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:

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EDITORIAL NOTICE.

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CORRECTED OBSERVATIONS.

The following observation corrects that previously published.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Mag.	Obs.
1984 QB	*	1984 08	24.72882	22 58 23.18	+03 43 38.7	MPC 9045	16	372

* * * * *

DELETED OBSERVATIONS.

The following observation is to be deleted.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Obs.
1983 RL3	1983 09	09.32203	22 30 01.78	-04 12 15.3	MPC 9151	809

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 9040-9041.

Object		Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	Obs.
1932 YT	*	1932 12	24.83346	03 45 43.58	+23 04 10.5	1932 WB		012
1934 EJ	*	1934 03	05.88097	07 59 57.10	+17 12 01.2	1934 CX		024

1952 RQ	*	1952 09 15.89514	21 50 24.68	-10 00 11.2	1952 QJ	14.6	024
1977 OU	*	1977 07 19.96522	21 19 36.16	-18 34 04.0	1977 NM	16.2	095
1977 OU		1977 07 22.96818	21 16 51.19	-18 39 11.3	1977 NM	16.5	095
1977 PL2	*	1977 08 14.87187	20 51 56.31	-19 02 18.8	1977 NM	16.5	095
1977 QJ5	*	1977 08 19.83840	20 48 57.78	-19 20 37.0	1977 OE	16.0	095
1980 TH15	*	1980 10 15.89306	00 27 16.63	+03 00 58.6	1980 TO7	18.0	095
1980 YW	*	1980 12 27.57216	05 49 15.88	+16 11 20.7	1980 XH1		330
1983 FJ	*	1983 03 31.80775	10 43 24.00	-00 34 20.0	1983 CB3		046
1983 FJ		1983 03 31.82188	10 43 23.28	-00 34 15.9	1983 CB3		046

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OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

017 Hoher List. Observers M. Geffert and F. Decker. 0.30-m f/5 astrograph.
046 Klet. Observer A. Mrkos.
056 Skalnate Pleso. Observers Q. G. Cervak and L. Kornos. Communicated by J. Svoren.
102 Zvenigorod. Observers V. P. Osipenko, Yu. V. Rusin and V. A. Yurevich. From Kiev Komet. Tsirk. Nos. 327 and 328.
114 Kazan Zelenchukskaya Station. Observers I. E. Tselishchev, V. N. Kitkin and M. I. Kibarina. From Kiev Komet. Tsirk. Nos. 327 and 328.
168 Ural'skij University. Observers S. N. Timofeev, V. Kajzer, A. Tearo, E. R. Starikov, E. Roev, G. Romashin and S. Golovlin. From Kiev Komet. Tsirk. Nos. 329 and 330.
323 Perth Observatory, Bickley. Observers P. Birch, M. P. Candy, V. Candy, P. Jekabsons, G. Kinnear and R. Martin.
372 Geisei. Observer T. Seki.
474 Mt. John University Observatory. Observer A. C. Gilmore. Measured by P. M. Kilmartin (assisted by R. McIntosh and W. M. Kissling).
567 Osservatorio Chaonis. Observer J. M. Baur.
568 Mauna Kea. Infrared Telescope Facility. Observer E. Tedesco.
657 Victoria. Observers D. D. Balam and J. B. Tatum.
675 Palomar. Observations on Oct. 4-5 by J. Gibson with the 1.2-m Schmidt, on Oct. 6 by Gibson with the 1.5-m reflector and CCD. The other observations are by C. and E. Shoemaker with the 0.46-m Schmidt.
688 Lowell Observatory, Anderson Mesa Station. Observers B. A. Skiff and E. Bowell.
691 Steward Observatory, Kitt Peak Station. Observer E. Roemer.
707 Chamberlin Obervatory field station. 0.40-m f/5.5 reflector. Observer E. Everhart (assisted by A. Carusi, G. Valsecchi and E. Perozzi).
801 Oak Ridge Observatory. Observers R. E. McCrosky, G. Schwartz and C.-Y. Shao (assisted by C. M. Bardwell, D. W. E. Green and B. G. Marsden).
808 El Leoncito. 0.5-m double astrograph. Observers M. R. Cesco, H. Mira, G. Sanchez and J. A. Vicentela (with assistance from C. E. Lopez and J. G. Sanguin).
811 Maria Mitchell Observatory. Observer A. Sarajedini. Reduction by E. Belserene.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N Obs.
		Periodic Comet Schwassmann-Wachmann 1				
/1974 II	1984 06	19.61458	14 22 18.39	-25 19 16.2		323
		Periodic Comet Smirnova-Chernykh				
/1975 VII	1984 06	19.47639	11 34 06.42	+09 38 10.9		323

Periodic Comet Schaumasse

/1976 XV	1976	12	27.54146	15	48	59.03	-14	06	42.4	18.5N	691

Periodic Comet Encke

/1980 XI	1984	02	25.63374	00	25	58.80	+10	14	08.3		168
/1980 XI	1984	02	25.63790	00	25	59.26	+10	14	11.4		168
/1980 XI	1984	02	29.63200	00	35	06.49	+10	56	03.0		168
/1980 XI	1984	03	01.63721	00	37	28.24	+11	06	12.6		168
/1980 XI	1984	03	02.63513	00	39	50.22	+11	16	11.6		168
/1980 XI	1984	03	04.62957	00	44	37.87	+11	35	21.6		168
/1980 XI	1984	03	08.64010	00	54	24.92	+12	08	38.8		168
/1980 XI	1984	03	09.63715	00	56	50.77	+12	15	14.5		168
/1980 XI	1984	03	14.65145	01	08	32.89	+12	32	10.7		168
/1980 XI	1984	06	06.88524	22	56	53.39	-21	03	04.5		323
/1980 XI	1984	07	25.51852	20	55	51.57	-29	29	30.4		474
/1980 XI	1984	07	25.56192	20	55	44.04	-29	29	39.9		474

Periodic Comet Halley

/1982i	1984	09	22.80382	06	46	16.89	+13	02	47.3	20.5T 1	372

Comet IRAS (1983k)

/1983k	1984	04	23.43368	11	09	15.38	-03	16	30.4		474
/1983k	1984	04	23.45972	11	09	14.01	-03	16	10.2		474

Comet Cernis (1983l)

/1983l	1983	09	02.94826	02	16	45.24	-01	46	14.3		102
/1983l	1983	09	05.00173	02	14	09.63	-02	37	43.1		102
/1983l	1983	09	14.03541	02	01	08.91	-06	36	29.3		102
/1983l	1983	11	07.05599	00	18	14.24	-27	04	04.9		808
/1983l	1983	11	07.07950	00	18	12.01	-27	04	20.8		808
/1983l	1983	12	08.05407	23	43	31.98	-30	29	54.7		808
/1983l	1983	12	08.07277	23	43	31.23	-30	29	58.2		808
/1983l	1984	06	26.87083	00	36	31.26	-47	46	24.3		323
/1983l	1984	07	26.58160	00	13	28.09	-57	10	10.9		474
/1983l	1984	07	26.59167	00	13	27.34	-57	10	22.1		474
/1983l	1984	08	25.69318	23	11	30.48	-64	46	00.8		474
/1983l	1984	08	25.70742	23	11	28.00	-64	46	10.1		474
/1983l	1984	08	27.78681	23	05	49.50	-65	06	17.1		323

Periodic Comet Crommelin

/1983n	1984	02	02.66264	23	32	34.70	+04	12	11.0		114
/1983n	1984	02	03.65943	23	37	08.81	+04	03	49.4		114
/1983n	1984	02	04.65460	23	41	45.62	+03	54	57.2		114
/1983n	1984	02	05.69878	23	46	39.72	+03	45	04.4		114
/1983n	1984	02	11.68131	00	15	56.51	+02	35	12.5		114
/1983n	1984	02	11.69433	00	16	00.59	+02	34	59.2		114
/1983n	1984	02	24.68973	01	25	51.30	-01	25	37.2		114
/1983n	1984	02	24.70037	01	25	54.80	-01	25	51.2		114
/1983n	1984	02	27.67738	01	42	58.38	-02	37	33.6		114
/1983n	1984	02	27.70240	01	43	06.84	-02	38	11.8		114
/1983n	1984	02	28.68438	01	48	49.67	-03	03	01.4		114
/1983n	1984	02	28.69976	01	48	54.78	-03	03	21.1		114
/1983n	1984	03	02.69308	02	06	32.54	-04	21	42.6		114
/1983n	1984	03	06.68545	02	30	36.26	-06	11	19.5		114
/1983n	1984	03	28.70380	04	51	48.20	-15	34	12.4		114
/1983n	1984	03	30.72816	05	05	00.79	-16	11	42.7		114
/1983n	1984	04	01.02921	05	13	27.57	-16	33	38.4		808
/1983n	1984	04	03.01890	05	26	17.02	-17	04	45.7		808
/1983n	1984	04	03.71912	05	30	46.90	-17	15	09.4		114

Comet Shoemaker (1983p)

/1983p	1984	06	18.88472	22	50	48.26	-39	38	19.0	323
/1983p	1984	07	26.50718	21	48	01.21	-53	15	15.7	474
/1983p	1984	07	26.52454	21	47	58.57	-53	15	34.3	474
/1983p	1984	08	28.62153	20	15	12.18	-58	46	58.5	323

Periodic Comet Hartley-IRAS

/1983v	1984	03	03.04902	20	46	04.58	+41	14	26.2	168
/1983v	1984	03	04.00040	20	45	49.94	+41	51	35.2	168
/1983v	1984	03	04.03756	20	45	49.33	+41	53	00.4	168
/1983v	1984	03	04.64554	20	45	38.67	+42	17	07.3	168
/1983v	1984	03	08.04722	20	44	30.20	+44	35	00.6	168
/1983v	1984	03	09.04907	20	44	04.77	+45	16	49.1	168
/1983v	1984	03	21.98920	20	33	59.78	+55	01	56.0	102
/1983v	1984	03	29.69068	20	20	33.75	+61	25	48.1	168
/1983v	1984	03	29.82228	20	20	15.48	+61	32	35.0	168
/1983v	1984	03	29.83270	20	20	14.15	+61	33	03.0	168
/1983v	1984	04	06.82540	19	52	47.36	+68	22	43.8	168
/1983v	1984	04	07.78958	19	47	55.48	+69	11	18.0	168
/1983v	1984	04	17.72992	18	19	12.34	+76	33	27.3	168
/1983v	1984	04	17.75978	18	18	47.48	+76	34	32.3	168
/1983v	1984	04	18.74138	18	04	32.66	+77	06	35.8	168
/1983v	1984	04	18.78270	18	03	55.74	+77	07	53.5	168
/1983v	1984	04	18.79797	18	03	40.46	+77	08	22.6	168
/1983v	1984	04	20.85972	17	29	38.30	+78	03	23.1	102
/1983v	1984	04	22.73513	16	54	39.20	+78	36	38.9	168
/1983v	1984	04	23.73513	16	34	51.70	+78	46	58.4	168
/1983v	1984	05	03.84832	13	40	17.56	+75	51	27.1	168

Periodic Comet Clark

/1983w	1984	06	06.81389	20	25	13.31	-32	10	34.3	323
/1983w	1984	06	25.76944	20	44	08.59	-36	11	44.6	323
/1983w	1984	07	25.43704	20	43	17.98	-40	36	33.3	474
/1983w	1984	07	25.44722	20	43	17.70	-40	36	35.5	474

Periodic Comet Bradfield

/1984a	1984	04	06.85868	23	21	58.53	-49	10	28.6	323

Periodic Comet Neujmin 1

/1984c	1984	06	07.79375	18	34	46.86	-48	48	51.4	323
/1984c	1984	06	25.71597	18	23	04.61	-50	21	22.0	323
/1984c	1984	07	24.67778	18	00	17.84	-48	36	22.4	323
/1984c	1984	07	25.40046	18	00	02.99	-48	29	10.1	474
/1984c	1984	07	25.41400	18	00	02.66	-48	29	02.1	474
/1984c	1984	08	03.62558	17	59	10.83	-46	41	50.4	323
/1984c	1984	08	28.56146	18	20	31.03	-40	03	17.7	323
/1984c	1984	08	29.57569	18	22	03.82	-39	44	40.8	323
/1984c	1984	10	15.97946	20	07	42.07	-23	02	47.1	801

Periodic Comet Russell 4

/1984d	1984	04	03.89389	13	17	17.23	+02	01	09.0	114
/1984d	1984	04	04.89991	13	16	32.63	+02	03	13.6	114

Comet Shoemaker (1984f)

/1984f	1984	06	06.63194	16	24	54.40	+13	25	07.6	323
/1984f	1984	06	18.60903	16	10	50.51	+12	35	28.1	323
/1984f	1984	08	03.57743	15	30	13.34	+06	41	32.0	323
/1984f	1984	09	26.00045	15	21	57.84	-01	50	20.8	801

Periodic Comet Wolf-Harrington

/1984g	1984	09	27.42406	07	57	43.70	+17	48	44.4		657
/1984g	1984	09	29.45486	08	02	51.05	+17	10	45.4		657
/1984g	1984	09	30.51424	08	05	29.62	+16	50	42.9		657

Periodic Comet Faye

/1984h	1984	09	27.50451	07	57	20.47	+12	47	26.6		657
/1984h	1984	09	29.46806	08	01	19.59	+12	28	17.2		657
/1984h	1984	09	30.52604	08	03	26.19	+12	17	50.7		657

Comet Austin (1984i)

/1984i	1984	07	08.82812	04	55	16.73	-38	42	40.8		323
/1984i	1984	07	08.83854	04	55	42.81	-38	42	21.6		323
/1984i	1984	07	08.88472	04	57	39.81	-38	40	28.7		323
/1984i	1984	07	09.87014	05	39	14.63	-37	26	58.2		323
/1984i	1984	07	20.45243	09	29	52.06	-09	30	02.6		323
/1984i	1984	07	20.45885	09	29	55.00	-09	29	21.9		323
/1984i	1984	07	23.46007	09	48	18.20	-05	09	02.3		323
/1984i	1984	07	24.44149	09	52	41.58	-03	58	44.6		323
/1984i	1984	07	26.28119	09	59	19.18	-02	00	47.8		474
/1984i	1984	07	26.28218	09	59	19.39	-02	00	45.3		474
/1984i	1984	07	26.45104	09	59	50.23	-01	50	44.1		323
/1984i	1984	07	26.45868	09	59	51.63	-01	50	17.9		323
/1984i	1984	07	27.44688	10	02	35.85	-00	53	26.8		323
/1984i	1984	07	31.43576	10	09	29.75	+02	30	37.4		323
/1984i	1984	07	31.44167	10	09	30.10	+02	30	52.9		323
/1984i	1984	09	29.42708	07	38	21.06	+39	58	07.4		657
/1984i	1984	09	30.01863	07	35	23.74	+40	20	41.4		046
/1984i	1984	09	30.02251	07	35	22.44	+40	20	49.5		046
/1984i	1984	09	30.48542	07	32	59.46	+40	38	33.7		657
/1984i	1984	10	01.01678	07	30	11.68	+40	58	53.5		046
/1984i	1984	10	02.49549	07	21	57.06	+41	55	47.9		657
/1984i	1984	10	05.45625	07	03	19.19	+43	49	10.3		657
/1984i	1984	10	07.44931	06	49	00.32	+45	03	03.0		707
/1984i	1984	10	26.16771	03	33	24.69	+47	45	40.2		707
/1984i	1984	10	29.92569	02	55	24.65	+45	26	50.1		567
/1984i	1984	10	29.93681	02	55	18.49	+45	26	21.0		567
/1984i	1984	10	29.94687	02	55	12.32	+45	25	54.9		567
/1984i	1984	10	29.95590	02	55	06.94	+45	25	29.9		567
/1984i	1984	10	29.96424	02	55	03.37	+45	25	15.1		567
/1984i	1984	10	29.97187	02	54	59.21	+45	24	51.9		567

Periodic Comet Takamizawa

/1984j	1984	08	02.74410	21	11	37.78	-19	25	03.6		323
/1984j	1984	08	03.67188	21	11	21.31	-19	37	21.0		323
/1984j	1984	08	23.60001	21	06	30.11	-23	09	44.4		474
/1984j	1984	08	23.60823	21	06	30.02	-23	09	48.6		474
/1984j	1984	08	23.69653	21	06	29.70	-23	10	31.1		323
/1984j	1984	08	24.62326	21	06	24.66	-23	17	29.3		323
/1984j	1984	08	25.56575	21	06	19.91	-23	24	14.5		474
/1984j	1984	08	25.57200	21	06	19.84	-23	24	16.6		474
/1984j	1984	08	26.08379	21	06	18.46	-23	28	01.2		811
/1984j	1984	08	27.74375	21	06	14.28	-23	38	50.5		323
/1984j	1984	08	28.68542	21	06	14.13	-23	44	40.9		323
/1984j	1984	08	29.60417	21	06	15.16	-23	50	04.2		323
/1984j	1984	10	16.02992	21	33	55.42	-23	28	19.0	18 T	801
/1984j	1984	10	22.26878	21	40	41.36	-22	54	07.4		568
/1984j	1984	10	22.27292	21	40	41.70	-22	54	05.8		568

Periodic Comet Kowal-Mrkos

/1984n	1984	05	19.91340	13	06	58.68	-10	04 20.6	16.0T 046
/1984n	1984	05	19.92752	13	06	58.95	-10	04 18.2	046

Comet Meier (1984o)

/1984o	1984	10	06.11123	14	42	08.20	+01	30 07.6	675
/1984o	1984	10	06.11968	14	42	07.53	+01	29 54.8	675

Periodic Comet Shoemaker

/1984q	1984	09	01.25002	23	50	15.4	+10	12 24	801
/1984q	1984	09	22.05081	23	22	19.0	+15	53 56	801
/1984q	1984	09	27.22916	23	15	19.40	+16	59 20.0	13 T 675
/1984q	1984	09	28.29444	23	13	56.49	+17	11 42.3	675
/1984q	1984	10	04.16954	23	06	50.98	+18	13 31.9	675
/1984q	1984	10	04.23234	23	06	45.8	+18	14 04	801
/1984q	1984	10	05.17049	23	05	44.36	+18	22 59.3	657
/1984q	1984	10	05.23299	23	05	40.33	+18	23 33.2	657
/1984q	1984	10	05.23395	23	05	39.77	+18	23 37.6	801
/1984q	1984	10	05.24347	23	05	39.41	+18	23 42.0	675
/1984q	1984	10	06.16297	23	04	40.09	+18	32 04.8	801
/1984q	1984	10	13.45174	22	57	54.61	+19	31 18.6	13 T 372
/1984q	1984	10	13.45868	22	57	54.24	+19	31 21.7	372
/1984q	1984	10	14.09028	22	57	25.11	+19	35 54.7	688
/1984q	1984	10	14.09775	22	57	24.67	+19	35 58.6	688
/1984q	1984	10	16.05686	22	55	59.51	+19	49 29.6	801
/1984q	1984	10	16.84583	22	55	27.9	+19	54 41	017
/1984q	1984	10	16.88333	22	55	26.5	+19	54 56	017
/1984q	1984	10	16.95833	22	55	23.3	+19	55 29	017
/1984q	1984	10	17.12311	22	55	17.44	+19	56 30.3	657
/1984q	1984	10	19.14514	22	54	04.85	+20	09 16.9	707
/1984q	1984	10	25.87921	22	51	18.94	+20	47 12.8	056
/1984q	1984	10	25.92569	22	51	18.04	+20	47 25.5	056

Comet Shoemaker (1984r)

/1984r	1984	10	23.45625	03	24	53.28	+18	32 02.9	16 T 675
/1984r	1984	10	25.44722	03	22	11.80	+18	21 55.1	675
/1984r	1984	10	26.38889	03	20	54.89	+18	16 59.4	675
/1984r	1984	11	01.31319	03	12	43.02	+17	44 47.9	16.2T 688
/1984r	1984	11	02.75842	03	10	41.23	+17	36 36.8	16.8T 372
/1984r	1984	11	03.77101	03	09	15.73	+17	30 46.3	16.8T 372

Comet Shoemaker (1984s)

/1984s	1984	10	25.37708	01	57	01.21	+18	59 50.0	12 T 675
/1984s	1984	10	26.29097	01	57	05.59	+18	42 17.0	675
/1984s	1984	11	02.70694	01	57	51.90	+15	56 40.6	12 T 372
/1984s	1984	11	02.72187	01	57	52.03	+15	56 17.3	372
/1984s	1984	11	03.15631	01	57	56.96	+15	45 16.9	14 T 801
/1984s	1984	11	03.74896	01	58	01.89	+15	30 02.4	13 T 372

Note 1: re-reduction of the position on MPC 9123.

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OBSERVATIONS MADE AT HOHER LIST BY M. GEFFERT, H. SCHMITZ, S. WAGNER, D. WARNKE AND S. NINKOVIC.

Plates (103a-O, IIa-O and Orwo ZU 2 emulsions) with the 0.30-m f/5 astrograph, measured on Zeiss Ascorecord engine, linear reductions from

6-12 AGK3 reference stars. Assistance also from M. Hoffmann, T. Richtler and L. D. Schmadel. Contact: M. Geffert, Hoher List Observatory, D-5568 Daun/Eifel, Federal Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.	N	Obs.
89	1978 05	03.87153	07 28 30.54	+22 16 25.8		017
89	1978 05	03.88889	07 28 31.82	+22 16 19.5		017
110	1982 01	16.85122	06 37 57.91	+29 48 23.0		017
110	1982 01	16.87188	06 37 56.67	+29 48 25.5		017
110	1982 01	17.00035	06 37 49.37	+29 48 34.0		017
110	1982 01	17.88403	06 37 00.49	+29 49 31.5		017
110	1982 01	17.91250	06 36 58.94	+29 49 33.1		017
130	1978 02	28.95139	11 57 40.75	+14 52 25.4		017
130	1978 02	28.96944	11 57 40.08	+14 52 35.0		017
130	1978 03	01.01215	11 57 38.46	+14 52 59.4		017
130	1978 03	01.02674	11 57 37.98	+14 53 06.3		017
130	1978 03	06.93924	11 53 52.07	+15 46 11.2		017
130	1978 03	07.01424	11 53 49.02	+15 46 51.0		017
130	1978 04	06.91806	11 33 25.81	+19 22 28.8		017
130	1978 04	06.96528	11 33 24.16	+19 22 41.3		017
130	1978 04	06.99097	11 33 23.30	+19 22 47.6		017
328	1979 02	25.85972	07 53 32.03	+37 18 54.4		017
328	1979 02	25.89653	07 53 30.95	+37 18 38.4		017
328	1979 02	27.86042	07 52 40.56	+37 04 17.9		017
328	1979 02	27.88758	07 52 39.80	+37 04 05.4		017
376	1978 04	09.84722	06 44 15.32	+22 55 00.4	1	017
416	1979 02	25.85972	08 11 43.40	+37 10 27.7		017
416	1979 02	25.89653	08 11 41.84	+37 10 25.9		017
416	1979 02	27.86042	08 10 24.83	+37 08 20.2		017
416	1979 02	27.88758	08 10 23.70	+37 08 18.4		017
426	1978 05	03.87153	07 23 23.18	+22 37 28.3		017
426	1978 05	03.88889	07 23 24.53	+22 37 19.5		017
578	1980 01	18.97222	08 34 17.28	+27 46 43.6		017
578	1980 01	19.00694	08 34 15.16	+27 46 51.1		017
597	1979 02	25.85972	07 57 31.37	+38 32 59.5		017
597	1979 02	25.89653	07 57 29.97	+38 32 51.1		017
597	1979 02	27.86042	07 56 28.19	+38 26 01.6		017
597	1979 02	27.88758	07 56 27.35	+38 25 54.5		017
906	1979 02	25.85972	07 42 01.99	+37 12 16.5		017
906	1979 02	25.89653	07 42 00.98	+37 12 10.4		017
906	1979 02	27.86042	07 41 13.35	+37 06 22.4		017
906	1979 02	27.88758	07 41 12.76	+37 06 17.1		017
1113	1980 01	18.97222	08 34 45.61	+27 01 25.1		017
1113	1980 01	19.00694	08 34 43.48	+27 01 23.6		017
1278	1980 01	18.97222	08 27 54.16	+27 47 22.1		017
1278	1980 01	19.00694	08 27 51.91	+27 47 34.1		017
1308	1980 01	18.97222	08 24 07.20	+26 20 12.8		017
1308	1980 01	19.00694	08 24 05.25	+26 20 15.7		017
1450	1980 01	18.97222	08 31 33.38	+25 23 57.0		017
1450	1980 01	19.00694	08 31 31.46	+25 24 08.0		017

Note 1: remeasurement of position on MPC 8486.

