+35 27.8	2.852	3.054	91.8	19.2	16.6
1985	09 22	05 03.52	+36 07.8					
1985	10 02	05 08.18	+36 45.3	2.596	3.062	108.3	18.1	16.4
1985	10 12	05 10.28	+37 19.7					
1985	10 22	05 09.58	+37 49.1	2.368	3.069	126.8	15.0	16.2
1985	11 01	05 05.98	+38 11.1					
1985	11 11	04 59.64	+38 22.0	2.201	3.077	146.8	10.2	15.9
1985	11 21	04 51.06	+38 18.5					
1985	12 01	04 41.15	+37 58.2	2.127	3.085	163.4	5.2	15.7
1985	12 11	04 31.04	+37 21.4					
1985	12 21	04 21.89	+36 30.9	2.167	3.093	156.3	7.3	15.8
1985	12 31	04 14.69	+35 32.4					
1986	01 10	04 10.01	+34 31.4	2.314	3.101	136.4	12.6	16.1
1986	01 20	04 08.12	+33 33.2					
1986	01 30	04 08.99	+32 41.1	2.541	3.108	116.5	16.5	16.4
1986	02 09	04 12.40	+31 56.7					
1986	02 19	04 18.10	+31 20.4	2.814	3.116	98.4	18.3	16.6

(3226) 6565 P-L a,e,i = 2.87, 0.07, 3 Elements MPC 9475

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 51.03	+19 58.8	2.387	2.668	94.9	22.1	18.9
1985	09 22	04 58.50	+20 08.3					
1985	10 02	05 03.77	+20 13.8	2.138	2.672	111.4	20.4	18.7
1985	10 12	05 06.56	+20 16.1					
1985	10 22	05 06.57	+20 15.8	1.920	2.676	130.5	16.4	18.3
1985	11 01	05 03.74	+20 13.1					
1985	11 11	04 58.20	+20 08.4	1.764	2.681	152.4	9.8	18.0
1985	11 21	04 50.41	+20 01.8					
1985	12 01	04 41.26	+19 54.0	1.703	2.688	176.0	1.5	17.5
1985	12 11	04 31.84	+19 46.1					
1985	12 21	04 23.31	+19 40.2	1.755	2.696	158.7	7.6	17.9
1985	12 31	04 16.66	+19 38.4					
1986	01 10	04 12.51	+19 42.3	1.910	2.704	135.8	14.7	18.3
1986	01 20	04 11.16	+19 52.7					
1986	01 30	04 12.59	+20 09.4	2.138	2.714	115.6	19.1	18.7
1986	02 09	04 16.63	+20 31.5					
1986	02 19	04 23.03	+20 57.6	2.406	2.724	97.9	21.1	19.0

1976 GO8 a,e,i = 2.40, 0.24, 11 Elements MPC 9593

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	05 07.95	+33 44.4	2.765	2.937	89.7	20.0	20.5
1985	09 22	05 14.45	+34 32.5					
1985	10 02	05 18.66	+35 20.5	2.505	2.949	106.5	19.0	20.3
1985	10 12	05 20.20	+36 07.9					
1985	10 22	05 18.74	+36 53.0	2.270	2.959	125.3	15.9	20.0
1985	11 01	05 14.10	+37 33.1					
1985	11 11	05 06.35	+38 04.0	2.094	2.965	145.8	10.8	19.7
1985	11 21	04 55.93	+38 20.8					
1985	12 01	04 43.84	+38 19.8	2.011	2.968	162.9	5.6	19.5
1985	12 11	04 31.33	+37 59.6					
1985	12 21	04 19.81	+37 22.8	2.045	2.968	155.5	7.9	19.6
1985	12 31	04 10.46	+36 34.9					
1986	01 10	04 03.99	+35 42.5	2.186	2.965	135.1	13.5	19.9
1986	01 20	04 00.71	+34 51.5					
1986	01 30	04 00.55	+34 06.1	2.405	2.958	114.9	17.6	20.2
1986	02 09	04 03.28	+33 28.4					
1986	02 19	04 08.57	+32 58.9	2.665	2.949	96.7	19.4	20.4