OBSERVATIONS MADE AT TAUTENBURG BY F. BORNGEN AND K.-H. MAU.

Plates taken with the 1.34-m (134/200/400 cm) Schmidt. Reductions by Borngen and K. Kirsch, using SAO Catalog. Contact: S. Marx, Karl Schwarzschild Observatorium, DDR-6901 Tautenburg, Democratic Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
79	1964 03	08.81562	08 47 54.30	+11 19 08.9		033
79	1964 03	08.83229	08 47 53.90	+11 19 13.0		033
79	1964 03	08.87396	08 47 52.90	+11 19 24.5		033

79			1964	03	08.90208	08	47	52.24	+11	19	32.4	033
79			1964	03	09.81285	08	47	32.76	+11	23	38.5	12.4 033
79			1964	03	09.83021	08	47	32.40	+11	23	43.1	033
79			1964	03	09.84896	08	47	31.97	+11	23	48.0	033
79			1964	03	09.86701	08	47	31.59	+11	23	53.0	033
79			1964	03	11.83437	08	46	54.54	+11	32	25.4	033
79			1964	03	11.85174	08	46	54.23	+11	32	29.7	033
79			1964	03	11.87118	08	46	53.86	+11	32	34.7	033
79			1964	03	11.88924	08	46	53.54	+11	32	39.2	033
79			1964	03	12.80174	08	46	38.91	+11	36	28.2	033
79			1964	03	16.87187	08	45	51.35	+11	52	18.6	033
2306			1964	02	15.79132	08	47	53.01	+11	24	53.8	17.6 033
2306			1964	02	15.88924	08	47	48.02	+11	25	17.0	033
2306			1964	02	15.92326	08	47	46.34	+11	25	24.9	033
2861			1984	07	23.88785	17	50	59.65	-17	10	55.9	17.3 033
2861			1984	07	23.91389	17	50	58.72	-17	11	00.0	033
2861			1984	07	24.88750	17	50	25.08	-17	12	24.4	033
1964	CH	*	1964	02	15.79132	08	47	56.43	+12	16	19.3	15.1 033
1964	CH		1964	02	15.88924	08	47	51.50	+12	16	48.3	033
1964	CH		1964	02	15.92326	08	47	49.78	+12	16	58.2	033
1964	CJ	*	1964	02	15.79132	08	53	32.22	+13	36	03.1	17.0 033
1964	CJ		1964	02	15.88924	08	53	31.17	+13	36	18.1	033
1964	CJ		1964	02	15.92326	08	53	29.02	+13	36	24.0	033
1964	CK	*	1964	02	15.79132	08	54	51.99	+12	26	33.5	16.5 033
1964	CK		1964	02	15.88924	08	54	47.63	+12	27	08.3	033
1964	CK		1964	02	15.92326	08	54	46.15	+12	27	19.8	033
1964	EC	*	1964	03	08.81562	08	43	49.21	+11	22	31.3	033
1964	EC		1964	03	08.83229	08	43	48.84	+11	22	35.8	033
1964	EC		1964	03	08.87396	08	43	47.88	+11	22	46.0	033
1964	EC		1964	03	08.90208	08	43	47.23	+11	22	53.6	033
1964	EC		1964	03	09.81285	08	43	28.98	+11	26	48.7	16.2 033
1964	EC		1964	03	09.83021	08	43	28.62	+11	26	53.7	033
1964	EC		1964	03	09.84896	08	43	28.20	+11	26	58.3	033
1964	EC		1964	03	09.86701	08	43	27.87	+11	27	02.9	033
1964	EC		1964	03	11.83437	08	42	54.34	+11	35	10.4	033
1964	EC		1964	03	11.85174	08	42	54.06	+11	35	15.1	033
1964	EC		1964	03	11.87118	08	42	53.74	+11	35	19.8	033
1964	EC		1964	03	11.88924	08	42	53.48	+11	35	23.9	033
1964	EC		1964	03	12.80174	08	42	40.99	+11	39	01.2	033
1964	ED	*	1964	03	08.81562	08	44	43.52	+12	47	51.6	033
1964	ED		1964	03	08.83229	08	44	43.12	+12	47	54.4	033
1964	ED		1964	03	08.87396	08	44	42.10	+12	48	01.8	033
1964	ED		1964	03	08.90208	08	44	41.44	+12	48	08.0	033
1964	ED		1964	03	09.81285	08	44	20.24	+12	50	59.9	17.8 033
1964	ED		1964	03	09.83021	08	44	19.82	+12	51	03.1	033
1964	ED		1964	03	09.84896	08	44	19.42	+12	51	06.3	033
1964	ED		1964	03	09.86701	08	44	19.00	+12	51	10.0	033
1964	ED		1964	03	11.83437	08	43	36.25	+12	57	10.1	033
1964	ED		1964	03	11.85174	08	43	35.90	+12	57	13.1	033
1964	ED		1964	03	11.87118	08	43	35.48	+12	57	17.2	033
1964	ED		1964	03	11.88924	08	43	35.08	+12	57	20.4	033
1964	ED		1964	03	12.80174	08	43	16.80	+13	00	01.4	033
1984	OK	*	1984	07	23.88785	17	51	50.47	-17	34	46.1	16.0 033
1984	OK		1984	07	23.91389	17	51	49.64	-17	34	47.5	033
1984	OK		1984	07	24.88750	17	51	19.96	-17	35	16.2	033
1984	OL	*	1984	07	23.88785	17	52	19.47	-17	46	29.2	16.5 033
1984	OL		1984	07	23.91389	17	52	18.91	-17	46	40.2	033
1984	OL		1984	07	24.88750	17	51	56.36	-17	53	39.0	033

OBSERVATIONS MADE AT KLET BY A. MRKOS AND Z. VAVROVA.

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.
120	1984 08	31.95463	23 25 08.07	-02 36 55.7			046
120	1984 08	31.96887	23 25 07.34	-02 36 59.1			046
240	1984 09	01.88258	21 57 02.87	-14 43 40.7			046
240	1984 09	01.89716	21 57 02.02	-14 43 44.2			046
249	1984 09	01.88258	21 50 05.94	-13 55 24.4			046
249	1984 09	01.89716	21 50 05.00	-13 55 21.9			046
310	1984 09	20.90318	23 41 10.48	+02 01 43.8			046
310	1984 09	20.91742	23 41 09.80	+02 01 38.1			046
310	1984 09	29.87361	23 34 17.62	+01 09 55.0			046
310	1984 09	29.88958	23 34 16.81	+01 09 48.2			046
321	1984 09	27.99485	01 23 47.63	+07 03 49.0		1	046
321	1984 09	28.00903	01 23 46.97	+07 03 46.8			046
366	1984 09	02.93067	23 25 23.79	-03 34 34.0			046
366	1984 09	02.94456	23 25 23.11	-03 34 34.6			046
470	1984 09	02.93067	23 35 23.41	-01 37 50.2			046
470	1984 09	02.94456	23 35 22.77	-01 37 57.7			046
523	1984 09	29.98738	01 37 09.02	+16 21 39.8			046
523	1984 09	30.98738	01 36 28.95	+16 18 10.2			046
523	1984 10	01.00156	01 36 28.31	+16 18 07.0			046
523	1984 10	06.04417	01 32 53.50	+15 58 06.7			046
659	1984 08	31.95463	23 22 46.88	-04 21 15.0			046
659	1984 08	31.96887	23 22 46.39	-04 21 17.3			046
801	1984 09	27.89078	23 49 23.12	+01 09 14.2		1	046
801	1984 09	27.90536	23 49 22.56	+01 09 04.3			046
833	1984 09	20.98848	00 51 47.66	+10 15 51.3			046
833	1984 09	21.00278	00 51 46.97	+10 15 49.7			046
833	1984 09	27.96178	00 45 56.92	+10 10 31.8			046
833	1984 09	27.97590	00 45 56.15	+10 10 30.5			046
833	1984 09	29.94850	00 44 12.31	+10 08 09.2			046
833	1984 09	29.96285	00 44 11.47	+10 08 07.6			046
833	1984 09	30.95041	00 43 19.11	+10 06 49.0			046
833	1984 09	30.96481	00 43 18.28	+10 06 47.2			046
939	1984 09	20.98848	00 58 36.68	+09 59 12.7			046
939	1984 09	21.00276	00 58 35.93	+09 59 10.1			046
939	1984 09	29.94850	00 50 31.32	+09 28 44.4			046
939	1984 09	29.96285	00 50 30.40	+09 28 41.0			046
939	1984 09	30.95041	00 49 33.50	+09 24 37.7			046
939	1984 09	30.96481	00 49 32.64	+09 24 33.8			046
1027	1984 09	01.95851	23 52 53.66	-01 53 31.3			046
1027	1984 09	01.97269	23 52 53.06	-01 53 36.4			046
1076	1984 09	01.88258	21 51 37.41	-13 42 00.5			046
1076	1984 09	01.89716	21 51 36.50	-13 42 05.5			046
1269	1984 09	01.88258	21 57 31.48	-13 28 24.2			046
1269	1984 09	01.89716	21 57 30.92	-13 28 28.9			046
1523	1984 08	31.95463	23 14 59.68	-02 04 07.8			046
1523	1984 08	31.96887	23 14 58.66	-02 04 14.6			046
1669	1984 09	01.95851	23 46 48.40	-02 05 32.1			046
1669	1984 09	01.97269	23 46 47.84	-02 05 36.3			046
1678	1984 09	27.96178	00 42 42.75	+10 00 40.0			046
1678	1984 09	27.97590	00 42 42.06	+10 00 38.2			046
1678	1984 09	29.94850	00 41 06.21	+09 56 18.7			046
1678	1984 09	29.96285	00 41 05.54	+09 56 17.5			046
1678	1984 09	30.95041	00 40 17.31	+09 54 00.7			046
1678	1984 09	30.96481	00 40 16.58	+09 53 58.5			046

1691		1984	09	01.88258	21	46	47.63	-12	42	04.6	046
1691		1984	09	01.89716	21	46	46.94	-12	42	09.7	046
1859		1984	09	20.98848	00	47	36.18	+10	27	47.0	046
1859		1984	09	21.00278	00	47	35.49	+10	27	44.1	046
1859		1984	09	27.96178	00	42	24.89	+10	09	03.4	046
1859		1984	09	27.97590	00	42	24.31	+10	09	00.2	046
1859		1984	09	29.94850	00	40	53.62	+10	03	05.5	046
1859		1984	09	29.96285	00	40	52.94	+10	03	01.8	046
1859		1984	09	30.95041	00	40	07.47	+09	59	59.2	046
1859		1984	09	30.96481	00	40	06.87	+09	59	56.5	046
1907		1984	09	01.95851	23	52	31.70	-02	35	38.2	046
1907		1984	09	01.97269	23	52	31.07	-02	35	44.8	046
2165		1984	09	01.95851	23	47	03.33	-02	10	49.8	046
2165		1984	09	01.97269	23	47	02.84	-02	10	53.9	046
2283		1984	09	27.99485	01	22	16.61	+08	55	56.3	046
2283		1984	09	28.00903	01	22	15.95	+08	55	51.3	046
2296		1984	09	27.99485	01	21	19.45	+07	46	09.8	046
2296		1984	09	28.00903	01	21	18.69	+07	46	07.0	046
2304		1984	09	27.92532	00	07	38.13	+05	38	27.6	046
2304		1984	09	27.93956	00	07	37.31	+05	38	16.1	046
2304		1984	09	29.91238	00	06	07.07	+05	17	47.1	046
2304		1984	09	29.92656	00	06	06.25	+05	17	36.6	046
2351		1984	09	27.89078	23	39	01.46	+01	13	35.0	046
2351		1984	09	27.90536	23	39	00.74	+01	13	31.2	046
2351		1984	09	29.87361	23	37	19.39	+01	06	50.1	046
2351		1984	09	29.88958	23	37	18.43	+01	06	44.4	046
2356		1984	09	01.99294	23	58	23.74	+05	32	33.4	046
2356		1984	09	02.00752	23	58	23.26	+05	32	27.7	046
2356		1984	09	20.90318	23	46	49.25	+03	10	21.6	046
2356		1984	09	20.91742	23	46	48.80	+03	10	16.8	046
2356		1984	09	27.89078	23	42	23.09	+02	13	04.5	046
2356		1984	09	27.90536	23	42	22.41	+02	12	56.4	046
2356		1984	09	29.87361	23	41	09.81	+01	56	52.2	046
2356		1984	09	29.88958	23	41	09.15	+01	56	42.5	046
2356		1984	09	30.88079	23	40	33.01	+01	48	38.9	046
2356		1984	09	30.89508	23	40	32.56	+01	48	32.4	046
2474		1984	09	29.98738	01	41	30.48	+17	24	55.1	046
2474		1984	09	30.00150	01	41	29.86	+17	24	52.3	046
2474		1984	09	30.98738	01	40	44.71	+17	19	51.6	046
2474		1984	10	01.00156	01	40	44.04	+17	19	46.5	046
2474		1984	10	06.04417	01	36	42.90	+16	52	06.7	046
2474		1984	10	06.05829	01	36	42.17	+16	52	01.7	046
2599		1984	09	29.87361	23	33	57.94	+00	51	40.4	1 046
2599		1984	09	29.88958	23	33	56.88	+00	51	41.6	046
2718		1984	09	01.88258	21	49	05.37	-15	40	01.6	046
2718		1984	09	01.89716	21	49	04.57	-15	40	05.2	046
2740		1984	09	27.89078	23	49	41.13	+03	26	32.6	046
2740		1984	09	27.90536	23	49	40.46	+03	26	25.0	046
1942	RN	1984	08	31.95463	23	25	14.23	-03	10	47.7	046
1942	RN	1984	08	31.96887	23	25	13.68	-03	10	54.8	046
1976	YU3	1984	09	20.98848	00	44	54.30	+07	50	39.6	046
1976	YU3	1984	09	21.00278	00	44	53.70	+07	50	38.2	046
1979	SZ9	1984	09	01.88258	21	46	29.63	-13	33	43.6	046
1979	SZ9	1984	09	01.89716	21	46	29.03	-13	33	47.2	046
1980	RJ2	1984	08	28.03103	23	27	27.45	-03	19	32.9	046
1980	RJ2	1984	08	31.95463	23	24	02.98	-03	26	09.1	046
1980	RJ2	1984	08	31.96887	23	24	02.21	-03	26	11.2	046
1984	QH	1984	09	01.88258	21	46	58.80	-15	31	02.7	046
1984	QH	1984	09	01.89716	21	46	57.86	-15	31	01.7	046

1984	QJ		1984	09	01.88258	21	53	58.05	-14	26	05.7	046
1984	QJ		1984	09	01.89716	21	53	57.23	-14	26	08.8	046
1984	QN		1984	08	31.95463	23	14	07.14	-03	08	35.5	046
1984	QN		1984	08	31.96887	23	14	06.52	-03	08	36.5	046
1984	QO		1984	08	31.95463	23	14	26.18	-04	46	43.9	046
1984	QO		1984	08	31.96887	23	14	25.46	-04	46	42.5	046
1984	QQ		1984	09	01.99294	23	59	28.32	+06	24	07.9	046
1984	QQ		1984	09	02.00752	23	59	27.72	+06	24	01.8	046
1984	QQ		1984	09	02.96331	23	58	55.58	+06	17	17.4	046
1984	QQ		1984	09	02.97755	23	58	55.12	+06	17	11.1	046
1984	QQ		1984	09	20.90318	23	46	23.75	+03	36	02.3	046
1984	QQ		1984	09	20.91742	23	46	23.20	+03	35	54.7	046
1984	QQ		1984	09	27.89078	23	41	10.30	+02	23	06.9	046
1984	QQ		1984	09	27.90536	23	41	09.66	+02	22	56.2	046
1984	QQ		1984	09	29.87361	23	39	45.70	+02	02	25.8	046
1984	QQ		1984	09	29.88958	23	39	44.97	+02	02	14.4	046
1984	QQ		1984	09	30.88079	23	39	03.67	+01	51	58.0	046
1984	QQ		1984	09	30.89508	23	39	02.92	+01	51	44.4	046
1984	QK1	*	1984	08	27.86049	21	26	05.04	-11	37	29.9	16.4 046
1984	QK1		1984	08	27.87461	21	26	04.29	-11	37	43.2	046
1984	RF	*	1984	09	01.95851	23	52	03.09	-02	06	16.4	16.8 046
1984	RF		1984	09	01.97269	23	52	02.39	-02	06	19.3	046
1984	RG	*	1984	09	02.93067	23	30	38.01	-00	34	47.2	16.5 046
1984	RG		1984	09	02.94456	23	30	37.18	-00	34	55.5	046
1984	RH	*	1984	09	02.96331	23	45	51.20	+07	22	32.0	16.5 046
1984	RH		1984	09	02.97755	23	45	50.62	+07	22	29.8	046
1984	RH		1984	09	20.85035	23	32	46.24	+06	46	13.1	046
1984	RH		1984	09	20.87031	23	32	44.91	+06	46	08.4	046
1984	RH		1984	09	27.85382	23	27	37.19	+06	25	45.6	046
1984	RH		1984	09	27.86797	23	27	36.68	+06	25	42.7	046
1984	RH		1984	09	29.83391	23	26	13.20	+06	19	38.7	046
1984	RH		1984	09	29.84803	23	26	12.42	+06	19	35.1	046
1984	RH		1984	09	30.84410	23	25	30.97	+06	16	29.2	046
1984	RH		1984	09	30.85822	23	25	30.35	+06	16	26.4	046
1984	RJ	*	1984	09	01.88258	21	49	43.31	-16	04	33.1	046
1984	RJ		1984	09	01.89716	21	49	42.68	-16	04	36.0	046
1984	SU	*	1984	09	20.94560	00	08	33.08	+04	53	41.6	16.5 046
1984	SU		1984	09	20.96019	00	08	32.44	+04	53	41.4	046
1984	SU		1984	09	27.92532	00	02	54.03	+04	28	22.8	046
1984	SU		1984	09	27.93956	00	02	53.37	+04	28	21.9	046
1984	SU		1984	09	29.91238	00	01	18.14	+04	20	32.9	046
1984	SU		1984	09	29.92656	00	01	17.46	+04	20	29.4	046
1984	SU		1984	09	30.91406	00	00	30.60	+04	16	34.2	046
1984	SU		1984	09	30.92824	00	00	29.87	+04	16	29.9	046
1984	SV	*	1984	09	20.94560	00	12	07.97	+04	48	42.7	16.8 046
1984	SV		1984	09	20.96019	00	12	07.20	+04	48	41.3	046
1984	SV		1984	09	27.92532	00	05	09.30	+04	26	12.8	046
1984	SV		1984	09	27.93956	00	05	08.40	+04	26	09.9	046
1984	SV		1984	09	29.91238	00	03	09.66	+04	19	21.9	046
1984	SV		1984	09	29.92656	00	03	08.79	+04	19	18.4	046
1984	SV		1984	09	30.91406	00	02	09.51	+04	15	50.6	046
1984	SV		1984	09	30.92824	00	02	08.80	+04	15	47.7	046
1984	SW	*	1984	09	20.94560	00	12	58.76	+06	14	07.6	16.8 046
1984	SW		1984	09	20.96019	00	12	58.03	+06	14	01.5	046
1984	SW		1984	09	30.91406	00	04	11.54	+05	03	18.9	046
1984	SW		1984	09	30.92824	00	04	10.68	+05	03	12.0	046
1984	SX	*	1984	09	20.94560	00	14	12.08	+03	58	36.2	16.7 046
1984	SX		1984	09	20.96019	00	14	11.33	+03	58	32.6	046
1984	SX		1984	09	27.92532	00	07	48.36	+03	22	53.7	046

1984	SX		1984	09	27.93956	00	07	47.67	+03	22	50.9	046
1984	SX		1984	09	29.91238	00	05	59.36	+03	12	31.3	046
1984	SX		1984	09	29.92656	00	05	58.61	+03	12	27.6	046
1984	SX		1984	09	30.91406	00	05	04.87	+03	07	16.5	046
1984	SX		1984	09	30.92824	00	05	03.80	+03	07	13.5	046
1984	SY	*	1984	09	20.94560	00	17	00.57	+02	18	26.3	16.3 046
1984	SY		1984	09	20.96019	00	16	59.90	+02	18	25.6	046
1984	SZ	*	1984	09	20.98848	00	47	08.96	+10	06	48.6	17.0 046
1984	SZ		1984	09	21.00278	00	47	08.57	+10	06	50.6	046
1984	SA1	*	1984	09	20.98848	00	47	57.22	+07	30	18.8	16.3 046
1984	SA1		1984	09	21.00278	00	47	56.52	+07	30	20.5	046
1984	SA1		1984	09	27.96178	00	41	27.22	+07	22	05.8	046
1984	SA1		1984	09	27.97590	00	41	26.50	+07	22	05.5	046
1984	SA1		1984	09	29.94850	00	39	30.29	+07	18	53.8	046
1984	SA1		1984	09	29.96285	00	39	29.37	+07	18	53.8	046
1984	SA1		1984	09	30.95041	00	38	30.63	+07	17	10.5	046
1984	SA1		1984	09	30.96481	00	38	29.70	+07	17	08.4	046
1984	SB1	*	1984	09	20.98848	00	50	21.74	+08	48	35.6	16.7 046
1984	SB1		1984	09	21.00278	00	50	21.11	+08	48	34.0	046
1984	SB1		1984	09	27.96178	00	43	04.58	+08	43	20.4	046
1984	SB1		1984	09	27.97590	00	43	03.77	+08	43	20.4	046
1984	SB1		1984	09	29.94850	00	40	54.96	+08	40	41.4	046
1984	SB1		1984	09	29.96285	00	40	54.09	+08	40	40.3	046
1984	SB1		1984	09	30.95041	00	39	49.35	+08	39	09.3	046
1984	SB1		1984	09	30.96481	00	39	48.65	+08	39	07.9	046
1984	SC1	*	1984	09	20.98848	00	53	03.30	+09	00	51.1	16.2 046
1984	SC1		1984	09	21.00278	00	53	02.50	+09	00	52.2	046
1984	SC1		1984	09	27.96178	00	45	27.78	+09	23	30.8	046
1984	SC1		1984	09	27.97590	00	45	26.87	+09	23	32.4	046
1984	SC1		1984	09	29.94850	00	43	12.14	+09	28	57.2	046
1984	SC1		1984	09	29.96285	00	43	11.25	+09	28	59.3	046
1984	SC1		1984	09	30.95041	00	42	03.45	+09	31	30.7	046
1984	SC1		1984	09	30.96481	00	42	02.41	+09	31	33.7	046
1984	SD1	*	1984	09	20.98848	00	53	34.75	+10	30	47.2	17.0 046
1984	SD1		1984	09	21.00278	00	53	34.01	+10	30	47.2	046
1984	SE1	*	1984	09	27.85382	23	27	58.67	+06	14	54.5	17.0 046
1984	SE1		1984	09	27.86797	23	27	58.16	+06	14	51.0	046
1984	SE1		1984	09	29.83391	23	26	23.27	+06	09	07.2	046
1984	SE1		1984	09	29.84803	23	26	22.68	+06	09	06.7	046
1984	SE1		1984	09	30.84410	23	25	36.16	+06	06	09.1	046
1984	SE1		1984	09	30.85822	23	25	35.59	+06	06	07.7	046
1984	SF1	*	1984	09	27.89078	23	44	45.53	+04	06	45.3	16.8 046
1984	SF1		1984	09	27.90536	23	44	44.67	+04	06	39.5	046
1984	SF1		1984	09	29.87361	23	43	01.13	+03	55	25.8	046
1984	SF1		1984	09	29.88958	23	43	00.20	+03	55	19.4	046
1984	SF1		1984	09	30.88079	23	42	09.82	+03	49	39.1	046
1984	SF1		1984	09	30.89508	23	42	09.05	+03	49	34.4	046
1984	SG1	*	1984	09	27.89078	23	46	09.45	+04	06	36.9	046
1984	SG1		1984	09	27.90536	23	46	08.76	+04	06	32.2	046
1984	SG1		1984	09	29.87361	23	44	35.20	+03	56	31.3	046
1984	SG1		1984	09	29.88958	23	44	34.37	+03	56	27.6	046
1984	SG1		1984	09	30.88079	23	43	48.28	+03	51	20.9	046
1984	SG1		1984	09	30.89508	23	43	47.43	+03	51	15.7	046
1984	SH1	*	1984	09	27.89078	23	46	40.35	+01	10	28.1	16.8 046
1984	SH1		1984	09	27.90536	23	46	39.40	+01	10	28.8	046
1984	SH1		1984	09	29.87361	23	44	50.25	+01	09	03.7	046
1984	SH1		1984	09	29.88958	23	44	49.15	+01	09	05.1	046
1984	SH1		1984	09	30.88079	23	43	55.28	+01	08	19.5	046
1984	SH1		1984	09	30.89508	23	43	54.56	+01	08	18.8	046

1984	SJ1	*	1984	09	27.92532	23	58	54.09	+03	35	26.5	16.9	046
1984	SJ1		1984	09	27.93956	23	58	53.71	+03	35	22.1		046
1984	SJ1		1984	09	29.91238	23	57	18.10	+03	16	22.8		046
1984	SJ1		1984	09	29.92656	23	57	17.53	+03	16	15.2		046
1984	SJ1		1984	09	30.91406	23	56	30.92	+03	06	47.7		046
1984	SJ1		1984	09	30.92824	23	56	30.12	+03	06	40.2		046
1984	SK1	*	1984	09	27.92532	23	59	26.56	+03	24	25.8	16.6	046
1984	SK1		1984	09	27.93956	23	59	25.86	+03	24	23.1		046
1984	SK1		1984	09	29.91238	23	57	47.25	+03	19	34.1		046
1984	SK1		1984	09	29.92656	23	57	46.35	+03	19	33.1		046
1984	SK1		1984	09	30.91406	23	56	58.16	+03	17	07.2		046
1984	SK1		1984	09	30.92824	23	56	57.39	+03	17	04.8		046
1984	SL1	*	1984	09	27.92532	00	00	00.18	+02	35	03.2	16.8	046
1984	SL1		1984	09	27.93956	23	59	59.44	+02	35	03.2		046
1984	SL1		1984	09	29.91238	23	58	14.40	+02	32	43.2		046
1984	SL1		1984	09	29.92656	23	58	13.56	+02	32	41.0		046
1984	SL1		1984	09	30.91406	23	57	22.19	+02	31	31.1		046
1984	SL1		1984	09	30.92824	23	57	21.44	+02	31	28.9		046
1984	SM1	*	1984	09	27.92532	00	06	41.83	+05	32	00.6		046
1984	SM1		1984	09	27.93956	00	06	41.06	+05	32	00.0		046
1984	SM1		1984	09	29.91238	00	04	56.86	+05	30	02.9		046
1984	SM1		1984	09	29.92656	00	04	56.00	+05	30	01.4		046
1984	SM1		1984	09	30.91406	00	04	04.37	+05	28	59.3		046
1984	SM1		1984	09	30.92824	00	04	03.54	+05	28	58.2		046
1984	SN1	*	1984	09	27.96178	00	43	50.48	+06	42	20.1	16.5	046
1984	SN1		1984	09	27.97590	00	43	49.67	+06	42	16.8		046
1984	SO1	*	1984	09	27.96178	00	44	47.08	+07	08	32.1	16.9	046
1984	SO1		1984	09	27.97590	00	44	46.50	+07	08	28.8		046
1984	SO1		1984	09	29.94850	00	43	03.85	+06	55	47.8		046
1984	SO1		1984	09	29.96285	00	43	03.10	+06	55	43.0		046
1984	SO1		1984	09	30.95041	00	42	11.44	+06	49	16.3		046
1984	SO1		1984	09	30.96481	00	42	10.75	+06	49	10.9		046
1984	SP1	*	1984	09	27.96178	00	45	31.38	+06	22	48.9	17.0	046
1984	SP1		1984	09	27.97590	00	45	30.69	+06	22	46.2		046
1984	SQ1	*	1984	09	27.96178	00	48	07.68	+10	03	24.6	16.0	046
1984	SQ1		1984	09	27.97590	00	48	06.91	+10	03	28.3		046
1984	SR1	*	1984	09	27.96178	00	49	22.26	+08	27	23.8	16.8	046
1984	SR1		1984	09	27.97590	00	49	21.14	+08	27	20.1		046
1984	SR1		1984	09	29.94850	00	47	23.52	+08	15	15.2		046
1984	SR1		1984	09	29.96285	00	47	22.79	+08	15	11.3		046
1984	SR1		1984	09	30.95041	00	46	23.08	+08	09	01.5		046
1984	SR1		1984	09	30.96481	00	46	22.39	+08	08	58.3		046
1984	SS1	*	1984	09	27.96178	00	49	51.80	+09	23	38.8	16.6	046
1984	SS1		1984	09	27.97590	00	49	50.88	+09	23	33.1		046
1984	SS1		1984	09	29.94850	00	48	01.86	+09	09	33.9		046
1984	SS1		1984	09	29.96285	00	48	01.24	+09	09	29.9		046
1984	SS1		1984	09	30.95041	00	47	05.76	+09	02	16.9		046
1984	SS1		1984	09	30.96481	00	47	04.94	+09	02	10.5		046
1984	ST1	*	1984	09	27.96178	00	51	00.79	+08	42	10.1		046
1984	ST1		1984	09	27.97590	00	51	00.06	+08	42	05.2		046
1984	ST1		1984	09	29.94850	00	49	18.98	+08	31	35.3		046
1984	ST1		1984	09	29.96285	00	49	18.09	+08	31	30.1		046
1984	ST1		1984	09	30.95041	00	48	26.62	+08	26	06.6		046
1984	ST1		1984	09	30.96481	00	48	25.69	+08	26	02.4		046
1984	SU1	*	1984	09	27.99485	01	17	24.93	+08	39	44.8	17.8	046
1984	SU1		1984	09	28.00903	01	17	24.11	+08	39	51.8		046
1984	SV1	*	1984	09	29.94850	00	44	20.35	+07	08	13.1	16.8	046
1984	SV1		1984	09	29.96285	00	44	19.40	+07	08	09.8		046
1984	SV1		1984	09	30.95041	00	43	19.20	+07	04	39.7		046

1984	SV1		1984	09	30.96481	00	43	18.46	+07	04	38.0		046
1984	SW1	*	1984	09	29.94850	00	51	28.41	+08	51	25.9		046
1984	SW1		1984	09	29.96285	00	51	27.62	+08	51	21.9		046
1984	SW1		1984	09	30.95041	00	50	36.46	+08	47	10.8		046
1984	SW1		1984	09	30.96481	00	50	35.83	+08	47	06.7		046
1984	SX1	*	1984	09	29.94850	00	51	50.65	+07	16	09.9	16.0	046
1984	SX1		1984	09	29.96285	00	51	49.98	+07	16	02.4		046
1984	SX1		1984	09	30.95041	00	51	10.72	+07	07	05.7		046
1984	SX1		1984	09	30.96481	00	51	10.25	+07	06	59.1		046
1984	SY1	*	1984	09	29.98738	01	36	10.70	+17	01	48.9	16.2	046
1984	SY1		1984	09	30.00150	01	36	10.18	+17	01	44.3		046
1984	SY1		1984	09	30.98738	01	35	32.75	+16	56	14.6		046
1984	SY1		1984	10	01.00156	01	35	32.15	+16	56	09.7		046
1984	SY1		1984	10	06.05829	01	32	08.62	+16	25	25.4		046
1984	SZ1	*	1984	09	29.98738	01	42	22.76	+16	23	49.8	16.5	046
1984	SZ1		1984	09	30.00150	01	42	22.41	+16	23	51.2		046
1984	SZ1		1984	09	30.98738	01	41	42.07	+16	22	06.9		046
1984	SZ1		1984	10	01.00156	01	41	41.49	+16	22	06.4		046
1984	SZ1		1984	10	06.04417	01	37	57.46	+16	10	33.0		046
1984	SZ1		1984	10	06.05829	01	37	56.66	+16	10	31.0		046
1984	SA2	*	1984	09	29.98738	01	43	15.04	+18	59	11.3	16.8	046
1984	SA2		1984	09	30.00150	01	43	14.16	+18	59	08.8		046
1984	SA2		1984	09	30.98738	01	42	26.69	+18	57	14.2		046
1984	SA2		1984	10	01.00156	01	42	25.90	+18	57	12.0		046
1984	SA2		1984	10	06.04417	01	38	01.78	+18	44	07.3		046
1984	SA2		1984	10	06.05829	01	38	01.02	+18	44	04.1		046
1984	SB2	*	1984	09	29.98738	01	44	14.50	+17	16	53.1	16.5	046
1984	SB2		1984	09	30.00150	01	44	13.98	+17	16	37.1		046
1984	SB2		1984	09	30.98738	01	43	41.86	+16	58	05.9		046
1984	SB2		1984	10	01.00156	01	43	41.36	+16	57	50.6		046
1984	SB2		1984	10	06.04417	01	40	39.61	+15	18	25.9		046
1984	SB2		1984	10	06.05829	01	40	39.08	+15	18	11.4		046
1984	SC2	*	1984	09	29.98738	01	44	26.13	+17	20	46.6	16.8	046
1984	SC2		1984	09	30.00150	01	44	25.55	+17	20	44.6		046
1984	SC2		1984	09	30.98738	01	43	44.42	+17	18	39.6		046
1984	SC2		1984	10	01.00156	01	43	43.71	+17	18	37.9		046
1984	SC2		1984	10	06.04417	01	40	00.70	+17	06	01.6		046
1984	SC2		1984	10	06.05829	01	39	59.70	+17	05	59.1		046
1984	SD2	*	1984	09	30.95041	00	52	02.53	+07	29	45.3	17.0	046
1984	SD2		1984	09	30.96481	00	52	01.55	+07	29	44.5		046
1984	SE2	*	1984	09	30.98738	01	46	04.20	+19	03	24.4	17.0	046
1984	SE2		1984	10	01.00156	01	46	03.43	+19	03	23.9		046
1984	SE2		1984	10	06.05829	01	42	14.60	+19	02	36.3		046

Note 1: near edge of plate.

OBSERVATIONS MADE AT BRORFELDE BY K. AUGUSTESEN, P. JENSEN AND H. J. FOGH OLSEN.

Contact: H. J. Fogh Olsen, Copenhagen University Observatory, Brorfelde, DK-4340 Tollose, Denmark.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
583	1984 09	24.93403	23 40 41.68	+10 02 25.8	15.2	054
583	1984 09	29.99375	23 37 12.84	+09 35 52.3		054
911	1984 09	24.93403	23 42 25.44	+10 17 17.6	15.5	054
911	1984 09	29.99375	23 39 31.05	+10 09 47.9		054
1206	1984 09	24.93403	23 39 05.65	+10 29 39.9	16.0	054
1206	1984 09	29.99375	23 34 41.42	+10 15 01.8		054
1404	1984 09	24.93403	23 40 27.15	+09 45 11.9	16.5	054
1404	1984 09	29.99375	23 37 34.99	+09 36 31.5		054
1984 SM	* 1984 09	24.93403	23 45 14.80	+10 56 42.6	16.5	054

1984	SM		1984	09	29.99375	23	40	50.80	+10	21	24.8	054
1984	SN	*	1984	09	24.93403	23	49	30.53	+08	09	39.0	16.0	054
1984	SN		1984	09	29.99375	23	46	05.18	+07	27	34.1	054
1984	SO	*	1984	09	24.93403	23	52	39.48	+09	06	26.1	16.5	054
1984	SO		1984	09	29.99375	23	48	17.04	+08	32	11.6	054

OBSERVATIONS MADE AT TRAUNSTEIN BY R. BENDEL.

Four-min exposures with a 0.21-m f/8 Newtonian reflector, reduced using AGK3 reference stars. Contact: F. Frevert, Dilichstrasse 1, D-633 Wetzlar/ Lahn, Federal Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1182	1983 09	27.87743	23 51 25.34	+08 07 00.1	065
1182	1983 09	27.89063	23 51 24.45	+08 07 00.4	065
1182	1983 09	27.91285	23 51 23.02	+08 06 59.7	065
1182	1983 09	27.92326	23 51 22.21	+08 06 59.4	065
1182	1983 10	05.91493	23 42 47.54	+07 57 38.1	065
1182	1983 10	05.92188	23 42 47.11	+07 57 35.8	065
1182	1983 10	05.93229	23 42 46.49	+07 57 35.3	065
1182	1983 10	05.93715	23 42 46.18	+07 57 34.5	065
1182	1983 10	13.90694	23 35 24.48	+07 45 03.3	065
1182	1983 10	13.92361	23 35 23.60	+07 45 01.6	065
1182	1983 10	13.93264	23 35 23.09	+07 45 00.1	065
1182	1983 10	13.94167	23 35 22.66	+07 44 59.5	065

OBSERVATIONS MADE AT THE BULGARIAN NATIONAL OBSERVATORY, SMOLYAN, BY V. SHKODROV, V. IVANOVA AND A. THINTHAROVA.

Contact: V. Shkodrov, Department of Astronomy, Bulgarian Academy of Sciences, Sofia, Bulgaria.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1562	1984 09	23.90875	00 19 47.99	-05 10 13.0	071
1562	1984 09	23.92264	00 19 47.42	-05 10 21.5	071
1562	1984 09	23.98406	00 19 43.55	-05 10 49.8	071
1562	1984 09	23.99795	00 19 42.91	-05 10 55.2	071
2887	1984 09	23.90875	00 23 00.30	-05 13 01.0	071
2887	1984 09	23.92264	00 22 59.96	-05 13 10.8	071
2887	1984 09	23.98406	00 22 55.74	-05 13 38.5	071
2887	1984 09	23.99795	00 22 55.25	-05 13 44.7	071
1981	EP	1984 09	23.90875	00 19 52.69	-04 57 21.2	071
1981	EP	1984 09	23.92264	00 19 52.48	-04 57 29.5	071
1981	EP	1984 09	23.98406	00 19 49.75	-04 58 14.9	071
1981	EP	1984 09	23.99795	00 19 49.25	-04 58 23.4	071
1984	SH	*	1984 09	23.90875	00 09 58.41	-04 38 37.1	071
1984	SH		1984 09	23.92264	00 09 58.13	-04 38 41.2	071
1984	SH		1984 09	23.98406	00 09 54.24	-04 39 07.8	071
1984	SH		1984 09	23.99795	00 09 53.50	-04 39 14.0	071
1984	SJ	*	1984 09	23.90875	00 14 40.68	-07 46 03.6	071
1984	SJ		1984 09	23.92264	00 14 40.40	-07 46 10.4	071
1984	SJ		1984 09	23.98406	00 14 36.87	-07 46 40.0	071
1984	SJ		1984 09	23.99795	00 14 36.50	-07 46 45.1	071
1984	SK	*	1984 09	23.90875	00 17 31.11	-07 07 36.4	071
1984	SK		1984 09	23.92264	00 17 30.97	-07 07 48.5	071
1984	SK		1984 09	23.98406	00 17 28.78	-07 08 50.1	071
1984	SK		1984 09	23.99795	00 17 28.37	-07 09 00.5	071
1984	SL	*	1984 09	23.90875	00 19 12.79	-06 58 13.2	071
1984	SL		1984 09	23.92264	00 19 12.54	-06 58 24.4	071
1984	SL		1984 09	23.98406	00 19 10.17	-06 59 08.8	071
1984	SL		1984 09	23.99795	00 19 09.79	-06 59 17.4	071
1984	UB	*	1984 10	18.79865	23 50 50.91	-08 09 39.7	071
1984	UB		1984 10	18.81253	23 50 50.37	-08 09 29.9	071

1984 UB		1984	10	18.85448	23	50	46.90	-08	08	25.3	071
1984 UB		1984	10	18.86837	23	50	45.80	-08	08	07.3	071
1984 UB		1984	10	18.91860	23	50	41.87	-08	06	56.6	071
1984 UB		1984	10	18.93249	23	50	41.22	-08	06	41.4	071
1984 UB		1984	10	19.79444	23	49	40.05	-07	46	57.6	071
1984 UB		1984	10	19.80833	23	49	39.16	-07	46	41.3	071
1984 UB		1984	10	20.92094	23	48	23.32	-07	21	24.6	071
1984 UB		1984	10	20.93483	23	48	22.46	-07	21	05.0	071
1984 UB		1984	10	21.76584	23	47	29.31	-07	02	16.1	071
1984 UB		1984	10	21.77973	23	47	28.74	-07	02	02.9	071

OBSERVATIONS MADE AT GEISEI BY T. SEKI.

Copied in part from Nihondaira Obs. Circ. No. 1481. Contact: T. Seki, Kamimachi 2-9-35, Kochi, Japan.

Object		Date	UT	R. A. (1950)			Decl.			Mag.	Obs.
2090		1984	04 07.65799	13	30	42.84	-22	49	18.2	16	372
2090		1984	04 07.66979	13	30	42.23	-22	49	18.5		372
A921 VA		1984	10 25.67326	04	07	39.32	+25	02	03.6	16	372
A921 VA		1984	10 25.68715	04	07	39.01	+25	02	03.2		372
1983 TB		1984	10 25.72639	06	27	35.06	+35	59	38.3	18	372
1983 TB		1984	10 25.74375	06	27	35.17	+35	59	43.0		372
1983 WB		1984	01 07.61146	03	48	35.35	+20	11	57.7		372
1983 WB		1984	01 07.62326	03	48	35.12	+20	12	00.5		372
1984 BJ		1984	02 08.62291	07	56	39.51	+21	24	15.5		372
1984 GT	*	1984	04 07.70660	14	08	34.07	-04	33	23.8	18	372
1984 GT		1984	04 07.71354	14	08	33.73	-04	33	23.0		372
1984 GT		1984	04 07.72049	14	08	33.40	-04	33	22.8		372
1984 QB		1984	09 04.67708	22	47	44.53	+03	51	03.5	16	372
1984 QB		1984	09 04.68819	22	47	43.86	+03	51	03.4		372
1984 QB		1984	09 16.51632	22	36	46.95	+03	39	09.7		372
1984 QB		1984	09 21.67326	22	32	42.69	+03	29	58.8		372
1984 QB		1984	09 26.65209	22	29	23.36	+03	20	09.0	16.5	372
1984 QB		1984	10 13.46667	22	23	34.97	+02	50	47.9	17	372
1984 QB		1984	10 13.48750	22	23	34.98	+02	50	50.5		372
1984 QB		1984	10 25.61458	22	24	49.85	+02	42	53.8	18	372
1984 QB		1984	10 25.62778	22	24	50.04	+02	42	52.9		372
1984 QC		1984	09 04.69965	22	52	58.88	+03	43	23.6	13.5	372
1984 QC		1984	09 04.71181	22	52	58.25	+03	43	23.0		372
1984 QC		1984	09 16.53264	22	43	14.78	+03	19	04.7	15	372
1984 QC		1984	09 16.54618	22	43	14.04	+03	19	02.5		372
1984 QC		1984	09 26.67083	22	35	53.07	+02	52	51.9	15	372
1984 QC		1984	09 26.68125	22	35	52.70	+02	52	51.2		372
1984 TA	*	1984	10 13.46667	22	21	12.42	+02	23	05.8	17	372
1984 TA		1984	10 13.48750	22	21	12.02	+02	23	04.0		372
1984 UA	*	1984	10 21.62708	02	08	44.11	+23	32	25.9	16.5	372
1984 UA		1984	10 22.53125	02	07	54.74	+23	24	42.5	16	372
1984 UA		1984	10 25.64410	02	05	02.68	+22	57	03.8	17	372
1984 UA		1984	10 25.65799	02	05	01.83	+22	56	56.0		372
1984 VA	*	1984	11 02.75842	03	10	32.11	+17	18	40.2	17	372
1984 VA		1984	11 03.76354	03	09	43.38	+17	16	47.0	17	372
1984 VA		1984	11 03.77847	03	09	42.63	+17	16	45.8		372

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. Computational support from R. McIntosh and W. M. Kissling. Reductions using field plates from the Carter Observatory, AGK3, SAO Catalog and Cape Photographic Catalogue. Contact: A. C. Gilmore, P.O. Box 57, Lake Tekapo, New Zealand.

Object		Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
2063		1984 07	25.67662	00 50 47.91	-29 08 33.9			474
2063		1984 07	25.70370	00 50 52.59	-29 08 53.0			474
2063		1984 08	23.72293	03 06 23.50	-36 17 03.2			474
2063		1984 08	23.74723	03 06 34.42	-36 17 21.6			474
2710		1982 06	23.41341	13 27 39.70	-04 43 23.7			474
2710		1982 06	23.43587	13 27 40.90	-04 43 32.9			474
3017		1983 02	14.58713	12 12 46.46	-20 25 48.4			474
3017		1983 02	14.61653	12 12 45.82	-20 25 54.4			474
3022		1984 02	27.40428	06 43 54.73	-08 01 48.0			474
3022		1984 02	27.42616	06 43 55.44	-08 01 18.8			474
3122		1984 07	17.35729	14 52 24.18	-65 49 13.0			474
3122		1984 07	17.37396	14 52 23.99	-65 48 49.0			474
1966	AA	1984 07	26.38125	16 00 00.92	-25 52 53.6			474
1966	AA	1984 07	26.41435	16 00 01.16	-25 52 43.9			474
1975	XY1	1984 05	27.44063	12 36 01.38	-25 45 27.7			474
1975	XY1	1984 05	27.47164	12 36 01.92	-25 45 00.7			474
1981	PB	1984 07	18.38796	17 29 24.68	-35 22 51.2			474
1981	PB	1984 07	18.41019	17 29 24.51	-35 22 43.7			474
1981	QC	1984 07	04.49282	17 05 59.19	-39 33 11.2			474
1981	QC	1984 07	18.32778	16 50 39.48	-40 14 54.4			474
1981	QC	1984 07	18.35671	16 50 37.94	-40 14 58.6			474
1982	DA	1984 09	21.62519	04 44 27.65	-16 52 53.9	18.1		474
1982	DA	1984 09	21.68161	04 44 32.85	-16 54 00.4			474
1982	HR	1982 05	27.43324	14 56 59.12	-04 48 40.0			474
1982	HR	1982 05	27.46218	14 56 57.80	-04 48 55.1			474
1982	RA	1984 08	23.62050	23 11 19.19	-30 49 00.5			474
1982	RA	1984 08	23.62779	23 11 16.83	-30 48 34.2			474
1983	CW1	1984 04	23.65266	16 22 36.24	-37 19 30.0			474
1983	CW1	1984 04	23.67587	16 22 35.43	-37 19 33.0			474
1984	KD	1984 08	23.66344	02 58 51.46	-37 59 55.7			474
1984	KD	1984 08	23.69353	02 58 48.42	-37 59 50.6			474
1984	QA	1984 09	17.43647	22 59 39.15	-23 32 26.5			474
1984	QA	1984 09	17.45418	22 59 35.91	-23 32 47.0			474
1984	SP *	1984 09	17.35406	15 48 51.34	-19 11 06.3		1	474
1984	SP	1984 09	17.39747	15 48 54.58	-19 11 18.1		1	474
1984	SP	1984 09	18.33531	15 50 09.92	-19 15 27.0		1	474
1984	SP	1984 09	18.37883	15 50 13.84	-19 15 38.2		1	474
1984	SP	1984 09	23.35626	15 57 03.65	-19 37 20.6	18.3		474
1984	SP	1984 09	23.39885	15 57 07.27	-19 37 32.6			474

Note 1: trailed image.