(3093) 1971 MG a,e,i = 2.68, 0.21, 13 Elements MPC 9022

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 58.19	+33 10.3	2.168	2.418	91.8	24.6	16.7
1985	09 22	05 07.45	+33 29.5					
1985	10 02	05 14.00	+33 42.8	1.965	2.461	107.6	22.8	16.4
1985	10 12	05 17.43	+33 49.9					
1985	10 22	05 17.44	+33 49.4	1.783	2.504	126.3	18.7	16.2
1985	11 01	05 13.91	+33 39.1					
1985	11 11	05 07.06	+33 16.0	1.656	2.548	147.7	12.0	15.9
1985	11 21	04 57.57	+32 37.4					
1985	12 01	04 46.62	+31 42.9	1.618	2.593	169.0	4.2	15.6
1985	12 11	04 35.62	+30 35.1					
1985	12 21	04 25.97	+29 19.8	1.692	2.636	159.5	7.5	15.9
1985	12 31	04 18.71	+28 04.2					
1986	01 10	04 14.37	+26 54.5	1.873	2.680	137.3	14.4	16.3
1986	01 20	04 13.11	+25 54.9					
1986	01 30	04 14.75	+25 06.9	2.131	2.723	116.9	18.8	16.8
1986	02 09	04 19.00	+24 30.2					
1986	02 19	04 25.50	+24 03.3	2.432	2.765	99.0	20.7	17.1

(2962) 1940 YF a,e,i = 2.57, 0.04, 16 Elements MPC 8387

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	05 06.59	+23 13.1	2.394	2.612	90.9	22.7	17.0
1985	09 22	05 14.69	+24 07.3					
1985	10 02	05 20.70	+25 03.3	2.128	2.605	107.1	21.5	16.7
1985	10 12	05 24.22	+26 02.3					
1985	10 22	05 24.84	+27 04.7	1.887	2.597	125.8	18.1	16.4
1985	11 01	05 22.26	+28 09.7					
1985	11 11	05 16.35	+29 15.2	1.702	2.590	147.1	12.0	16.0
1985	11 21	05 07.35	+30 16.8					
1985	12 01	04 56.05	+31 09.8	1.608	2.582	168.4	4.4	15.6
1985	12 11	04 43.70	+31 50.1					
1985	12 21	04 31.84	+32 16.4	1.628	2.574	159.9	7.5	15.8
1985	12 31	04 21.93	+32 30.8					
1986	01 10	04 14.99	+32 37.8	1.753	2.566	137.5	15.0	16.1
1986	01 20	04 11.54	+32 41.9					
1986	01 30	04 11.65	+32 46.8	1.953	2.557	117.1	20.1	16.5
1986	02 09	04 15.08	+32 54.5					
1986	02 19	04 21.53	+33 05.4	2.194	2.549	99.4	22.5	16.8

1975 WK1 a,e,i = 2.23, 0.09, 2 Elements MPC 6300

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	09 12	04 51.00	+23 24.7	1.738	2.075	94.5	28.9	18.4
1985	09 22	05 03.71	+23 36.4					
1985	10 02	05 14.17	+23 40.7	1.509	2.061	108.7	27.4	18.1
1985	10 12	05 21.88	+23 38.3					
1985	10 22	05 26.31	+23 30.2	1.302	2.050	125.8	23.2	17.7
1985	11 01	05 27.04	+23 16.8					
1985	11 11	05 23.82	+22 58.1	1.141	2.040	146.4	15.6	17.2
1985	11 21	05 16.86	+22 33.8					
1985	12 01	05 07.05	+22 04.2	1.055	2.034	170.5	4.6	16.7
1985	12 11	04 55.89	+21 30.7					
1985	12 21	04 45.26	+20 57.2	1.066	2.029	164.0	7.7	16.8
1985	12 31	04 36.92	+20 28.4					
1986	01 10	04 31.96	+20 08.4	1.170	2.028	140.4	18.0	17.3
1986	01 20	04 30.88	+19 59.3					
1986	01 30	04 33.65	+20 00.7	1.343	2.029	120.4	24.7	17.7
1986	02 09	04 39.90	+20 10.5					
1986	02 19	04 49.21	+20 26.0	1.554	2.032	103.9	28.2	18.1