OBSERVATIONS MADE AT LINZ BY E. MEYER.

Contact: F. Frevert, Dilichstrasse 1, D-633 Wetzlar/Lahn, Federal Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1160	1984 02	21.86458	07 18 09.69	+41 07 25.4	540
1160	1984 02	21.87637	07 18 09.45	+41 07 20.6	540
1160	1984 02	21.88819	07 18 09.16	+41 07 15.6	540
1160	1984 02	21.90021	07 18 08.82	+41 07 10.5	540
1160	1984 02	29.91389	07 16 08.34	+40 04 34.3	540
1160	1984 02	29.92431	07 16 08.19	+40 04 29.7	540
1160	1984 02	29.93542	07 16 08.10	+40 04 25.5	540

OBSERVATIONS MADE AT REINTAL BY F. SEILER.

Observations with a 0.30-m f/6 reflector, SAO reference stars. Contact: F. Frevert, Dilichstrasse 1, D-633 Wetzlar/Lahn, Federal Republic of Germany.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1006	1984 09	01.88403	21 21 09.69	-04 52 41.1	556
1006	1984 09	01.89097	21 21 09.29	-04 52 41.6	556
1006	1984 09	01.89792	21 21 08.93	-04 52 40.4	556
1065	1984 07	30.91319	21 15 38.64	-23 34 33.6	556
1065	1984 07	30.93403	21 15 37.64	-23 34 25.2	556
1065	1984 07	30.94097	21 15 37.10	-23 34 21.0	556

OBSERVATIONS MADE AT THE OSSERVATORIO CHAONIS.

Plates taken with the 0.40-m f/4.5 reflector by C. R. Baur and J. M. Baur, blinked by G. Carniel, measured and reduced by J. M. Baur using 4 or 5 reference stars from the SAO Catalog or AGK3. Reconstruction of reference-star positions from the plate constants yields mean residuals of 0".2 to 0".7. Contact: J. M. Baur, Via Zara 20, I-33083 Chions, Italy.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
2806	1984 10	29.05625	03 57 18.75	+16 44 40.1	16.3	567
2806	1984 10	29.07014	03 57 17.92	+16 44 34.0		567
2806	1984 10	31.00417	03 55 48.41	+16 39 35.1		567
2806	1984 10	31.01805	03 55 47.34	+16 39 33.2		567
2806	1984 10	31.03194	03 55 46.48	+16 39 29.9		567
1949 QC	1984 10	28.88264	00 54 24.23	-09 42 16.6	16.1	567
1949 QC	1984 10	28.89653	00 54 23.71	-09 42 12.5		567
1979 SF9	1984 10	30.89722	01 14 08.49	+03 50 35.6	16.4	567
1979 SF9	1984 10	30.91111	01 14 07.93	+03 50 32.4		567
1979 SF9	1984 10	30.92500	01 14 07.32	+03 50 29.2		567
1979 SS11	1984 10	29.87569	01 45 08.49	+11 07 22.8	16.6	567
1979 SS11	1984 10	29.88958	01 45 07.68	+11 07 20.7		567
1979 SS11	1984 10	29.90347	01 45 07.01	+11 07 17.5		567
1981 XF2	1984 10	28.94583	01 55 10.40	+06 28 15.6	16.3	567
1981 XF2	1984 10	28.95972	01 55 09.29	+06 28 12.7		567

OBSERVATIONS MADE AT MAUNA KEA BY E. TEDESCO, D. GRIEP, M. A. BARUCCI AND J. GRADIE.

Observations made using the encoders at the Infrared Telescope Facility. Contact: E. F. Tedesco, Jet Propulsion Laboratory, MS 183-501, 4800 Oak Grove Drive, Pasadena, CA 91109, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
1971 SC	1984 10	21.30000	23 49 48.04	-18 05 50.4	568
1971 SC	1984 10	22.30799	23 51 10.53	-18 09 47.7	568
1982 RA	1984 10	21.26979	19 35 47.87	+36 31 00.6	568
1982 RA	1984 10	22.27778	19 35 25.56	+36 56 07.2	568
1983 TB	1984 10	23.61707	06 27 12.15	+35 49 30.0	568
1984 KD	1984 10	21.34861	01 03 43.28	-25 24 33.5	568
1984 KD	1984 10	21.39097	01 03 40.22	-25 23 36.1	568
1984 KD	1984 10	22.38264	01 02 34.23	-25 01 30.2	568
1984 KD	1984 10	22.40625	01 02 32.55	-25 00 58.4	568

OBSERVATION MADE AT VICTORIA BY D. D. BALAM.

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.	Obs.
1982 RA	1984 09	19.19677	20 40 01.24	+11 09 34.8	657

OBSERVATIONS MADE WITH THE 1.2-M SCHMIDT AT PALOMAR BY C. KOWAL.

Contact: C. Kowal, Department of Astrophysics, California Institute of Technology, Pasadena, CA 91125, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
1984 QL1 *	1984 08	29.33125	22 47 34.88	+06 25 02.8	17.0	675
1984 QL1	1984 08	29.38333	22 47 34.56	+06 25 00.3		675

1984 QL1	1984 08 31.29722	22 47 33.33	+06 22 16.4		17.0		675
1984 QL1	1984 08 31.34931	22 47 33.02	+06 22 11.9				675

OBSERVATIONS MADE WITH THE 1.2-M SCHMIDT AT PALOMAR BY E. HELIN, R. S. DUNBAR AND M. A. BARUCCI.

Contact: E. Helin, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A. Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A.

Object		Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
1984 KD		1984 09	22.44028	01 56 53.06	-34 33 29.8			675
1984 KD		1984 09	22.45417	01 56 51.33	-34 33 11.3			675
1984 QR		1984 09	20.22153	23 35 42.31	+30 37 27.9			675
1984 QR		1984 09	20.23542	23 35 41.07	+30 37 39.1			675
1984 QR		1984 09	24.22292	23 29 14.99	+31 30 41.6			675
1984 QR		1984 09	24.23681	23 29 13.69	+31 30 50.2			675
1984 RA		1984 09	20.28819	23 34 23.26	-29 31 19.4			675
1984 RA		1984 09	20.30208	23 34 22.59	-29 31 32.2			675
1984 SE	*	1984 09	21.22083	23 56 44.62	+03 54 50.0	17.5	1	675
1984 SE		1984 09	21.24861	23 56 43.49	+03 54 20.8			675
1984 SF	*	1984 09	21.22083	00 11 56.18	+06 32 13.4	17.0	1	675
1984 SF		1984 09	21.24861	00 11 53.39	+06 32 32.8			675
1984 SG	*	1984 09	21.22083	00 13 45.00	+04 12 34.9	18.0	1	675
1984 SG		1984 09	21.24861	00 13 42.39	+04 12 50.0			675

Note 1: discoverers Helin and Dunbar.

OBSERVATIONS MADE AT PALOMAR BY C. SHOEMAKER AND E. SHOEMAKER.

Four-minute exposures with the 0.46-m Schmidt telescope. Film pairs scanned by C. Shoemaker with a stereomicroscope; measured by her with a Mann comparator at the U.S. Geological Survey. Reference stars from the SAO Catalog. Contact: C. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A.

Object		Date	UT	R. A. (1950)	Decl.	Mag.	Obs.
2099		1984 09	28.48611	01 23 37.11	+41 58 17.1		675
2099		1984 09	28.50277	01 23 37.54	+41 57 48.0		675
1984 QR		1984 09	28.28472	23 22 38.62	+32 15 49.0	16	675
1984 QR		1984 09	29.29444	23 21 01.15	+32 25 37.3		675
1984 SR	*	1984 09	26.41388	00 31 00.22	+09 51 52.3	16	675
1984 SR		1984 09	27.29444	00 29 25.88	+10 09 02.7		675
1984 SS	*	1984 09	28.28472	23 13 17.55	+31 03 20.1	16.5	675
1984 SS		1984 09	29.29444	23 13 14.46	+30 34 35.9		675
1984 ST	*	1984 09	28.48611	01 32 02.57	+41 58 29.4		675
1984 ST		1984 09	28.50277	01 32 01.39	+41 58 57.0	17.8	675

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

Plates with the 0.33-m photographic telescope. Observers S. J. Bus and and B. A. Skiff. Measured by Bus and Skiff using a PDS scanning microdensitometer. SAO reference stars, global solutions. 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.
26	1984 09	25.28819	23 47 40.36	-05 52 53.5			688
26	1984 09	25.31875	23 47 38.74	-05 53 01.3			688
26	1984 09	28.24722	23 45 10.70	-06 05 10.4			688
26	1984 09	28.27778	23 45 09.13	-06 05 17.6			688
47	1984 09	28.14861	23 04 01.75	-07 37 17.7			688
47	1984 09	28.20139	23 03 59.49	-07 37 23.1			688
113	1983 12	09.32917	06 42 23.62	+18 41 21.8			688
113	1983 12	09.37361	06 42 21.33	+18 41 25.7			688
118	1984 09	25.20139	22 15 29.48	-22 46 55.2			688
118	1984 09	25.25417	22 15 27.24	-22 46 52.4			688
120	1984 09	25.22014	23 06 35.24	-03 50 07.6			688
120	1984 09	25.27292	23 06 32.93	-03 50 16.9			688

120	1984	09	28.14861	23	04	33.56	-03	58	11.8	688
120	1984	09	28.20139	23	04	31.33	-03	58	20.7	688
131	1984	09	28.35764	01	39	06.79	+03	57	04.1	688
131	1984	09	28.40556	01	39	04.36	+03	56	52.0	688
291	1984	09	28.35764	01	45	19.82	+08	50	56.2	688
291	1984	09	28.40556	01	45	17.59	+08	50	40.5	688
301	1984	09	28.30833	00	19	39.71	-03	27	12.2	688
301	1984	09	28.33889	00	19	38.12	-03	27	24.0	688
308	1984	09	28.35764	01	36	54.58	+08	02	46.3	688
308	1984	09	28.40556	01	36	52.54	+08	02	29.8	688
310	1984	09	25.30347	23	37	44.62	+01	36	16.0	688
310	1984	09	25.33403	23	37	43.28	+01	36	05.6	688
310	1984	09	28.29306	23	35	28.03	+01	19	00.9	688
310	1984	09	28.32361	23	35	26.84	+01	18	47.8	688
366	1984	09	25.22014	23	07	08.29	-04	13	07.4	688
366	1984	09	25.27292	23	07	05.80	-04	13	12.2	688
366	1984	09	28.14861	23	04	58.53	-04	17	15.4	688
366	1984	09	28.20139	23	04	56.18	-04	17	20.0	688
636	1984	09	28.35764	01	55	02.09	+08	23	56.6	688
636	1984	09	28.40556	01	54	59.94	+08	23	53.4	688
659	1984	09	25.22014	23	10	24.50	-05	23	30.0	688
659	1984	09	25.27292	23	10	22.97	-05	23	37.7	688
701	1984	09	28.23194	23	13	47.72	+05	30	54.8	688
701	1984	09	28.26250	23	13	46.49	+05	30	44.0	688
727	1984	09	25.20139	22	05	01.50	-23	16	27.9	688
727	1984	09	25.25417	22	04	59.94	-23	16	44.1	688
801	1984	09	25.30347	23	51	19.65	+01	35	10.2	688
801	1984	09	25.33403	23	51	18.27	+01	34	50.7	688
801	1984	09	28.29306	23	49	04.98	+01	05	13.6	16.0 688
801	1984	09	28.32361	23	49	03.79	+01	04	51.6	688
844	1984	09	28.23194	23	28	41.46	-01	23	12.3	688
844	1984	09	28.26250	23	28	40.03	-01	23	16.4	688
892	1984	09	28.30833	00	16	41.10	-02	57	59.4	688
892	1984	09	28.33889	00	16	39.89	-02	58	17.0	688
1003	1984	09	25.18264	21	14	22.94	-16	24	22.3	688
1003	1984	09	25.23542	21	14	21.97	-16	24	27.7	688
1013	1984	09	28.35764	01	51	46.83	+09	09	33.1	688
1013	1984	09	28.40556	01	51	44.52	+09	09	31.5	688
1133	1984	09	28.30833	00	24	03.08	-08	14	18.6	688
1133	1984	09	28.33889	00	24	01.22	-08	14	22.3	688
1143	1984	09	25.22014	22	57	13.08	-03	22	33.2	688
1143	1984	09	25.27292	22	57	11.74	-03	22	43.2	688
1143	1984	09	28.14861	22	56	00.02	-03	31	26.4	16.8 688
1143	1984	09	28.16389	22	55	59.80	-03	31	28.8	688
1143	1984	09	28.20139	22	55	58.71	-03	31	36.5	688
1143	1984	09	28.21667	22	55	58.42	-03	31	36.6	688
1159	1984	09	25.22014	22	50	51.93	-06	05	10.5	688
1159	1984	09	25.27292	22	50	48.87	-06	05	06.5	688
1159	1984	09	28.14861	22	48	12.76	-06	00	58.5	688
1265	1984	09	25.18264	21	17	23.88	-11	44	16.4	16.5 688
1265	1984	09	25.23542	21	17	22.76	-11	44	16.7	688
1290	1984	09	28.16389	23	11	20.61	+03	49	17.2	688
1290	1984	09	28.21667	23	11	17.88	+03	49	04.9	688
1290	1984	09	28.23194	23	11	17.05	+03	49	00.6	688
1290	1984	09	28.26250	23	11	15.45	+03	48	53.4	688
1330	1984	09	25.18264	21	24	02.36	-12	20	01.0	688
1330	1984	09	25.23542	21	24	01.50	-12	20	17.9	688
1508	1984	09	28.30833	00	19	29.59	-09	17	34.5	15.8 688
1508	1984	09	28.33889	00	19	26.99	-09	17	30.5	688

1523	1984	09	25.22014	22	50	59.73	-03	43	25.3		1	688
1523	1984	09	25.27292	22	50	56.90	-03	43	37.1			688
1523	1984	09	28.14861	22	48	32.03	-03	54	16.9	17.0	1	688
1523	1984	09	28.20139	22	48	29.28	-03	54	27.1			688
1539	1984	09	25.18264	21	14	57.74	-16	19	58.3			688
1539	1984	09	25.23542	21	14	57.03	-16	20	02.2			688
1562	1984	09	28.30833	00	15	37.79	-05	43	03.0	15.5		688
1562	1984	09	28.33889	00	15	35.99	-05	43	16.6			688
1658	1983	12	09.32917	06	43	27.35	+22	25	07.8	16.5	1	688
1658	1983	12	09.37361	06	43	24.77	+22	25	18.4			688
1671	1984	09	28.35764	01	43	03.93	+08	04	23.1	15.5		688
1671	1984	09	28.40556	01	43	02.41	+08	04	05.4			688
1680	1984	09	28.30833	00	18	42.93	-04	55	30.1			688
1680	1984	09	28.33889	00	18	41.35	-04	55	39.3			688
1745	1984	09	25.28819	23	46	55.77	-06	54	51.0			688
1745	1984	09	25.31875	23	46	54.25	-06	54	58.7			688
1745	1984	09	28.24722	23	44	36.32	-07	08	03.0			688
1745	1984	09	28.27778	23	44	34.85	-07	08	10.3			688
1748	1983	12	09.32917	06	30	38.81	+20	56	57.5	17.2		688
1748	1983	12	09.37361	06	30	37.08	+20	57	00.3			688
1774	1983	12	09.32917	06	23	30.16	+20	28	38.5			688
1774	1983	12	09.37361	06	23	27.55	+20	28	38.6			688
1814	1984	09	25.28819	23	38	22.38	-05	44	43.3			688
1814	1984	09	25.31875	23	38	20.38	-05	44	50.9			688
1814	1984	09	28.24722	23	35	21.65	-05	55	34.6			688
1814	1984	09	28.27778	23	35	19.69	-05	55	40.6			688
1822	1983	12	09.32917	06	43	17.92	+21	53	54.2			688
1822	1983	12	09.37361	06	43	15.39	+21	53	55.9			688
1854	1984	09	28.35764	01	45	19.34	+09	26	18.7			688
1854	1984	09	28.40556	01	45	17.50	+09	26	00.7			688
1903	1984	09	25.28819	23	50	15.65	-12	36	24.7			688
1903	1984	09	25.31875	23	50	14.30	-12	36	37.0			688
1907	1984	09	25.28819	23	33	36.08	-05	07	46.9			688
1907	1984	09	25.31875	23	33	34.45	-05	07	58.2			688
1907	1984	09	28.24722	23	31	15.06	-05	25	41.0			688
1907	1984	09	28.27778	23	31	13.56	-05	25	52.5			688
1955	1983	12	09.32917	06	38	36.25	+22	49	03.0	16.5		688
1955	1983	12	09.37361	06	38	34.13	+22	49	04.0			688
1983	1984	09	25.28819	23	32	37.69	-11	28	17.4			688
1983	1984	09	25.31875	23	32	35.86	-11	28	18.8			688
1983	1984	09	28.24722	23	29	54.43	-11	28	51.0			688
1983	1984	09	28.27778	23	29	52.73	-11	28	50.0			688
1986	1984	09	28.35764	01	43	29.28	+07	42	57.5			688
1986	1984	09	28.40556	01	43	27.57	+07	42	45.2			688
2008	1984	09	28.30833	00	20	50.55	-04	24	12.7			688
2008	1984	09	28.33889	00	20	48.95	-04	24	14.1			688
2009	1984	09	28.30833	00	09	06.69	-03	21	48.5			688
2009	1984	09	28.33889	00	09	05.23	-03	21	56.6			688
2017	1984	09	25.18264	21	10	47.58	-14	16	04.5			688
2017	1984	09	25.23542	21	10	48.56	-14	16	13.6			688
2088	1984	09	28.29306	23	55	43.25	-00	00	28.6			688
2088	1984	09	28.32361	23	55	41.30	-00	00	36.1			688
2132	1984	09	25.28819	23	43	57.53	-11	53	23.5			688
2132	1984	09	25.31875	23	43	55.94	-11	53	31.9			688
2132	1984	09	28.24722	23	41	34.83	-12	05	18.0			688
2132	1984	09	28.27778	23	41	33.39	-12	05	24.8			688
2194	1984	09	28.35764	01	46	01.86	+03	22	43.8			688
2194	1984	09	28.40556	01	45	59.39	+03	22	36.5			688
2222	1983	12	09.32917	06	37	12.10	+22	51	10.0			688

2222		1983	12	09.37361	06	37	10.05	+22	51	14.1			688
2225		1984	09	25.28819	23	24	30.42	-09	12	24.6			688
2225		1984	09	25.31875	23	24	28.94	-09	12	33.1			688
2225		1984	09	28.24722	23	22	19.19	-09	24	38.1			688
2225		1984	09	28.27778	23	22	18.05	-09	24	46.6			688
2254		1984	09	25.18264	21	24	54.60	-15	03	22.9			688
2254		1984	09	25.23542	21	24	54.05	-15	03	13.8			688
2297		1984	09	28.35764	01	40	07.78	+08	20	49.2			688
2297		1984	09	28.40556	01	40	05.91	+08	20	36.8			688
2317		1984	09	28.29306	23	52	34.97	+00	02	22.2			688
2317		1984	09	28.32361	23	52	33.64	+00	02	06.1			688
2351		1984	09	25.30347	23	41	18.54	+01	22	32.8			688
2351		1984	09	25.33403	23	41	16.91	+01	22	25.5			688
2351		1984	09	28.29306	23	38	40.38	+01	12	14.8			688
2351		1984	09	28.32361	23	38	38.92	+01	12	06.9			688
2356		1984	09	25.30347	23	44	00.31	+02	34	21.3			688
2356		1984	09	25.33403	23	43	59.24	+02	34	06.4			688
2356		1984	09	28.29306	23	42	07.70	+02	09	48.7			688
2356		1984	09	28.32361	23	42	06.84	+02	09	32.8			688
2401		1984	09	25.28819	23	34	22.70	-08	51	16.8			688
2401		1984	09	25.31875	23	34	20.93	-08	51	22.5		1	688
2401		1984	09	28.24722	23	31	59.81	-09	01	54.6			688
2401		1984	09	28.27778	23	31	58.46	-09	02	01.5			688
2456		1984	09	25.18264	21	24	13.24	-15	29	08.4			688
2456		1984	09	25.23542	21	24	12.24	-15	29	08.1			688
2483		1984	09	28.16389	23	09	16.48	+01	09	12.3	17.5		688
2483		1984	09	28.21667	23	09	14.71	+01	08	57.6			688
2483		1984	09	28.23194	23	09	14.11	+01	08	54.5	17.2		688
2483		1984	09	28.26250	23	09	13.16	+01	08	47.0			688
2500		1984	09	28.24722	23	48	48.14	-11	01	39.7			688
2500		1984	09	28.27778	23	48	46.08	-11	01	44.8			688
2510		1983	12	09.32917	06	43	34.89	+21	24	51.7		1	688
2510		1983	12	09.37361	06	43	31.61	+21	25	02.3		1	688
2599		1984	09	25.30347	23	39	03.42	+00	37	55.3			688
2599		1984	09	25.33403	23	39	01.33	+00	38	00.3			688
2599		1984	09	28.29306	23	35	41.33	+00	46	55.8	15.5		688
2599		1984	09	28.32361	23	35	39.45	+00	47	00.7			688
2681		1984	09	28.30833	00	24	28.62	-03	11	17.0			688
2681		1984	09	28.33889	00	24	27.03	-03	11	27.3			688
2740		1984	09	25.30347	23	51	28.16	+03	46	39.7			688
2740		1984	09	25.33403	23	51	26.90	+03	46	25.5			688
2740		1984	09	28.29306	23	49	24.27	+03	23	24.6			688
2740		1984	09	28.32361	23	49	23.25	+03	23	09.8			688
2884		1984	09	28.35764	01	47	34.09	+09	55	43.5			688
2884		1984	09	28.40556	01	47	32.28	+09	55	35.0			688
2887		1984	09	28.30833	00	18	47.20	-05	43	49.3	16.8		688
2887		1984	09	28.33889	00	18	45.40	-05	44	03.3			688
2905		1984	09	25.28819	23	40	52.77	-05	27	56.9	17.2		688
2905		1984	09	25.31875	23	40	51.22	-05	28	01.2			688
2905		1984	09	28.24722	23	38	21.27	-05	35	02.7	17.2		688
2905		1984	09	28.27778	23	38	19.79	-05	35	06.7			688
2909		1984	09	25.20139	22	15	23.94	-28	03	29.0	16.5		688
2909		1984	09	25.25417	22	15	22.10	-28	03	29.7			688
1940	WL	1984	09	25.28819	23	37	47.91	-09	03	09.2	16.2		688
1940	WL	1984	09	25.31875	23	37	46.54	-09	03	16.9			688
1940	WL	1984	09	28.24722	23	35	45.04	-09	16	45.0	16.5		688
1940	WL	1984	09	28.27778	23	35	43.75	-09	16	52.8			688
1942	RN	1984	09	25.22014	23	06	39.00	-06	42	38.1	16.0		688
1942	RN	1984	09	25.27292	23	06	36.66	-06	43	04.7			688

1942	RN	1984	09	28.14861	23	04	36.33	-07	06	26.3	16.0	688
1942	RN	1984	09	28.20139	23	04	34.09	-07	06	50.9		688
1973	SX3	1984	09	28.30833	00	19	58.38	-06	04	30.2	16.0	688
1973	SX3	1984	09	28.33889	00	19	56.91	-06	04	35.4		688
1974	SO2	1984	09	28.16389	23	12	59.71	+04	03	52.2	16.8	688
1974	SO2	1984	09	28.21667	23	12	57.11	+04	03	30.8		688
1974	SO2	1984	09	28.23194	23	12	56.26	+04	03	22.0	16.5	688
1974	SO2	1984	09	28.26250	23	12	54.57	+04	03	08.3		688
1976	SU2	1984	09	25.22014	22	48	01.42	-00	04	53.3	16.5	688
1976	SU2	1984	09	25.27292	22	47	59.49	-00	05	30.3		688
1976	SU2	1984	09	28.14861	22	46	20.92	-00	39	27.8	16.8	688
1976	SU2	1984	09	28.20139	22	46	19.02	-00	40	05.0		688
1979	SF9	1984	09	28.35764	01	38	42.31	+06	32	52.8	16.2	688
1979	SF9	1984	09	28.40556	01	38	40.27	+06	32	38.6		688
1980	LE	1984	09	25.30347	23	48	45.81	+06	27	15.0	16.8	688
1980	LE	1984	09	25.33403	23	48	44.21	+06	27	05.6		688
1980	LE	1984	09	28.29306	23	45	55.49	+06	12	30.8	17.2	688
1980	LE	1984	09	28.32361	23	45	54.00	+06	12	20.3		688
1980	RJ2	1984	09	25.22014	23	00	13.58	-04	19	03.0	16.2	688
1980	RJ2	1984	09	25.27292	23	00	10.59	-04	19	10.3		688
1980	TB5	1984	09	25.30347	23	53	46.72	+03	39	46.4	16.8	688
1980	TB5	1984	09	25.33403	23	53	44.82	+03	39	43.9		688
1980	TB5	1984	09	28.29306	23	50	39.42	+03	35	38.4	16.5	688
1980	TB5	1984	09	28.32361	23	50	37.72	+03	35	34.9		688
1980	YH	1984	09	25.20139	22	05	06.62	-23	58	39.5	17.2	688
1980	YH	1984	09	25.25417	22	05	05.06	-23	58	52.0		688
1981	EP	1984	09	28.30833	00	16	59.41	-05	48	46.4	16.8	688
1981	EP	1984	09	28.33889	00	16	58.22	-05	49	08.9		688
1984	QN	1984	09	25.22014	22	52	53.31	-03	45	11.4	16.8	688
1984	QN	1984	09	25.27292	22	52	50.88	-03	45	14.6		688
1984	QN	1984	09	28.14861	22	50	50.91	-03	48	28.6	16.8	688
1984	QN	1984	09	28.20139	22	50	48.85	-03	48	31.5		688
1984	QO	1984	09	25.22014	22	47	20.35	-04	31	49.8	16.5	688
1984	QO	1984	09	25.27292	22	47	17.04	-04	31	47.1		688
1984	QO	1984	09	28.14861	22	44	25.49	-04	28	38.9	16.5	688
1984	QO	1984	09	28.20139	22	44	22.43	-04	28	34.4		688
1984	QH1	1984	09	25.22014	23	06	55.27	-00	21	28.5	16.5	688
1984	QH1	1984	09	25.27292	23	06	52.69	-00	21	38.1		688
1984	QH1	1984	09	28.14861	23	04	42.36	-00	30	41.2	16.8	688
1984	QH1	1984	09	28.16389	23	04	41.53	-00	30	45.4	17.0	688
1984	QH1	1984	09	28.20139	23	04	39.87	-00	30	51.2		688
1984	QH1	1984	09	28.21667	23	04	39.21	-00	30	55.5		688
1984	QJ1	1984	09	28.16389	23	16	41.40	-00	00	43.9	16.5	688
1984	QJ1	1984	09	28.21667	23	16	39.47	-00	01	11.4		688
1984	QJ1	1984	09	28.23194	23	16	38.94	-00	01	18.8	16.5	688
1984	QJ1	1984	09	28.26250	23	16	37.78	-00	01	35.2		688
1984	SH	1984	09	28.30833	00	05	44.09	-05	07	29.1	16.5	688
1984	SH	1984	09	28.33889	00	05	42.28	-05	07	42.0		688
1984	SL	1984	09	28.30833	00	16	48.88	-07	51	15.1	15.5	688
1984	SL	1984	09	28.33889	00	16	47.77	-07	51	36.7		688
1984	SN	1984	09	25.30347	23	49	15.15	+08	06	39.2	16.2	688
1984	SN	1984	09	25.33403	23	49	14.00	+08	06	22.8		688
1984	SF1	1984	09	25.30347	23	47	06.13	+04	21	39.8	16.0	688
1984	SF1	1984	09	25.33403	23	47	04.53	+04	21	28.5		688
1984	SF1	1984	09	28.29306	23	44	23.52	+04	04	30.5	16.2	688
1984	SF1	1984	09	28.32361	23	44	21.98	+04	04	19.6		688
1984	SH1	1984	09	25.30347	23	49	08.68	+01	12	29.6	16.8	688
1984	SH1	1984	09	25.33403	23	49	06.89	+01	12	27.9		688
1984	SH1	1984	09	28.29306	23	46	17.34	+01	10	13.4	16.8	688

1984	SH1		1984	09	28.32361	23	46	15.84	+01	10	10.6		688
1984	SF2	*	1984	09	25.22014	22	50	34.10	-01	33	25.6	16.8	4 688
1984	SF2		1984	09	25.27292	22	50	31.94	-01	33	47.6		688
1984	SF2		1984	09	28.14861	22	48	45.71	-01	53	48.0	16.8	688
1984	SF2		1984	09	28.20139	22	48	43.77	-01	54	10.7		688
1984	SG2	*	1984	09	25.22014	22	52	09.66	-02	55	15.5	17.2	4 688
1984	SG2		1984	09	25.27292	22	52	07.22	-02	55	22.2		688
1984	SG2		1984	09	28.14861	22	50	01.13	-03	03	47.1	17.0	688
1984	SG2		1984	09	28.20139	22	49	59.05	-03	01	54.2		688
1984	SH2	*	1984	09	25.22014	22	55	21.30	-05	05	27.8	17.2	4 688
1984	SH2		1984	09	25.27292	22	55	18.96	-05	05	41.6		1 688
1984	SJ2	*	1984	09	25.22014	22	59	18.51	-00	17	59.1	16.8	4 688
1984	SJ2		1984	09	25.27292	22	59	15.60	-00	17	53.9		688
1984	SK2	*	1984	09	25.22014	23	04	03.45	-07	13	08.1	16.8	5 688
1984	SK2		1984	09	25.27292	23	04	01.19	-07	13	17.7		688
1984	SK2		1984	09	28.14861	23	02	11.63	-07	22	02.1	16.5	688
1984	SK2		1984	09	28.20139	23	02	09.70	-07	22	12.5		688
1984	SL2	*	1984	09	25.28819	23	28	17.85	-05	58	28.2	17.0	4 688
1984	SL2		1984	09	25.31875	23	28	15.51	-05	58	27.4		688
1984	SM2	*	1984	09	25.28819	23	29	04.69	-06	53	40.1	17.0	4 688
1984	SM2		1984	09	25.31875	23	29	03.32	-06	53	48.9		688
1984	SM2		1984	09	28.24722	23	27	06.74	-07	06	28.8	17.0	688
1984	SM2		1984	09	28.27778	23	27	05.56	-07	06	36.5		688
1984	SN2	*	1984	09	25.28819	23	29	36.66	-09	29	52.4	16.2	4 688
1984	SN2		1984	09	25.31875	23	29	35.03	-09	30	04.0		688
1984	SN2		1984	09	28.24722	23	27	25.46	-09	47	15.3	16.2	688
1984	SN2		1984	09	28.27778	23	27	24.02	-09	47	26.0		688
1984	SO2	*	1984	09	25.28819	23	37	21.71	-06	44	32.0	17.2	4 688
1984	SO2		1984	09	25.31875	23	37	19.89	-06	44	33.4		1 688
1984	SO2		1984	09	28.24722	23	34	31.33	-06	45	56.2	17.2	688
1984	SO2		1984	09	28.27778	23	34	29.59	-06	45	56.3		688
1984	SP2	*	1984	09	25.28819	23	43	42.54	-11	34	53.5	16.8	7 688
1984	SP2		1984	09	25.31875	23	43	40.61	-11	35	01.9		3 688
1984	SQ2	*	1984	09	25.28819	23	48	26.86	-08	39	16.4	16.8	4 688
1984	SQ2		1984	09	25.31875	23	48	24.89	-08	39	18.5		688
1984	SQ2		1984	09	28.24722	23	45	35.37	-08	40	44.0	16.5	1 688
1984	SQ2		1984	09	28.27778	23	45	33.60	-08	40	43.9		688
1984	SR2	*	1984	09	25.30347	23	41	37.85	+05	53	06.3	16.8	4 688
1984	SR2		1984	09	25.33403	23	41	36.19	+05	53	00.0		1 688
1984	SR2		1984	09	28.29306	23	38	46.51	+05	43	03.8	16.8	688
1984	SR2		1984	09	28.32361	23	38	44.88	+05	42	57.2		688
1984	SS2	*	1984	09	25.30347	23	49	11.77	+03	41	19.5	16.8	4 688
1984	SS2		1984	09	25.33403	23	49	10.55	+03	41	02.8		688
1984	SS2		1984	09	28.29306	23	46	46.87	+03	10	34.4	16.8	688
1984	SS2		1984	09	28.32361	23	46	45.65	+03	10	15.8		688
1984	ST2	*	1984	09	25.30347	23	55	44.15	+06	11	16.6	16.5	4 688
1984	ST2		1984	09	25.33403	23	55	42.28	+06	11	16.4		688
1984	ST2		1984	09	28.29306	23	52	45.45	+06	12	12.4	16.5	688
1984	ST2		1984	09	28.32361	23	52	43.72	+06	12	12.5		688
1984	SU2	*	1984	09	25.30347	23	56	06.61	+01	35	15.8	16.8	4 688
1984	SU2		1984	09	25.33403	23	56	04.91	+01	35	10.7		688
1984	SU2		1984	09	28.29306	23	53	15.23	+01	28	58.9	16.5	688
1984	SU2		1984	09	28.32361	23	53	13.65	+01	28	54.1		688
1984	SV2	*	1984	09	25.30347	00	00	44.90	+00	51	22.7	16.5	4 688
1984	SV2		1984	09	25.33403	00	00	43.20	+00	51	18.6		688
1984	SW2	*	1984	09	25.30347	00	01	33.01	+06	45	01.9	17.0	4 688
1984	SW2		1984	09	25.33403	00	01	31.40	+06	44	48.6		688
1984	SX2	*	1984	09	28.16389	22	57	07.21	-00	41	17.3	16.8	4 688
1984	SX2		1984	09	28.21667	22	57	04.86	-00	41	29.0		688

1984 SY2	*	1984	09	28.16389	23	10	31.81	-03	32	13.8		16.8	4 688
1984 SY2		1984	09	28.21667	23	10	29.50	-03	32	35.3			688
1984 SZ2	*	1984	09	28.16389	23	13	49.40	+00	28	41.1		17.2	5 688
1984 SZ2		1984	09	28.21667	23	13	46.95	+00	28	37.8			688
1984 SZ2		1984	09	28.23194	23	13	46.17	+00	28	38.2		17.0	688
1984 SZ2		1984	09	28.26250	23	13	44.85	+00	28	36.3			688
1984 SA3	*	1984	09	28.16389	23	15	11.36	-00	25	16.5		16.8	4 688
1984 SA3		1984	09	28.21667	23	15	07.97	-00	25	22.0			688
1984 SA3		1984	09	28.23194	23	15	07.12	-00	25	22.1		16.8	688
1984 SA3		1984	09	28.26250	23	15	05.31	-00	25	25.3			688
1984 SB3	*	1984	09	28.16389	23	18	22.94	+03	07	46.1		17.0	5 688
1984 SB3		1984	09	28.21667	23	18	20.50	+03	07	20.1			2 688
1984 SB3		1984	09	28.23194	23	18	19.76	+03	07	12.9		16.8	688
1984 SB3		1984	09	28.26250	23	18	18.19	+03	06	56.0			688
1984 SC3	*	1984	09	28.16389	23	21	45.36	+02	36	00.2		16.5	4 688
1984 SC3		1984	09	28.21667	23	21	42.55	+02	35	53.4			688
1984 SC3		1984	09	28.23194	23	21	41.74	+02	35	49.9		16.2	688
1984 SC3		1984	09	28.26250	23	21	40.14	+02	35	46.6			688
1984 SD3	*	1984	09	28.23194	23	26	43.04	+02	06	31.1		16.2	4 688
1984 SD3		1984	09	28.26250	23	26	41.55	+02	06	08.5			688
1984 SE3	*	1984	09	28.30833	00	07	06.59	-04	20	42.3		17.2	4 688
1984 SE3		1984	09	28.33889	00	07	04.83	-04	20	55.9			688
1984 SF3	*	1984	09	28.30833	00	11	49.12	-02	22	42.2		17.5	4 688
1984 SF3		1984	09	28.33889	00	11	47.59	-02	22	54.4			688
1984 SG3	*	1984	09	28.30833	00	17	37.31	-05	54	56.7		17.0	4 688
1984 SG3		1984	09	28.33889	00	17	35.37	-05	54	57.4			1 688
1984 SH3	*	1984	09	28.30833	00	18	58.08	-07	31	36.1		16.0	4 688
1984 SH3		1984	09	28.33889	00	18	56.15	-07	31	39.0			688
1984 SJ3	*	1984	09	28.30833	00	24	17.25	-06	30	29.3		16.8	4 688
1984 SJ3		1984	09	28.33889	00	24	15.68	-06	30	42.5			688
1984 SK3	*	1984	09	28.30833	00	30	25.27	-02	03	04.4		15.8	4 688
1984 SK3		1984	09	28.33889	00	30	23.25	-02	03	06.9			1 688
1984 SL3	*	1984	09	28.35764	01	35	06.29	+07	24	16.7		16.0	4 688
1984 SL3		1984	09	28.40556	01	35	03.60	+07	24	21.9			688
1984 SM3	*	1984	09	28.35764	01	38	07.74	+05	47	53.1		17.5	5 688
1984 SM3		1984	09	28.40556	01	38	05.45	+05	47	44.7			688
1984 SN3	*	1984	09	28.35764	01	39	49.63	+05	51	27.4		17.5	5 688
1984 SN3		1984	09	28.40556	01	39	46.99	+05	51	23.0			688
1984 SO3	*	1984	09	28.35764	01	39	52.71	+06	13	52.0		17.0	4 688
1984 SO3		1984	09	28.40556	01	39	50.83	+06	13	39.4			688
1984 SP3	*	1984	09	28.35764	01	41	19.84	+07	41	12.9		15.8	4 688
1984 SP3		1984	09	28.40556	01	41	17.24	+07	41	10.2			688
1984 SQ3	*	1984	09	28.35764	01	41	59.78	+09	40	47.4		16.5	4 688
1984 SQ3		1984	09	28.40556	01	41	57.10	+09	40	42.9			688
1984 SR3	*	1984	09	28.35764	01	45	30.92	+02	36	47.4		17.5	4 688
1984 SR3		1984	09	28.40556	01	45	29.17	+02	36	16.4			2 688
1984 SS3	*	1984	09	28.35764	01	49	07.47	+08	56	08.0		17.2	5 688
1984 SS3		1984	09	28.40556	01	49	04.26	+08	56	07.6			688
1984 ST3	*	1984	09	28.35764	01	50	40.24	+07	50	08.8		17.2	4 688
1984 ST3		1984	09	28.40556	01	50	37.97	+07	50	42.0			688
1984 SU3	*	1984	09	28.35764	01	57	49.35	+06	21	02.3		16.2	4 688
1984 SU3		1984	09	28.40556	01	57	47.53	+06	21	04.8			688

Note 1: right ascension uncertain. 2: declination uncertain. 3: image diffuse. 4: discoverer Skiff. 5 = 1 + 4. 7 = 3 + 4.

OBSERVATIONS MADE AT THE LOWELL OBSERVATORY BY A. A. HOAG.

Plates with the 0.46-m astrographic telescope, measured by L. H. Wasserman using a PDS scanning microdensitometer. SAO reference stars,

global solutions. Contact: E. Bowell, Lowell Observatory, P.O. Box 1269, Flagstaff, AZ 86002, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Obs.
47	1984 09	07.26771	23 20 50.08	-06 43 26.9	690
47	1984 09	07.26910	23 20 50.00	-06 43 27.0	690
47	1984 09	07.27049	23 20 49.92	-06 43 26.8	690
47	1984 09	12.24514	23 16 36.26	-06 58 32.7	690
47	1984 09	12.24722	23 16 36.13	-06 58 33.2	690
47	1984 09	12.24931	23 16 36.03	-06 58 33.7	690
47	1984 09	12.26285	23 16 35.32	-06 58 36.3	690
47	1984 09	12.26424	23 16 35.24	-06 58 36.3	690
47	1984 09	12.26563	23 16 35.16	-06 58 36.8	690
47	1984 09	13.23264	23 15 45.99	-07 01 27.2	690
47	1984 09	13.23472	23 15 45.90	-07 01 27.6	690
47	1984 09	13.23681	23 15 45.77	-07 01 28.0	690
47	1984 09	14.26944	23 14 53.35	-07 04 27.1	690
47	1984 09	14.27153	23 14 53.23	-07 04 27.6	690

OBSERVATIONS MADE WITH THE SPACEWATCH CAMERA 0.91-m TELESCOPE AT KITT PEAK.

RCA SID-53612 CCD scans obtained at the University of Arizona's Kitt Peak Station. Observations mainly made by T. Gehrels (by R. C. Taylor in 1984 June), reductions by J. V. Scotti. The 512 x 320 pixels are 0.03 mm square, and with a reduction lens the telescope operates at f/3.85, 1 pixel thus corresponding to 1".75. The smaller number of pixels corresponds to declination, giving a field 0.156 wide. With the drive off and charge transfer therefore at sidereal rate, R.A. scans are made over an arc of 7.2. (Observations before 1984 Sept. were made at the original f/5 and pixel size 1".35.) The R.A. scan is long enough to yield at least three SKYMAP stars (Gottlieb 1978, Ap. J. Suppl. 38, 287), but only stars also contained in the SAO Catalog are currently used in the astrometric reduction. Declinations are determined by counting the pixels between the image centers of the minor planets and the reference stars, and right ascensions involve measuring differences in time, as for a transit-circle telescope. During follow-up work the recovery scans may be 5 min with an astrometry scan of up to 30 min in time. The resulting intervals between observations may therefore not be uniform. Magnitudes are determined by comparison with the standard regions of Ables and Dahn (1983, Bull. Am. Astron. Soc. 10, 615, and personal communication). The primary response (more than 60 percent) of the CCD is in the range 500-800 nm. The quoted magnitudes are V on the UBV system, comparison stars being selected with colors close to the sun; the mean color index is in fact B-V 0.5. An empirical correction of 0.2 mag has been applied.

The Spacewatch Camera is a joint venture of the Steward Observatory and the Lunar and Planetary Laboratory. The work on minor planets is supported by NASA Contract NASW-3454. Preparatory work for the Spacewatch Camera was done by L. R. Doose, J. E. Frecker, R. Goff, R. L. James, R. S. McMillan, M. L. Perry, E. M. Shoemaker, C. P. Stoll, D. J. Tholen, et al. Essential support, in addition to that of NASA, was provided by the Steward Observatory, by B. M. Oliver, the University of Arizona Foundation, the National Geographic Society, the Hewlett-Packard Company Foundation, the Delta-Vee Society, the Planetary Science Institute, the Perkin-Elmer Corporation, an anonymous donor, the Tumamoc Hill Committee, the Arthur D. Little Foundation, the Callahan Mining Corporation, S. Nozette, the Space Studies Institute, the L-5 Society, Arthur C. Clarke, G. Goebel, Astronomy New England, TRW Inc., and 37 others. Contact: T. Gehrels, Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ 85721, U.S.A.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N Obs.
1538	1984 09	22.36374	05 37 36.62	+34 08 15.0	19.2V	691
1538	1984 09	22.39227	05 37 38.94	+34 08 25.5		691
1538	1984 09	22.42063	05 37 41.27	+34 08 36.7		691

1538		1984	09	29.43951	05	46	44.08	+34	50	09.6			691
1538		1984	09	29.46260	05	46	45.69	+34	50	18.1			691
1538		1984	09	29.47749	05	46	46.67	+34	50	23.6			691
2197		1984	04	28.28000	15	01	18.12	-16	18	07.7	16.6V	1	691
2197		1984	04	28.29182	15	01	17.58	-16	18	05.9		1	691
2197		1984	04	28.34756	15	01	14.89	-16	17	57.1		1	691
2197		1984	05	02.21005	14	58	12.40	-16	07	24.8		1	691
2197		1984	05	02.22395	14	58	11.71	-16	07	22.7		1	691
2197		1984	05	02.24309	14	58	10.79	-16	07	20.0		1	691
2197		1984	06	01.37000	14	36	26.64	-14	50	22.2			691
2197		1984	06	01.38990	14	36	25.96	-14	50	19.9			691
3124		1984	06	01.29618	14	04	01.39	-04	30	10.5	17.9V		691
3124		1984	06	01.31569	14	04	00.83	-04	30	09.1			691
3124		1984	06	01.34789	14	04	00.06	-04	30	07.1			691
1983	TB	1984	09	22.38233	06	04	28.63	+34	08	28.0	18.9V		691
1983	TB	1984	09	22.41087	06	04	30.43	+34	08	33.0			691
1983	TB	1984	09	22.43923	06	04	32.14	+34	08	37.3			691
1983	TB	1984	09	29.38344	06	11	33.54	+34	25	56.3		2	691
1983	TB	1984	09	29.41351	06	11	35.43	+34	25	58.6		2	691
1983	TB	1984	09	29.42777	06	11	36.00	+34	26	04.1		2	691
1984	HW1 *	1984	04	28.28407	15	07	11.48	-16	17	55.3	17.4V	1	691
1984	HW1	1984	04	28.29589	15	07	10.84	-16	17	52.4		1	691
1984	HW1	1984	04	28.35163	15	07	07.90	-16	17	38.3		1	691
1984	JZ	1984	04	28.28119	15	03	02.26	-16	20	46.7	16.8V	1	691
1984	JZ	1984	04	28.29301	15	03	01.58	-16	20	47.9		1	691
1984	JZ	1984	04	28.34875	15	02	58.41	-16	20	54.0		1	691
1984	JZ	1984	05	02.25799	14	59	17.86	-16	27	57.1		1	691
1984	JZ	1984	05	02.28741	14	59	16.13	-16	28	00.3		1	691
1984	JZ	1984	05	02.33966	14	59	13.07	-16	28	05.9		1	691
1984	JZ	1984	06	01.22828	14	32	31.29	-17	17	32.4			691
1984	JZ	1984	06	01.24752	14	32	30.43	-17	17	34.7			691
1984	JZ	1984	06	21.19273	14	22	07.22	-18	01	54.1			691
1984	JJ1 *	1984	05	02.20907	14	56	48.45	-16	11	29.9	18.6V	1	691
1984	JJ1	1984	05	02.22298	14	56	47.73	-16	11	23.7		1	691
1984	JJ1	1984	05	02.24213	14	56	46.81	-16	11	15.4		1	691
1984	JK1 *	1984	05	02.21014	14	58	20.16	-16	10	00.1	19.6V	1	691
1984	JK1	1984	05	02.22404	14	58	19.44	-16	09	57.5		1	691
1984	LL *	1984	06	01.22573	14	28	50.07	-17	18	52.0	18.6V		691
1984	LL	1984	06	01.24497	14	28	49.49	-17	18	41.9			691
1984	LM *	1984	06	01.22684	14	30	26.34	-17	21	03.3	19.6V		691
1984	LM	1984	06	01.24607	14	30	25.46	-17	21	01.8			691
1984	LN *	1984	06	01.22941	14	34	09.26	-17	17	38.0	19.1V		691
1984	LN	1984	06	01.24865	14	34	08.53	-17	17	34.7			691
1984	LO *	1984	06	01.23044	14	35	38.16	-17	16	39.8	18.9V		691
1984	LO	1984	06	01.24968	14	35	37.19	-17	16	37.1			691
1984	LP *	1984	06	01.23182	14	37	37.20	-17	20	24.8	19.0V		691
1984	LP	1984	06	01.25105	14	37	36.38	-17	20	20.0			691
1984	LQ *	1984	06	01.23182	14	37	37.30	-17	15	55.1	17.9V		691
1984	LQ	1984	06	01.25105	14	37	36.54	-17	15	56.3			691
1984	MC *	1984	06	21.19149	14	20	20.98	-17	55	36.7	19.2V		691
1984	MD *	1984	06	21.19523	14	25	39.74	-17	55	39.7	20.0V		691
1984	ME *	1984	06	21.19651	14	27	29.67	-17	56	24.7	19.4V		691

Note 1: only two reference stars. 2: poor fit to reference stars in R.A.

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.	N	Obs.
917	1950 01	28.37361	08 54 30.51	+22 08 30.4	1	760
917	1950 01	28.39304	08 54 29.19	+22 08 34.2		760
938	1953 07	11.14480	17 47 05.29	-21 42 33.1		760
938	1953 07	11.19342	17 47 03.14	-21 42 34.0		760
938	1956 01	14.20278	07 14 18.41	+21 39 19.7		760
938	1956 01	14.28126	07 14 14.36	+21 39 28.8		760
970	1962 11	21.20134	03 56 59.91	+30 33 45.7		760
970	1962 11	21.24717	03 56 57.15	+30 33 35.1		760
1047	1961 12	31.06248	03 56 54.76	+20 36 29.5		760
1047	1961 12	31.10467	03 56 53.82	+20 36 37.6		760
3054	1961 11	04.25764	04 17 50.85	+18 19 56.7		760
3054	1961 11	04.30104	04 17 48.87	+18 19 50.0		760
3109	1956 09	29.07085	21 59 20.50	-20 17 20.9		760
3109	1956 09	29.11390	21 59 19.34	-20 17 13.3		760
1949 XM	1949 12	14.24508	04 25 51.97	+20 58 19.0		760
1949 XM	1949 12	14.26661	04 25 50.41	+20 58 16.8		760
1955 FE	1955 03	23.21092	12 17 59.00	-09 35 05.2		760
1955 FE	1955 03	23.25397	12 17 56.75	-09 35 00.4		760
1955 FS	1955 03	29.27985	12 43 06.44	+04 27 22.1		760
1955 FS	1955 03	29.32569	12 43 03.63	+04 27 36.0		760
1955 RA	1955 09	19.16453	21 24 20.29	-02 36 22.6		760
1955 RA	1955 09	19.20689	21 24 19.41	-02 36 35.4		760
1955 RK	1955 09	13.29368	23 03 38.81	-14 15 15.8	2	760
1955 SK	1955 09	17.16002	23 19 49.87	-20 54 29.7		760
1955 SK	1955 09	17.20586	23 19 47.05	-20 54 31.2		760
1955 SL	1955 09	17.20586	23 15 28.48	-22 56 30.1		760
1955 SR	1955 09	17.27286	23 56 53.69	+04 41 11.7		760
1955 SR	1955 09	17.31314	23 56 51.69	+04 41 09.3		760
1955 SQ1	1955 09	19.33815	01 56 26.23	+18 57 56.8		760
1955 SQ1	1955 09	19.38050	01 56 25.59	+18 58 02.9		760
1955 SW1	1955 09	21.23223	00 08 26.10	+10 17 23.2		760
1955 SW1	1955 09	21.27182	00 08 24.29	+10 17 04.6		760
1955 SX1	1955 09	21.23223	23 59 31.55	+11 29 01.4		760
1955 SX1	1955 09	21.27182	23 59 29.74	+11 28 48.5		760
1956 XE	1956 12	04.38824	06 07 01.76	+36 51 05.3		760
1956 XE	1956 12	04.43199	06 06 59.27	+36 51 09.2		760
1958 DV	1958 02	24.24162	10 11 41.31	+16 57 09.8		760
1958 DV	1958 02	24.28407	10 11 38.51	+16 57 22.8		760
1958 VY	1958 11	11.26946	03 08 43.48	+17 05 49.9		760
1958 VY	1958 11	11.31806	03 08 40.32	+17 05 29.2		760
1962 CF	1962 02	04.25869	10 43 33.91	+19 28 04.2		760
1962 CF	1962 02	04.30243	10 43 32.11	+19 28 19.1		760
1962 CP	1962 02	05.10557	07 15 52.48	+26 12 10.2		760
1962 CP	1962 02	05.14826	07 15 50.76	+26 12 20.3		760
1962 JK	1962 05	05.11217	13 19 48.23	-06 35 05.3		760
1962 JK	1962 05	05.15557	13 19 46.29	-06 35 02.0		760
1963 DO	1963 02	27.26208	10 22 42.42	+01 22 34.5		760
1963 DO	1963 02	27.30548	10 22 39.70	+01 22 51.5		760
1963 QD	1963 08	21.23541	21 17 42.38	-18 05 03.2		760
1963 QD	1963 08	21.28541	21 17 40.92	-18 05 21.7		760

Note 1: the rough position (1950 BS) on MPC 446 is in error. 2: the rough position on MPC 1313 is in error.

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

Plates with the 1.5-m reflector, reduced using the Astrographic Catalog. Coordination and verification by, and assistance with identifica-

tions 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.
1562		1984 09	23.24934	00 20 24.99	-05 05 09.1			801
1916		1984 09	23.35677	04 00 08.89	+38 15 07.0			801
2100		1984 09	25.05644	19 10 54.13	-15 29 50.6			801
3122		1984 09	25.01130	17 39 36.06	-22 53 57.1			801
3122		1984 09	27.01327	17 45 55.08	-21 04 39.3		1	801
1931	TY1	1984 09	26.06717	22 08 36.69	+00 58 35.2			801
1937	AC	1984 09	23.22641	00 15 43.01	+19 23 14.1			801
1974	SO2	1984 08	26.25343	23 42 36.29	+07 18 29.1			801
1974	SO2	1984 09	23.15775	23 17 25.45	+04 40 47.5			801
1976	US2	1984 09	23.20874	00 12 52.15	+17 23 05.7			801
1976	YU3	1984 09	23.27312	00 43 09.40	+07 37 23.0			801
1980	LE	1984 09	23.17319	23 50 49.85	+06 37 26.4			801
1980	LE	1984 09	25.28715	23 48 46.65	+06 27 20.4			801
1980	PM	1984 08	25.16574	20 10 24.38	-16 40 45.5			801
1980	PM	1984 08	29.06851	20 08 29.00	-17 15 54.0			801
1980	TB5	1984 09	23.19407	23 56 00.39	+03 42 33.9			801
1980	UA	1984 08	24.11710	20 14 35.67	-23 30 06.8			801
1980	VL1	1984 09	25.03701	18 09 52.71	-09 17 32.5			801
1981	EP	1984 08	28.24923	00 33 39.46	-00 00 27.7			801
1981	EP	1984 09	23.24934	00 20 18.48	-04 49 35.1			801
1981	SH	1984 07	24.20014	20 01 02.68	-08 57 31.8			801
1981	SH	1984 08	26.12210	19 34 23.68	-11 53 04.6			801
1981	XF2	1984 10	03.28400	02 20 52.06	+08 11 13.3			801
1982	FK	1984 07	29.33998	01 25 25.04	+06 14 25.7			801
1982	FK	1984 09	23.29071	01 15 43.81	+08 23 35.2			801
1982	FK	1984 10	03.23821	01 07 29.60	+08 15 10.0			801
1982	RA	1984 09	23.04304	20 24 49.11	+16 19 32.6			801
1982	RA	1984 09	26.04723	20 14 44.13	+19 47 13.4			801
1982	RA	1984 09	30.99795	20 01 16.44	+24 32 26.1			801
1983	HF	1984 09	23.11424	22 10 13.43	+11 47 56.6			801
1983	HF	1984 09	31.01904	22 07 11.98	+10 15 01.0			801
1983	TB	1984 10	25.34408	06 27 31.38	+35 57 39.7			801
1984	FO	1984 09	26.02116	16 43 29.33	-02 07 35.1			801
1984	QU	1984 09	26.09529	22 21 09.26	-10 47 49.9		2	801
1984	SQ *	1984 09	23.17319	23 51 02.33	+06 31 15.4	17		801
1984	SQ	1984 09	25.28715	23 49 03.83	+06 25 37.0	17		801

Note 1: very poor plate; ends of star trails in clouds. 2: doubtful image.

OBSERVATIONS MADE AT THE EUROPEAN SOUTHERN OBSERVATORY.

Addition to MPC 9147. Contact: C.-I. Lagerkvist, Astronomiska Observatoriet, Box 515, S-75120 Uppsala, Sweden.

Object	Date	UT	R. A. (1950)	Decl.	N	Obs.
2422	1983 09	08.38016	23 37 58.16	-04 24 19.3	1	809
2422	1983 09	08.38570	23 37 57.64	-04 24 19.9	1	809

Note 1: very faint.

OBSERVATIONS MADE AT JCPM OI STATION BY K. SUZUKI.

Plates taken by K. Suzuki, measured by T. Urata. Reductions using about five SAO or three AGK3 reference stars. Contact: T. Urata, Nishitaka-cho 8-23, Shimizu, Shizuoka 424, Japan.

Object		Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
494		1984 09	25.51319	22 54 03.62	-15 50 25.9			882
494		1984 09	25.56806	22 54 01.21	-15 50 32.1			882
494		1984 09	26.53611	22 53 21.95	-15 51 39.7			882
494		1984 09	26.59306	22 53 19.37	-15 51 43.1			882
1984	QE	1984 09	25.51319	22 50 57.71	-15 58 55.2	16		882

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1984 QE    1984 09 25.56806  22 50 55.60  -15 59 01.1                  882
1984 QE    1984 09 26.53611  22 50 24.1   -16 00 04            16    1 882
1984 QE    1984 09 26.59306  22 50 21.80  -16 00 04.6                  882
Note 1: poor image.
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* * * * *

ORBITAL ELEMENTS OF ONE-OPPOSITION MINOR PLANETS.

The orbit computers and authors of double designations are B = C. M. Bardwell, c = N. S. Chernykh, 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
1964 EC	13.5	640306	53.03	226.27	222.17	3.96	0.0493	2.1688	4	0		G
1964 ED	13.0	640306	174.91	121.62	203.47	4.28	0.0307	3.2031	4	0	1	G
1978 EC	16.5	780313	48.18	88.00	11.99	3.28	0.1175	2.2847	5	7	2	M
1978 JT1	14.0	780512	333.73	235.80	42.09	1.23	0.3026	3.2294	31	4	2	M
1978 NQ1	15.5	780711	19.68	344.41	281.40	3.93	0.2287	2.1693	26	4	2	M
1978 RJ6	15.0	780909	342.48	223.47	172.27	6.44	0.1906	2.7804	25	3	2	M
1978 RQ7		780909	31.16	134.64	163.70	4.38	0.1547	2.5847	8	9	2	M
1978 RU7		780909	13.63	336.88	343.49	4.17	0.2046	2.2655	8	9	2	M
1978 RC9		780909	29.81	321.98	338.12	4.32	0.1709	2.2785	8	9	2	M
1980 BB	14.5	800122	353.06	62.35	68.93	2.36	0.1464	2.9129	2	3	3	M
1980 BM	13.0	800122	114.07	220.33	131.65	13.10	0.2025	2.6575	19	5	2	M
1980 DS4	15.0	800302	311.81	62.61	173.53	4.58	0.1949	2.3589	25	9	2	M
1980 DY4	16.0	800302	5.28	122.40	37.85	1.16	0.1805	2.3421	25	9	2	M
1980 DL5	14.5	800302	139.90	353.93	34.61	2.78	0.0542	2.6018	25	0	2	M
1980 DO5	13.0	800302	243.94	304.28	3.77	7.64	0.1967	2.7806	25	6	2	M
1980 FV	14.5	800322	241.63	321.17	341.49	4.36	0.0949	2.2490	31	0	2	M
1980 GF	15.0	800322	345.28	52.29	144.25	1.82	0.0836	2.4103	31	0	2	M
1980 GO	14.0	800322	352.19	55.53	147.44	1.81	0.1092	3.1651	31	7	2	M
1980 KR1	16.0	800610	9.29	82.38	161.11	4.54	0.1414	2.1952	33	4	2	M
1980 KT1	14.0	800610	2.38	132.13	121.63	1.88	0.1785	3.0710	25	3	2	M
1980 OG	15.0	800720	331.28	228.11	131.62	4.77	0.1629	2.2538	52	5	2	M
1980 RZ2	12.0	800829	346.84	39.84	324.23	8.77	0.1273	3.0019	10	3	2	M
1980 TM	14.0	801008	31.45	312.78	23.52	3.77	0.1931	2.8348	10	5	2	M
1980 TD3	15.5	801008	34.82	315.70	358.23	4.81	0.3029	2.6650	5	5	3	M
1980 TG4	15.0	801008	16.60	333.96	13.95	12.29	0.1716	2.6146	9	5	2	M
1980 TY14	15.5	801008	350.19	42.81	4.73	5.82	0.1464	2.2369	26	4	2	M
1984 QB	14.9	840828	24.64	352.77	310.01	10.19	0.2197	2.6184	62	0		N
1984 QH	16.0	840828	33.12	301.90	341.94	5.48	0.1702	2.1961	11	8		G
1984 QJ	14.0	840828	335.64	249.69	121.06	1.88	0.2551	3.2000	11	8		G
1984 QN	14.0	840917	34.34	320.82	336.68	7.43	0.2081	2.7706	31	0		B
1984 QO	13.5	840917	302.78	90.21	343.45	14.45	0.2549	2.5634	31	0		B
1984 QQ	14.0	840828	339.28	180.00	196.65	7.57	0.1309	2.4032	30	0		G
1984 QR	15.0	840917	334.42	88.47	321.77	20.61	0.3115	2.3410	32	0		M
1984 QU	17.0	840917	340.34	26.30	352.08	5.16	0.2490	2.2673	33	5		M
1984 RA	16.0	840917	305.89	273.36	141.96	23.05	0.1025	1.9205	19	8		M
1984 SN	12.5	840917	71.12	71.52	208.69	12.09	0.0693	3.0270	5	4		B
1984 SP	15.0	840917	0.13	101.07	156.89	0.92	0.0535	2.9663	6	6	1	M
1984 SU	15.5	840917	347.94	69.44	309.28	2.07	0.2392	2.3365	10	8		G
1984 SV	14.0	840917	281.60	110.08	344.52	6.30	0.1341	2.4250	10	8		G
1984 SX	13.0	840917	183.57	206.26	333.08	3.01	0.2093	2.4241	10	8		G
1984 SA1	14.0	840917	332.00	45.82	356.21	6.63	0.1377	2.4741	10	8		G
1984 SB1	15.0	840917	30.63	329.10	351.79	6.20	0.1812	2.2287	10	8		G
1984 SC1	14.0	840917	15.18	343.87	0.74	14.14	0.1730	2.5817	10	8		G
1984 SE1	15.0	840917	14.27	17.41	316.93	7.12	0.1998	2.6576	3	6	1	G
1984 SF1	14.0	840917	41.46	3.50	293.96	2.89	0.2011	2.2845	5	0		B

1984 SG1		840917	341.77	100.11	284.32	2.88	0.1868	2.6570	3 6	1 G
1984 SJ1	15.5	840917	38.36	100.40	202.99	4.89	0.1960	2.2671	3 6	1 G
1984 SK1	15.5	840917	17.97	345.70	340.24	4.03	0.2817	2.6047	3 6	1 G
1984 SL1	16.0	840917	15.62	341.76	349.58	4.66	0.2550	2.3876	3 6	1 G
1984 SM1		840917	353.57	27.35	343.95	6.71	0.2475	2.8032	3 6	G
1984 SO1	14.5	840917	45.28	83.01	224.54	2.11	0.1440	2.5071	3 6	G
1984 SR1	14.5	840917	150.93	297.33	275.68	1.66	0.0628	2.1675	3 6	1 G
1984 SS1	14.5	840917	286.63	223.97	227.61	3.28	0.1020	2.1920	3 6	1 G
1984 ST1	15.5	840917	350.81	109.20	268.52	1.43	0.1561	2.2253	3 6	1 G
1984 SY1	12.5	840917	355.44	153.43	229.31	8.64	0.1067	2.9916	6 5	1 G
1984 SZ1	14.5	840917	354.69	71.28	311.13	3.21	0.1878	2.6177	6 6	G
1984 SA2	16.0	840917	281.21	178.86	299.51	4.57	0.1989	2.2999	6 6	G
1984 SB2	14.5	840917	4.21	161.75	206.36	24.46	0.1482	2.4347	6 6	G
1984 SC2	12.5	840917	267.21	169.71	320.75	4.78	0.1535	2.9738	6 6	G
1984 UA	14.4	841027	53.26	86.14	247.08	10.40	0.0852	2.4622	4 4	N

Note 1: e assumed. 2: double designations 1978 EC = 1978 ER6 (M); 1978 JT1 = 1978 LS (M); 1978 NQ1 = 1978 OC (M); 1978 RJ6 = 1978 TH2 (M); 1978 RQ7 = 1978 RC16 (M); 1978 RU7 = 1978 RD16 (M); 1978 RC9 = 1978 RD12 (M); 1980 BB = 1980 BU5 (M); 1980 BM = 1980 BK4 = 1980 CC (M); 1980 DS4 = 1980 FL (M); 1980 DY4 = 1980 FL1 (M); 1980 DL5 = 1980 FX4 (M); 1980 DO5 = 1980 FC (M); 1980 DO5 = 1980 FG10 (c); 1980 FV = 1980 DZ4 (M); 1980 GF = 1980 FO10 (M); 1980 GO = 1980 EP1 (M); 1980 KR1 = 1980 LS = 1980 MF (M); 1980 KT1 = 1980 LD1 (M); 1980 OG = 1980 RG3 (B, M); 1980 RZ2 = 1980 RX4 (M); 1980 TM = 1980 TX9 (M); 1980 TD3 = 1980 TH8 (M); 1980 TG4 = 1980 TH15 (M); 1980 TY14 = 1980 VY1 (M). 3 = 1 + 2.

* * * * *

ORBITAL ELEMENTS BY W. LANDGRAF, MAX-PLANCK-INSTITUT FUR AERONOMIE, LINDAU.

(241) Germania
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	13.23580		(1950.0)	P	Q
n	0.18522179	Peri.	73.72419	+0.95841484	+0.26875814
a	3.0479511	Node	270.60846	-0.28445475	+0.87263551
e	0.1038950	Incl.	5.50741	-0.02294546	+0.40776993
P	5.32	B(1,0)	8.6		

From 186 observations at 44 oppositions 1884-1983, mean error 0".8 during 1903-1983.

(3132)* 1940 WL = 1929 WU = 1973 UF3 = 1975 BC = 1977 KQ = 1978 NO2 = 1978 PE1 = 1978 SH = 1981 CT

Discovered 1940 Nov. 29 by L. Oterma at Turku. The identifications are by W. Landgraf; 1940 WL = 1975 BC = 1981 CT was published on MPC 8138.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	63.32221		(1950.0)	P	Q
n	0.17605445	Peri.	258.03133	+0.97822270	-0.19479196
a	3.1528602	Node	113.16736	+0.20744523	+0.90617303
e	0.1146779	Incl.	4.47105	+0.00684286	+0.37537518
P	5.60	B(1,0)	12.5		

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

291127	690	(10.7+	29.9-)X	770523	095	0.6+	0.2+	840702	801	0.4-	0.5+
401129	062	0.7+	0.7+	780707	095	(3.3-	3.0+)	840725	801	0.3-	0.2+
401129	062	1.3-	0.6+	780808	095	0.1+	0.5+	840824	801	0.4-	0.8-
401204	062	0.4+	(2.6+)	780927	809	0.8-	0.2-	840925	688	0.3+	(2.6-)
401227	062	(2.6-	1.9+)	780928	809	0.5-	0.2+	840925	688	0.1-	(1.6-)
731029	095	(4.3+)	0.5-	780929	809	(0.00-	0.04+)	840928	688	0.7+	(2.2-)
750116	330	0.0	(2.5-)	810208	688	0.0	(2.3-)	840928	688	0.9+	(1.8-)
750117	095	0.0	0.1-	810208	688	0.3-	(1.1-)				

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

(994) Otthild
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	50.03573		(1950.0)	P		Q
n	0.24501407	Peri.	340.34688	+0.95296667		+0.30292068
a	2.5293486	Node	2.09382	-0.23034761		+0.74466223
e	0.1150473	Incl.	15.35357	-0.19696320		+0.59474131
P	4.02	B(1,0)	11.4			

From 61 observations at 19 oppositions 1923-1983, mean residual 1".6.

* * * * *

ORBITAL ELEMENTS BY S. NAKANO, TOKYO.

The identifications are by S. Nakano unless otherwise stated.

Comet Shoemaker (1984r)
T 1984 Oct. 14.79770 ET

q	5.5041740		(1950.0)	P		Q
		Peri.	187.61570	+0.63855833		+0.76948431
		Node	237.93050	+0.70676188		-0.58035019
e	1.0	Incl.	179.20810	+0.30451750		-0.26662250

From 6 observations 1984 Oct. 23-Nov. 3.

Comet Shoemaker (1984s)
T 1985 Jan. 4.08820 ET

q	1.2146170		(1950.0)	P		Q
		Peri.	229.57450	-0.02378726		-0.98586868
		Node	222.68710	+0.97521059		+0.01361831
e	1.0	Incl.	14.15690	+0.21999653		-0.16696550

From 6 observations 1984 Oct. 25-Nov. 3.

(3133)* A907 TC = A907 XA = 1968 TO = 1973 DN = 1981 UX = 1984 QG1
Discovered 1907 Oct. 4 by A. Kopff at Heidelberg. The double designation A907 TC = A907 XA is by F. Kaiser (AN 199, 331).
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	94.82683		(1950.0)	P		Q
n	0.30597100	Peri.	357.97502	+0.82186144		-0.56556944
a	2.1811350	Node	36.73948	+0.52424619		+0.70386669
e	0.1600647	Incl.	6.56346	+0.22295674		+0.42977074
P	3.22	B(1,0)	14.0			

Residuals in seconds of arc

071004	024	1.9-	2.2+		730227	029	0.5+	0.2+		811031	704	0.9-	0.8+
071105	024	3.8-	3.1-		730228	029	1.1-	0.7-		840831	688	0.7+	2.6-
071110	024	(92.3- | 33.1-)X		730307	029	0.2+	0.4-		840831	688	1.8+	2.2-
071204	024	7.5+	2.0-		811027	704	1.7-	1.1-					
681015	095	1.8-	3.1+		811030	704	1.3+	2.4+					

(3134)* A921 VA = 1929 WK = 1931 DO = 1952 ST = 1976 UT3 = 1978 CO
Discovered 1921 Nov. 5 by S. Belyavskij at Simeis. The identification 1961 WA = 1929 WK (MPC 2195) is invalid.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	45.42364		(1950.0)	P		Q
n	0.12438242	Peri.	165.04030	+0.47147044		-0.87237177
a	3.9746302	Node	256.68541	+0.79482749		+0.48379869
e	0.2227060	Incl.	7.62743	+0.38205350		+0.07004519
P	7.92	B(1,0)	12.0			

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

211105	094	3.6-	3.7+	291203	690	0.5-	1.5-	761026 095 1.5+ 0.2+
211125	024	0.9-	1.0+	310217	690	(0.03+	0.00-)X	780201 330 0.0 0.4-
211126	024	4.3+	1.3+	310219	690	(0.04+	0.02+)X	841025 372 1.1- 1.5-
291127	690	0.2-	1.3-	520925	760	0.1+	2.3-	841025 372 0.0 0.1+

(3135)* 1981 EC9 = 1978 NE1 = 1979 SS2

Discovered 1981 Mar. 1 by S. J. Bus at Siding Spring in the course of the U.K.-Caltech Asteroid Survey. The identifications were found independently by S. Nakano and K. Hurukawa (MPC 7814) and by L. D. Schmadel.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	188.89970				
n	0.26202161	Peri.	118.59914	+0.44838014	-0.88968871
a	2.4186776	Node	304.50707	+0.77922675	+0.43624688
e	0.1415689	Incl.	5.99578	+0.43790516	+0.13469472
P	3.76	B(1,0)	15.0		

Residuals in seconds of arc

780709	809	0.5-	0.9+	810307	413	0.5-	0.3+	810406 413 0.6+ 0.9-
780710	809	0.1+	0.0	810311	413	0.1+	0.7+	810407 413 1.6- 0.8+
780711	809	0.2+	0.5+	810311	413	0.9+	0.9-	810407 413 1.0+ 0.8-
790922	095	1.2+	1.2-	810315	413	0.5+	0.9+	810412 413 0.6+ 1.4-
790928	095	0.2-	0.6-	810405	413	2.2-	0.3+	831204 801 1.1+ 1.3+
810301	413	0.8-	0.5+	810405	413	0.0	1.4-	840104 801 1.9- 0.1-
810301	413	1.3+	0.6-	810406	413	0.8-	0.6+	

(3136)* 1981 WD4 = 1938 DL = 1978 BC

Discovered 1981 Nov. 18 at the Purple Mountain Observatory. The key identification 1981 WD4 = 1978 BC is by S. Nakano and K. Hurukawa (JAM 1262).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	221.71515				
n	0.17387128	Peri.	26.12722	-0.29513218	-0.95222517
a	3.1791973	Node	81.12077	+0.86205962	-0.30081639
e	0.1277612	Incl.	4.55781	+0.41200753	-0.05269474
P	5.67	B(1,0)	12.9		

Residuals in seconds of arc

380219	062	1.3+	0.0	811118	330	5.0-	3.6+	830220 801 0.0 0.9-
380219	062	1.4-	0.3-	811127	330	0.8-	1.0+	840506 801 0.4+ 3.1+
780118	809	0.6-	0.6+	811201	330	0.5+	0.9-	840528 801 1.0+ 1.8+
780119	809	0.6-	0.6+	811220	330	2.1-	3.9-	840603 801 1.4+ 3.8+
780120	809	0.8+	0.7+	811223	330	4.9+	9.4+	

(3137)* 1982 SM1 = 1971 UC2 = 1976 AC

Discovered 1982 Sept. 16 by A. Mrkos at Klet. The key identification 1982 SM1 = 1976 AC is by S. Nakano and K. Hurukawa (MPC 7616).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	259.66099				
n	0.26481846	Peri.	134.39703	+0.48914627	-0.87121879
a	2.4016177	Node	286.27656	+0.78743037	+0.46151852
e	0.1916326	Incl.	2.47170	+0.37508579	+0.16726765
P	3.72	B(1,0)	14.6		

Residuals in seconds of arc

711021	095	0.7-	2.0+	820917	046	0.3-	1.7+	821020 695 4.5- 0.6+
760107	026	0.3+	0.1-	820917	046	0.5+	0.5+	821023 801 0.1+ 1.3+
760110	026	0.5-	1.5-	820918	046	0.0	0.2-	840308 801 7.6+ 5.2+
820916	046	1.4-	0.8-	820918	046	1.8+	0.0	840401 801 3.1- 0.9+
820916	046	3.0+	0.0	821019	695	2.0-	1.6+	840502 801 1.6- 1.5+

1929 PB = 1929 PD = 1969 VB1 = 1976 SG1

The double designation 1929 PB = 1929 PD is by M. Wolf (BZ 11, 63).

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

M 204.84485		(1950.0)	P	Q
n 0.27329377	Peri.	183.32932	+0.95282044	+0.30251893
a 2.3517099	Node	159.01010	-0.27684894	+0.89965588
e 0.2365704	Incl.	3.97149	-0.12445025	+0.31480407
P 3.61	B(1,0)	15.5		

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

290804 024(0.03- 0.04-)X	290814 024 2.1- 0.6+	691115 095 2.6+ 0.7+
290806 024 1.4- 5.0+	290827 024(21.6+ 78.0+)X	760828 675 2.0+ 0.5+
290810 024(0.06+ 0.01+)X	290902 024 2.2- 0.9-	760924 095 0.6- 0.3-
290812 024 4.7+ 1.6-	691111 095 1.6- 1.7+	760925 095 0.9+ 0.8+
290813 024(0.05+ 0.00+)X	691113 095 1.7- 0.8+	760928 095 1.1- 5.1-

1932 CQ = 1932 HQ = 1976 SW1

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

M 137.33929		(1950.0)	P	Q
n 0.23263612	Peri.	261.00553	-0.06880757	+0.99741882
a 2.6182964	Node	5.18296	-0.80252715	-0.04311872
e 0.0973518	Incl.	13.13157	-0.59263453	-0.05741484
P 4.24	B(1,0)	13.5		

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

320205 024 2.6+ 0.1+	320301 024 0.0 0.6+	760924 095 0.6+ 0.3+
320211 024 2.6- 1.8-	320427 024(0.10- 0.07+)X	760928 095 0.5- 0.3-

1932 WB = 1971 GD = 1984 BY

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

M 199.49373		(1950.0)	P	Q
n 0.29152915	Peri.	198.70820	-0.51333977	-0.85558356
a 2.2525906	Node	282.22727	+0.79579403	-0.44544961
e 0.0794588	Incl.	3.91784	+0.32123843	-0.26372600
P 3.38	B(1,0)	14.0		

Residuals in seconds of arc

321128 012 1.5+ 3.1-	321223 012 1.7+ 2.3+	840129 704 0.3- 0.7-
321130 024 4.4- 0.0	321229 012 2.5- 1.5+	840130 704 0.1- 0.2-
321130 012 1.0+ 2.5-	321231 012 1.8- 0.9+	840131 704 1.0+ 1.5+
321217 024 2.6+ 6.1+	710402 805 0.6+ 1.9+	840201 704 0.8- 0.4-
321219 012(10.4- 2.4-)	840128 704 0.3+ 0.7-	840203 704 0.7- 2.2-
321223 024 1.1+ 2.0-	840128 704 0.1- 0.3+	

1934 CX = 1934 AG = 1950 AF = 1978 NJ3 = 1978 PU

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

M 205.06860		(1950.0)	P	Q
n 0.18650907	Peri.	290.70444	-0.75611253	+0.64487115
a 3.0339164	Node	289.62738	-0.54768644	-0.71679086
e 0.1318126	Incl.	6.79928	-0.35823652	-0.26523963
P 5.28	B(1,0)	12.5		

Residuals in seconds of arc

340107 024 2.7- 2.6+	340214 024 0.6+ 0.3+	500116 760 1.2+ 0.5+
340204 024 3.7+ 0.1-	500115 760 1.3+ 1.6-	780710 095 0.7- 1.5+
340209 024 0.9- 1.0-	500116 760 2.9- 0.0	780808 095 0.5+ 0.9-

1938 DZ = 1961 TP = 1970 AP = 1979 TV

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

M 32.17264		(1950.0)	P	Q
n 0.27364607	Peri.	240.23087	-0.66292653	+0.74837869
a 2.3496911	Node	348.17126	-0.64577559	-0.58603101
e 0.0972177	Incl.	5.99101	-0.37881698	-0.31063964
P 3.60	B(1,0)	13.5		

Residuals in seconds of arc

380218	062	0.8-	0.1+		611007	760	2.5+	0.1+		791014	095	2.5+	0.4+
380224	062	0.1+	2.1+		611007	760	1.6+	0.9-		791110	095	2.9-	1.4+
380303	062	1.6+	0.9+		611017	760	2.8-	2.3-		791111	095	3.4-	4.8+
380307	062	1.0+	0.3+		700104	095	0.5-	3.2-					

1940 EF = 1971 US2 = 1972 YY = 1978 EP6 = 1981 XG2 = 1982 DS4
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	262.00313		(1950.0)	P	Q
n	0.20571428	Peri.	19.04697	-0.36896509	-0.92772598
a	2.8420210	Node	92.63698	+0.84519694	-0.36017887
e	0.0239902	Incl.	3.24086	+0.38666123	-0.09795764
P	4.79	B(1,0)	13.0		

Residuals in seconds of arc

400315	053	(1.6+	27.5-)X		400412	053	5.0-	0.1-		780306	095	0.2-	0.4-
400402	053	2.2-	2.4-		711021	095	0.4+	1.7+		811202	330	2.4-	2.3+
400404	062	0.2-	0.9+		721230	095	0.2-	1.6+		811220	330	1.1-	2.4+
400404	062	5.2+	2.0-		730103	095	0.5-	2.8-		811223	330	1.7+	5.4-
400412	062	2.5+	5.9+		730203	095	2.0+	0.0		820221	010	0.2-	1.2+

1941 UG = 1949 XG = 1974 HG = 1977 BE
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	156.42646		(1950.0)	P	Q
n	0.25636987	Peri.	133.39726	+0.85326125	-0.51657123
a	2.4541000	Node	257.82543	+0.45482358	+0.80416951
e	0.2040333	Incl.	4.18937	+0.25510930	+0.29405026
P	3.84	B(1,0)	14.5		

Residuals in seconds of arc

410926	062	1.3-	0.6-		411016	062	1.7+	0.5-		740425	805	0.8-	0.3-
410927	062	0.7-	1.5+		491214	760(80.8- | | 44.2-)X		770120	095	0.0	0.2+
411015	062	0.7+	0.7-		740422	805	0.2+	0.6-					
411016	062	0.0	0.4-		740424	805	0.2+	0.1-					

1984 EO1 = 1970 SO = 1980 DP2 = 1980 ET

The identification and double designation 1984 EO1 = 1980 DP2 = 1980 ET are by T. Furuta (JAM 1695).

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

M	51.85489		(1950.0)	P	Q
n	0.25546962	Peri.	302.04828	+0.24368012	+0.96921961
a	2.4598619	Node	341.95558	-0.84716703	+0.19508624
e	0.0962791	Incl.	6.51001	-0.47215254	+0.15018222
P	3.86	B(1,0)	14.2		

Residuals in seconds of arc

700927	095	0.7-	1.0+		840305	809	0.4-	0.4-		840310	809	0.6+	0.1-
701001	095	0.6+	0.9-		840305	809	0.2+	0.5-		840310	809	0.2+	0.4-
800220	095	0.8-	0.1+		840306	809	0.5-	0.2-		840310	809	0.1-	0.1-
800315	095	0.8+	0.1-		840306	809	0.4-	0.2-		840311	809	0.6-	0.2+
840302	809	0.3+	0.8+		840306	809	0.3-	0.1+		840311	809	0.5-	0.0
840302	809	0.4+	1.0+		840308	809	0.4-	0.5-		840311	809	0.1-	0.5+
840302	809	0.4+	1.0+		840308	809	0.2-	0.5-		840313	809	0.2+	1.3+
840304	809	0.3+	0.2-		840308	809	0.2-	0.9-		840313	809	0.3+	1.0+
840304	809	0.2+	0.2-		840309	809	0.2+	0.5-		840313	809	0.2-	0.8+
840304	809	0.3+	0.2-		840309	809	0.3+	0.5-					
840305	809	0.5-	0.3-		840309	809	0.5+	0.7-					

1984 QC = 1951 PL = 1962 PD = 1962 QM = 1973 SD2
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	83.33261	(1950.0)	P	Q
n	0.18106245	Peri. 31.37720	+0.95066622	+0.26727563
a	3.0944584	Node 312.25850	-0.30991492	+0.79593538
e	0.0400090	Incl. 12.28451	-0.01365584	+0.54318560
P	5.44	B(1,0) 11.5		

Residuals in seconds of arc

510805	711(17.5+	5.6+)Y	840824	372	1.9-	0.6+	840916	372	0.4-	0.8-
620801	760	1.8-	0.7+	840828	372	2.3-	1.3+	840916	372	1.7-	1.0-
620801	760	0.7-	1.9-	840902	372	5.2+	0.8+	840926	372	0.6-	0.0
620827	024	2.6+	1.0+	840902	372	3.6+	0.1-	840926	372	0.1+	1.0+
730922	095	0.6-	0.1-	840904	372	1.1-	1.0-				
730924	095	2.4-	1.3-	840904	372	1.1-	0.4-				

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ORBITAL ELEMENTS BY T. URATA, SHIMIZU, JAPAN.

The following orbital elements have been copied from NOC 1482.

1984 QE = 1953 GP = 1974 QE2 = 1981 WB2
The identifications are by T. Urata.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	142.59560	(1950.0)	P	Q
n	0.29303596	Peri. 239.04375	+0.83997487	+0.53829754
a	2.2448620	Node 88.30646	-0.47155782	+0.78650408
e	0.1787830	Incl. 3.92357	-0.26846871	+0.30273270
P	3.36	B(1,0) 14.5		

Residuals in seconds of arc

530412	024	(0.6-	11.3-)	840824	882	0.7-	1.9-	840925	882	0.1+	2.9-
530419	024	0.3+	0.8+	840824	882	0.9-	0.1-	840926	882	(4.8+	4.3-)Y
740826	095	0.5-	1.1+	840831	882	0.3+	2.7+	840926	882	0.4+	1.9-
811123	046	0.3-	0.4+	840831	882	0.0	3.8+				
811123	046	0.1-	1.1+	840925	882	1.1+	1.1-				

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

The identifications are by C. M. Bardwell unless otherwise stated.

(3138)* 1980 KL = 1950 HE = 1953 EG1 = 1958 VY = 1963 DO = 1981 VZ = 1983 CT3

Discovered 1980 May 22 by H. Debehogne at the European Southern Observatory. The key identifications 1980 KL = 1981 VZ = 1983 CT3 are by T. Furuta (JAM 1568).
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	284.35031	(1950.0)	P	Q
n	0.29685534	Peri. 319.15503	-0.99605144	+0.06827641
a	2.2255609	Node 224.85929	-0.04467080	-0.93780499
e	0.0752405	Incl. 4.61418	-0.07672054	-0.34038232
P	3.32	B(1,0) 14.5		

Residuals in seconds of arc

500421	760	2.2-	2.2+	800525	809	0.7+	0.2+	800611	809	0.2- 1.3+
500421	760	5.9+	1.7-	800526	809	0.6+	0.4+	800612	809	1.2+ 0.6-
530314	760	1.2-	1.4-	800526	809	0.3+	0.3+	800612	809	1.1+ 0.2-
530314	760	2.3-	3.2-	800531	809	0.1+	0.9-	800612	809	1.2+ 0.2-
581111	760	0.8-	0.5+	800531	809	0.2+	0.9-	811102	688	1.2+ 1.2-
581111	760	0.1-	0.7-	800531	809	0.2+	0.6-	811102	688	1.3+ 1.5-
630227	760	0.0	1.1+	800601	809	1.5-	0.1-	830215	809	0.9+ 0.2-
630227	760	1.6-	0.3+	800601	809	0.6-	0.6-	830215	809	1.0+ 0.2-
800522	809	1.2-	0.8+	800602	809	0.2-	0.7-	830215	809	1.3+ 0.1+
800522	809	1.0-	0.0	800603	809	0.3-	1.1-	830217	809	0.2- 0.3+
800522	809	1.6-	0.4+	800603	809	0.2+	1.0-	830217	809	0.2+ 0.3+
800523	809	1.1-	0.5+	800603	809	0.3+	1.0-	830217	809	0.9+ 0.1+
800523	809	1.3-	0.4+	800604	809	0.2+	0.7-	840724	801	0.9- 0.1-
800523	809	1.8-	0.2+	800604	809	0.5+	0.5-	840824	801	1.0+ 0.7+
800524	809	0.8-	0.4-	800604	809	0.6+	0.4-	840827	801	0.3+ 0.9-
800524	809	1.3-	0.3-	800611	809	0.3+	1.5+			
800525	809	1.2+	0.3+	800611	809	0.1+	1.7+			

(3139)* 1980 VL1 = 1963 YC

Discovered 1980 Nov. 11 at the Purple Mountain Observatory. The identification was made by L. D. Schmadel and W. Landgraf, who found it independently (MPC 8060).

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	22.66753				
n	0.17283082	Peri.	96.46920	+0.92150492	+0.19806840
a	3.1919440	Node	252.50441	-0.29658534	+0.91423375
e	0.0360990	Incl.	20.50355	+0.25073054	+0.35347638
P	5.70	B(1,0)	12.0		

Residuals in seconds of arc

631217	760	1.0-	1.2-	801227	330	0.0	5.9+	830712	474	0.5+ 0.3-
631217	760	0.7+	1.0-	830607	474	0.3-	0.7+	840603	801	0.8- 0.0
801013	095	0.4+	1.2+	830607	474	0.6-	0.5+	840627	801	0.7+ 1.2+
801111	330	0.4+	0.3+	830612	474	0.9+	2.6+	840925	801	1.3- 1.4+
801209	330	0.0	0.1+	830612	474	0.2-	1.2+			
801213	330	0.0	0.2+	830712	474	1.0+	0.5-			

(3140)* 1983 AO = 1949 PA = 1952 DR1 = 1962 CP = 1976 UW3 = 1978 EU3 = 1979 HR5

Discovered 1983 Jan. 9 by B. A. Skiff at the Anderson Mesa Station of the Lowell Observatory.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

			(1950.0)	P	Q
M	295.22739				
n	0.18833860	Peri.	264.93268	+0.97470854	-0.11516147
a	3.0142307	Node	101.58396	+0.17806419	+0.91806604
e	0.1132627	Incl.	11.27424	-0.13504226	+0.37933175
P	5.23	B(1,0)	12.0		

Residuals in seconds of arc

490815	078(75.9+	11.7+)X		830116	688	0.9-	0.7-	830309	688	0.8- 0.4-
520220	711 (0.0	6.5-)Y		830116	688	0.3-	0.4-	830309	688	0.1- 0.7-
620205	760	0.1+	1.1+	830121	688	2.5-	0.7+	840201	801	0.1+ 3.3+
620205	760	0.6+	2.7+	830121	688	2.1-	1.5+	840301	801	0.7+ 1.8+
761027	095	0.5+	1.1-	830211	688	1.4+	0.6+	840309	688	0.8- 2.3-
780306	095	3.0-	0.2+	830211	688	0.4+	0.9-	840327	552	0.1- 3.2-
790428	095	0.3-	3.4+	830211	688	1.2+	1.8+	840327	552	1.1+ 4.0-
830109	688	1.0+	0.5-	830211	688	0.6-	1.3-			
830109	688	1.4+	1.6-	830218	688	2.7+	0.6-			

(3141)* 1984 RH = 1952 PE = 1952 RQ = 1953 UF = 1953 VK2 = 1977 NM = 1977 OE = 1979 YW9

Discovered 1984 Sept. 2 by A. Mrkos at Klet.

Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

		(1950.0)	P	Q
M	338.42857			
n	0.15662702	Peri. 133.42181	-0.09769796	-0.98829814
a	3.4084604	Node 321.71771	+0.84967266	-0.02154558
e	0.0698574	Incl. 10.89896	+0.51818093	-0.15100522
P	6.29	B(1,0) 11.5		

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

520802	760(17.3+	18.4+)X	770722	095	0.3-	0.8+	840927	046	0.6-	0.1+
520915	024	0.5+	1.0-	791225	095	0.0	1.4+	840927	046	1.0+	0.2-
531017	760	0.7-	0.8+	800122	095	0.0	1.2-	840929	046	1.0+	0.2-
531017	760	0.7+	0.4-	840902	046	0.6+	0.6+	840929	046	1.6-	1.2-
531115	760(0.03-	0.01+)X	840902	046	0.8+	0.6-	840930	046	0.2+	0.6-
770714	095	0.7-	0.8-	840920	046	2.6+	2.1+	840930	046	0.2-	0.8-
770719	095	0.5+	1.1+	840920	046	3.6-	0.7+				

1978 EA3 = 1978 JM2 = 1951 RO = 1951 TM = 1972 EP

The double designations 1978 EA3 = 1978 JM2 and 1951 RO = 1951 TM are by B. G. Marsden and by W. Landgraf, respectively.

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

		(1950.0)	P	Q
M	85.04297			
n	0.17418535	Peri. 66.14528	-0.31828289	+0.94784478
a	3.1753809	Node 185.38066	-0.92210713	-0.31368425
e	0.1604850	Incl. 10.39521	-0.22003282	-0.05650195
P	5.66	B(1,0) 13.0		

Residuals in seconds of arc

510904	024	0.9-	1.2+	511003	024	1.1+	1.5-	780407	095	1.9-	0.0
510905	024	0.2+	0.5-	720314	095	0.1-	0.3-	780509	095	1.3+	0.1+
510906	024(48.9-	16.9-)	780306	095	0.6+	0.7-					

1980 EE2 = 1980 BU2 = 1975 VS1 = 1984 KO

The double designation 1980 EE2 = 1980 BU2 is by B. G. Marsden.

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

		(1950.0)	P	Q
M	221.00652			
n	0.28055426	Peri. 293.26044	-0.95750327	-0.28499420
a	2.3109595	Node 230.21127	+0.28119349	-0.88820792
e	0.1026505	Incl. 3.30781	+0.06416942	-0.36036786
P	3.51	B(1,0) 14.5		

Residuals in seconds of arc

751102	095	0.1-	0.2-	800314	808	0.1-	0.5+	840522	071	1.3-	1.2+
800124	095	0.3-	0.5-	800314	808	0.1+	0.5-	840522	071	0.3+	1.0-
800313	808	0.7+	0.5+	800318	808	0.5-	0.3-				
800313	808	0.4+	0.1-	840522	071	1.0+	0.1-				

1980 PH = 1941 SA2 = 1984 QH1

The key identification 1980 PH = 1984 QH1 was found independently by E. Bowell.

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

		(1950.0)	P	Q
M	89.88114			
n	0.25148253	Peri. 69.96982	+0.91099845	-0.40965309
a	2.4857934	Node 314.17920	+0.34919575	+0.82761789
e	0.2173704	Incl. 3.80601	+0.21941777	+0.38370949
P	3.92	B(1,0) 15.0		

Residuals in seconds of arc

410923	024	0.3+	0.7-	800909	095	3.1-	1.0+	840928	688	0.3+	0.6+
800808	688	2.4+	1.0-	800911	095	0.9+	0.2-	840928	688	1.6-	0.8-
800902	688	0.7-	0.4-	840831	688	1.9+	0.8-	840928	688	0.4-	0.4+
800904	688	0.6+	0.4+	840831	688	0.8+	0.9+	840928	688	0.3+	1.1-
800907	688	1.2+	0.2-	840925	688	1.0-	0.1-				
800907	095	1.9-	1.4+	840925	688	0.0	0.4+				

1984 FO
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

M	120.78150		(1950.0)	P	Q
n	0.26626705	Peri.	96.13906	+0.03141898	+0.99903057
a	2.3928993	Node	175.31683	-0.99921667	+0.03213754
e	0.2522638	Incl.	22.18891	-0.02406016	-0.03008481
P	3.70	B(1,0)	14.0		

From 15 observations 1984 Mar. 28-Sept. 26, mean residual 0".8.

1984 JZ = 1958 VB1 = 1969 TP3 = 1975 VC8 = 1975 WF1
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

M	261.07854		(1950.0)	P	Q
n	0.17320845	Peri.	17.62113	+0.45871402	-0.84561120
a	3.1873092	Node	46.11801	+0.76278596	+0.21714762
e	0.0141319	Incl.	22.25611	+0.45578397	+0.48763574
P	5.69	B(1,0)	12.5		

Residuals in seconds of arc

581111	760(89.0-	43.0-)X		840428	691	0.3+	1.1+	840503	688	0.7-	2.0-
691009	095	0.1+	0.2-	840428	691	0.5+	1.3+	840503	688	0.0	2.9-
751106	095	2.1-	3.2-	840502	691	0.4-	0.3-	840601	691	0.5-	0.3+
751124	330	3.8+	1.4+	840502	691	0.6-	0.4-	840601	691	0.5-	0.1+
840428	691	0.4+	1.0+	840502	691	0.6-	0.5-	840621	691	0.4+	0.3+

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

The identifications are by B. G. Marsden.

Periodic Comet Takamizawa (1984j)
Epoch 1984 May 20.0 ET = JDE 2445840.5
T 1984 May 24.94826 ET

q	1.5945537		(1950.0)	P	Q
n	0.13607756	Peri.	147.53539	+0.03683269	+0.99001845
a	3.7435047	Node	124.22868	-0.94836777	+0.07754366
e	0.5740479	Incl.	9.47039	-0.31502684	-0.11768796
P	7.24				

From 81 observations 1984 July 6-Oct. 22, mean residual 1".2.

Periodic Comet Kowal-Mrkos (1984n)
T 1984 June 7.63072 ET

q	1.9510755		(1950.0)	P	Q
n	0.13461316	Peri.	338.10458	-0.68657206	+0.72547602
a	3.7706050	Node	248.49965	-0.65914625	-0.64893829
e	0.4825564	Incl.	2.95678	-0.30683062	-0.22926762
P	7.32				

From 8 observations 1984 Apr. 23-May 19.

Periodic Comet Shoemaker (1984q)
T 1984 Sept. 17.36806 ET

		(1950.0)	P	Q
q 1.9761019				
n 0.13664788	Peri.	19.02313	+0.98768926	-0.00475408
a 3.7330814	Node	339.27638	-0.11331356	+0.66734025
e 0.4706513	Incl.	26.22256	+0.10784232	+0.74473779
P 7.21				

From 20 observations 1984 Sept. 27-Oct. 25.

Comet Meier (1984o)
T 1984 Oct. 13.94862 ET

		(1950.0)	P	Q
q 0.8568559				
	Peri.	128.00498	-0.48022805	-0.87048589
	Node	11.00923	-0.87051951	+0.45789895
e 1.0	Incl.	145.60832	+0.10759549	-0.18050723

From 6 observations 1984 Sept. 18-Oct. 6.

(3142)* 1937 AC = 1978 EL7 = 1982 BV1
Discovered 1937 Jan. 9 by A. Patry at Nice.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

		(1950.0)	P	Q
M 328.95944				
n 0.24134660	Peri.	189.62540	-0.86491145	-0.47736989
a 2.5549079	Node	320.61649	+0.47521432	-0.67938380
e 0.0872845	Incl.	14.14587	+0.16155352	-0.55727519
P 4.08	B(1,0)	13.5		

Residuals in seconds of arc

370109	020	2.2+	1.3+		780305	095	0.2-	1.5+		820222	704	0.2+	0.5+
370111	020	(3.4-	26.6+)X		820124	688	1.3-	1.4-		820223	704	0.8+	0.4+
370113	020	6.0+	1.5+		820124	688	0.5-	1.3-		820228	688	1.2-	1.2-
370121	020	0.2+	0.1+		820130	688	0.3-	1.5-		820228	688	0.1-	1.0-
370130	020	0.9-	1.2+		820130	688	0.2+	1.3-		840725	801	2.2+	0.2-
370203	020	3.2-	2.1+		820218	704	3.0-	0.4-		840825	801	3.0+	1.8-
370211	020	(98.3+	50.9+)X		820221	688	1.0-	2.4-		840923	801	2.2-	1.7-
370213	020	0.6+	1.0+		820221	704	(0.6+	4.1+)					
370404	020	(26.4-	7.4-)X		820221	688	0.2+	1.6-					

(3143)* 1980 UA
Discovered 1980 Oct. 31 at the Harvard Observatory’s Agassiz Station.
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5

		(1950.0)	P	Q
M 9.38537				
n 0.20527774	Peri.	326.24619	+0.69303999	-0.71893425
a 2.8460431	Node	79.81903	+0.67275244	+0.61847945
e 0.0812564	Incl.	3.09779	+0.25903615	+0.31720137
P 4.80	B(1,0)	14.0		

Residuals in seconds of arc

801008	095	1.0-	2.1+		810109	801	1.1+	0.1-		840726	801	0.1+	0.2-
801031	801	0.7+	0.1-		810131	801	2.1-	0.0		840824	801	0.3-	0.3+
801103	801	0.1-	0.2+		820419	801	1.4+	0.2+		840827	801	0.2+	0.2+
801106	801	0.4-	0.3-		820526	801	1.0-	0.8+					
801207	801	0.6+	0.2-		830418	801	0.3+	1.4+					

1931 VP = 1984 UB
Epoch 1985 Dec. 1.0 ET = JDE 2446400.5 (J-P)

		(1950.0)	P	Q
M 191.68591				
n 0.37108317	Peri.	293.45237	+0.65878292	+0.74184443
a 1.9178858	Node	19.48165	-0.47665480	+0.54030601
e 0.2069029	Incl.	22.04713	-0.58206980	+0.39716024
P 2.66	B(1,0)	15.0		

Residuals in seconds of arc

311108	024	2.6+	2.0-	841018	071	0.1-	0.1+	841020	071	0.5-	1.2+
311113	024	2.9+	0.6-	841018	071	0.7-	0.9-	841020	071	0.9+	1.9+
311201	024	2.6-	0.9+	841018	071	2.0-	0.8+	841021	071	3.3-	5.1+
311212	024	3.2-	0.4+	841018	071	4.0+	3.1-	841021	071	1.9+	0.4-
841018	071	4.2-	2.2+	841019	071	1.3-	2.0+				
841018	071	3.6+	7.0-	841019	071	0.6+	0.6-				

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ORBITAL ELEMENTS BY D. W. E. GREEN, SMITHSONIAN ASTROPHYSICAL OBSERVATORY.

1974 QO2 = 1937 KA = 1947 LG = 1980 GM1 = 1984 SN2

The key identification 1974 QO2 = 1984 SN2 is by E. Bowell. The identifications 1974 QO2 = 1937 KA = 1947 LG = 1980 GM1 are by D. W. E. Green.

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

M	163.91964		(1950.0)	P	Q
n	0.29594281	Peri.	172.03341	+0.56901176	+0.82067240
a	2.2301379	Node	132.63005	-0.75829219	+0.54819195
e	0.1837838	Incl.	4.06669	-0.31814866	+0.16119058
P	3.33	B(1,0)	15.5		

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

370516	078(0.05+	0.02-)X	740911	095	0.9-	0.5+	840925	688	2.0+	0.7-
470614	690(0.04+	0.02-)Y	740914	095	1.3-	0.3-	840925	688	0.1+	0.9-
470615	690(0.04+	0.03-)Y	800413	033	0.3-	0.2-	840928	688	0.3-	0.1-
740827	095	1.6+	1.5+	800413	033	0.1-	0.7-	840928	688	0.9-	0.7-

1977 QD2 = 1977 TP2 = 1984 SH1

The identification 1977 QD2 = 1984 SH1 is by E. Bowell. The double designation 1977 QD2 = 1977 TP2 is by B. G. Marsden (MPC 9153).

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

M	128.87561		(1950.0)	P	Q
n	0.28241491	Peri.	359.97938	+0.98391847	+0.17776529
a	2.3007980	Node	349.73123	-0.16385691	+0.85944280
e	0.1916427	Incl.	5.61246	-0.07110109	+0.47933033
P	3.49	B(1,0)	15.5		

Residuals in seconds of arc

770820	095	0.5+	0.9-	840925	688	0.4+	0.4-	840929	046	3.9+	1.5+
770821	095	1.4-	0.0	840927	046	0.0	1.4-	840929	046	1.2+	3.5+
770823	095	1.4-	0.3-	840927	046	1.3-	0.1-	840930	046	0.7-	0.9-
771007	095	0.0	1.4+	840928	688	2.7-	0.2+	840930	046	0.6+	1.0-
840925	688	1.0-	0.1-	840928	688	2.1+	1.3-				

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

Periodic Comet Crommelin

Epoch 1984 Mar. 1.0 ET = JDE 2445760.5

T 1984 Feb. 20.17073 ET

q	0.7345227		(1950.0)	P	Q
n	0.03596074	Peri.	195.85443	+0.10141563	-0.88335828
a	9.0904137	Node	250.19098	+0.95739755	+0.21167082
e	0.9191981	Incl.	29.10259	+0.27037898	-0.41817893
P	27.41				

From 279 observations 1873-1984, mean residual 2".1. The nongravitational parameters are A1 = -0.08, A2 = -0.0003.

Periodic Comet Halley
Epoch 1986 Feb. 19.0 ET = JDE 2446480.5
T 1986 Feb. 9.43867 ET

		(1950.0)	P	Q
q	0.5870992			
n	0.01297198	Peri.	111.84658	+0.55440167	-0.79089084
a	17.9390115	Node	58.14397	-0.83064644	-0.50652437
e	0.9672725	Incl.	162.23932	-0.05162621	-0.34340172
P	75.98				

From 753 observations 1835-1984, mean residual 1".9. The nongravitational parameters are A1 = +0.15, A2 = +0.0155.

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NEW NAMES OF MINOR PLANETS.

(2317) Galya = 2524 P-L
Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld at Leiden on Palomar Schmidt plates taken by T. Gehrels.
Named in honor of Galya Lubarsky, a friend of T. Gehrels.

(2318) Lubarsky = 6521 P-L
Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld at Leiden on Palomar Schmidt plates taken by T. Gehrels.
Named in honor of Cronid Lubarsky, a friend of T. Gehrels.

(2362) Mark Twain = 1976 SH2
Discovered 1976 Sept. 24 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for Mark Twain, pen name of Samuel Langhorne Clemens (1835-1910), world-famous American writer.

(2506) Pirogov = 1976 QG1
Discovered 1976 Aug. 26 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in memory of Nikolaj Ivanovich Pirogov (1810-1881), distinguished Russian surgeon and anatomist who developed new methods of anatomical research and the basic principles of field surgery. He has been credited with placing surgery on a scientific basis.

(2508) Alupka = 1977 ET1
Discovered 1977 Mar. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for a small town on the south coast of the Crimea, famous for its health resorts, also the Vorontsov palace and nearby park.

(2726) Kotelnikov = 1979 SE9
Discovered 1979 Sept. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of academician Vladimir Aleksandrovich Kotel’nikov, Soviet scientist, radio engineer and vice-president of the U.S.S.R. Academy of Sciences. Radar observations of Mercury, Venus, Mars and Jupiter conducted under his supervision were of help in correcting the value of the astronomical unit, in determining the period and the direction of the rotation of Venus, and in understanding the physics and dynamics of these planets.

(2727) Paton = 1979 SO9
Discovered 1979 Sept. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Named in memory of Evgenij Oskarovich Paton (1870-1953), Soviet scientist known for bridge building and electric welding. The planet also honors academician Boris Evgen'evich Paton, prominent Soviet metallurgist and president of the Academy of Sciences of the Ukrainian S.S.R.

(2728) Yatskiv = 1979 ST9

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

Named in honor of Yaroslav Stepanovich Yatskiv, Soviet astrometrist and geodynamicist, director of the Main Astronomical Observatory of the Ukrainian Academy of Sciences, a vice-president of the IAU, president of IAU Commission 19, and a member of the International Halley Watch Steering Group.

(2769) Mendeleev = 1976 GZ2

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

Named in memory of Dmitrij Ivanovich Mendeleev (1834-1907), world-famous Russian chemist, discoverer of the periodic law of the elements.

(2783) Chernyshevskij = 1974 RA2

Discovered 1974 Sept. 14 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Named in memory of Nikolaj Gavrilovich Chernyshevskij (1828-1889), Russian writer and philosopher.

(2794) Kulik = 1978 PS3

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

Named in memory of Leonid Alekseevich Kulik (1883-1942), Soviet mineralogist, researcher of meteorites, and a founder of meteoric research in the U.S.S.R. He is particularly known for his investigation of the place and circumstances of the Tunguska event.

(2844) Hess = 1981 JP

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

Named in honor of Frederick Hess, professor of natural science at the State University of New York at Fort Schuyler and long-time lecturer at the Hayden Planetarium-American Museum in New York City. Hess has directed a number of solar eclipse expeditions and has accumulated more than 30 minutes in the shadow of the moon. Name proposed by the discoverer following a suggestion from the Custer Institute. Citation prepared by T. Carey.

(2845) Franklinken = 1981 OF

Discovered 1981 July 26 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named in honor of Kenneth Linn Franklin, astronomer at the Hayden Planetarium-American Museum in New York City. At the Carnegie Institution of Washington he was co-discoverer of high-frequency radio emission from Jupiter, and while at the American Museum he directed the Kalbfleisch Research Station on Long Island and designed a watch that displays lunar time. Name proposed by the discoverer following a suggestion by the Custer Institute. Citation prepared by T. Carey.

(2873) Binzel = 1982 FR

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

Named in honor of Richard P. Binzel of the University of Texas at Austin. During his thesis research, Binzel has been one of the most prolific

observers of minor-planet lightcurves, especially in determining rotation periods of small, main-belt objects. Citation prepared by A. W. Harris.

(2883) Barabashov = 1978 RG6
Discovered 1978 Sept. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in memory of Nikolaj Pavlovich Barabashov (1894-1971), director of the Kharkov Observatory for 40 years, known for his research on the moon and planets.

(2910) Yoshkar-Ola = 1980 TK13
Discovered 1980 Oct. 11 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for a city on the Volga basin, capital of the Mari Autonomous Soviet Socialist Republic, on the occasion of the city's 400th anniversary.

(2915) Moskvina = 1977 QY2
Discovered 1977 Aug. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of Valentina Nikolaevna Moskvina, a doctor at the Bakhchisaraj regional hospital in the Crimea.

(2916) Voronveliya = 1978 PW2
Discovered 1978 Aug. 8 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of Boris Aleksandrovich Vorontsov-Vel'yaminov, famous Soviet astrophysicist at the Sternberg Astronomical Institute for many decades. His scientific works cover a wide range of topics, including comets, variable stars, galaxies, nebulae and the history of astronomy. He is also well-known as an author of textbooks and popular books on astronomy.

(2918) Salazar = 1980 TU4
Discovered 1980 Oct. 9 by C. S. Shoemaker on films taken at Palomar by E. F. Helin and S. J. Bus.
Named in honor of Frederick Salazar, son-in-law of the discoverer.

(2932) Kempchinsky = 1980 TK4
Discovered 1980 Oct. 9 by C. S. Shoemaker on films taken at Palomar by E. F. Helin and S. J. Bus.
Named in honor of Paula M. Kempchinsky, daughter-in-law of the discoverer.

(2948) Amosov = 1969 TD2
Discovered 1969 Oct. 8 by L. I. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of Nikolaj Mikhailovich Amosov, distinguished cardiologist, specialist in medical cybernetics, and member of the Academy of Sciences of the Ukrainian S.S.R. He has performed more than four thousand heart operations.

(2952) Lilliputia = 1979 SF2
Discovered 1979 Sept. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Named for the land of tiny people in "Gulliver's Travels", this minor planet is one of the smallest discovered at this Observatory.

(2977) Chivilikhin = 1974 SP
Discovered 1974 Sept. 19 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Named in memory of Vladimir Alekseevich Chivilikhin (1928-1984), prominent Soviet writer.

(2982) Muriel = 1981 JA3

Discovered 1981 May 6 by C. S. Shoemaker on films taken at Palomar by E. F. Helin and S. J. Bus.

Named in honor of Muriel May Scott Shoemaker, mother-in-law of the discoverer.

(3025) Higson = 1982 QR

Discovered 1982 Aug. 20 by C. S. Shoemaker and E. M. Shoemaker.

Named in honor of Roger Higson, night assistant for the 1.2-m Schmidt telescope at Palomar Observatory since 1979. An outstanding and thoroughly dedicated member of the observatory's supporting staff, he has skillfully assisted astronomers in a broad range of research conducted with the 1.2-m Schmidt. His efforts have been especially appreciated by observers of comets and minor planets. Name proposed by the discoverers, endorsed by J. Gibson and C. Kowal.

(3101) Goldberger = 1978 GB

Discovered 1978 Apr. 11 by E. Helin on a plate taken by G. Grueff and J. Wall at Palomar.

Named in honor of Marvin L. Goldberger, gifted physicist, teacher and humanitarian, to commemorate his birthday, Oct. 22. Since his inauguration in 1978 as president of the California Institute of Technology, he has dedicated himself to sustaining the Institute's excellence and to opening new opportunities for women in science. His steadfast support for research on minor planets has enhanced the importance and vitality of the subject as a scientific endeavor.

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EPHEMERIDES.

Periodic Comet Shoemaker (1984q) Elements MPC 9212

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1984	10 27	22 51.05	+20 53.0	1.188	2.004	133.2	21.2	12.4
1984	11 06	22 50.96	+21 40.6					
1984	11 16	22 54.76	+22 25.7	1.384	2.038	117.4	25.5	12.8
1984	11 26	23 01.93	+23 13.0					
1984	12 06	23 11.98	+24 05.5	1.614	2.084	104.0	27.3	13.2
1984	12 16	23 24.39	+25 04.5					
1984	12 26	23 38.76	+26 10.0	1.865	2.141	92.2	27.3	13.7
1985	01 05	23 54.77	+27 21.7					
1985	01 15	00 12.12	+28 38.2	2.127	2.207	81.5	26.2	14.1
1985	01 25	00 30.61	+29 58.3					
1985	02 04	00 50.09	+31 20.5	2.394	2.281	71.5	24.2	14.5
1985	02 14	01 10.39	+32 42.9					
1985	02 24	01 31.43	+34 04.1	2.659	2.361	61.9	21.7	14.9
1985	03 06	01 53.10	+35 22.4					
1985	03 16	02 15.30	+36 36.4	2.918	2.446	52.7	18.9	15.2
1985	03 26	02 37.96	+37 44.6					
1985	04 05	03 00.98	+38 46.1	3.162	2.535	43.7	15.8	15.5

Comet Shoemaker (1984s) Elements MPC 9204

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1984	10 27	01 57.15	+18 28.3	0.614	1.605	173.9	3.8	12.0
1984	11 06	01 58.48	+14 29.9					
1984	11 16	02 02.20	+09 19.0	0.464	1.430	158.2	14.9	10.9

1984 11 26	02 10.34	+03 13.4						
1984 12 06	02 24.90	-03 11.6	0.389	1.296	136.5	31.5	10.1	
1984 12 16	02 47.05	-09 14.0						
1984 12 26	03 16.91	-14 12.6	0.373	1.223	122.1	42.9	9.7	
1985 01 05	03 53.37	-17 36.1						
1985 01 15	04 33.89	-19 09.4	0.403	1.226	118.2	45.0	9.9	
1985 01 25	05 15.38	-18 54.6						
1985 02 04	05 55.20	-17 13.8	0.483	1.306	121.7	40.0	10.6	

Comet Shoemaker (1984r) Elements MPC 9204

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1984 10 27		03 20.08	+18 13.8	4.556	5.505	160.9	3.4	16.7
1984 11 06		03 06.12	+17 17.9					
1984 11 16		02 52.08	+16 17.4	4.528	5.509	172.1	1.4	16.7
1984 11 26		02 38.57	+15 15.4					
1984 12 06		02 26.16	+14 15.2	4.679	5.517	145.3	5.8	16.8
1984 12 16		02 15.24	+13 19.8					
1984 12 26		02 06.04	+12 31.4	4.975	5.530	119.7	8.9	16.9
1985 01 05		01 58.63	+11 51.4					
1985 01 15		01 52.97	+11 20.1	5.356	5.545	96.0	10.2	17.1
1985 01 25		01 48.91	+10 57.3					
1985 02 04		01 46.29	+10 42.3	5.758	5.565	73.9	9.8	17.3

1982 DV a,e,i = 2.03, 0.46, 6 Elements MPC 9029

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1984 10 27		09 37.96	+08 24.7	1.772	1.700	-1.75	+8.0	19.7
1984 11 06		10 02.60	+05 49.2					
1984 11 16		10 28.29	+02 56.5	1.495	1.576	-2.15	+10.6	19.2
1984 11 26		10 55.34	-00 13.3					
1984 12 06		11 24.15	-03 39.3	1.245	1.453	-2.70	+13.3	18.8
1984 12 16		11 55.23	-07 19.8					
1984 12 26		12 29.15	-11 10.2	1.036	1.337	-3.41	+14.7	18.3
1985 01 05		13 06.47	-15 02.3					
1985 01 15		13 47.68	-18 43.9	0.882	1.235	-4.21	+12.0	17.9
1985 01 25		14 32.85	-21 57.9					
1985 02 04		15 21.36	-24 24.8	0.789	1.156	-4.68	+2.9	17.6
1985 02 14		16 11.76	-25 49.0					
1985 02 24		17 01.92	-26 03.3	0.754	1.111	-4.26	-8.5	17.5
1985 03 06		17 49.65	-25 11.9					
1985 03 16		18 33.42	-23 27.6	0.758	1.109	-3.24	-13.7	17.5
1985 03 26		19 12.38	-21 07.0					
1985 04 05		19 46.36	-18 25.5	0.777	1.150	-2.44	-12.2	17.6
1985 04 15		20 15.56	-15 35.7					
1985 04 25		20 40.18	-12 46.7	0.790	1.226	-2.10	-8.7	17.7
1985 05 05		21 00.41	-10 05.8					
1985 05 15		21 16.34	-07 37.8	0.784	1.327	-2.16	-5.9	17.7
1985 05 25		21 27.86	-05 27.7					
1985 06 04		21 34.79	-03 39.9	0.761	1.442	-2.55	-4.8	17.7
1985 06 14		21 36.92	-02 18.9					
1985 06 24		21 34.07	-01 30.1	0.736	1.564	-3.17	-5.9	17.5
1985 07 04		21 26.53	-01 17.4					
1985 07 14		21 15.15	-01 41.9	0.739	1.688	-3.68	-8.6	17.4
1985 07 24		21 01.46	-02 40.1					
1985 08 03		20 47.60	-04 02.0	0.808	1.810	-3.60	-10.2	17.5
1985 08 13		20 35.52	-05 34.7					
1985 08 23		20 26.61	-07 06.1	0.963	1.928	-3.00	-9.3	18.1
1985 09 02		20 21.51	-08 27.6					
1985 09 12		20 20.15	-09 34.6	1.196	2.040	-2.32	-7.7	18.9

1985 09 22	20 22.19	-10 25.6						
1985 10 02	20 27.12	-11 00.4	1.488	2.147	-1.77	-6.2	19.6	
1985 10 12	20 34.38	-11 20.0						
1985 10 22	20 43.53	-11 25.4	1.817	2.247	-1.37	-5.2	20.1	

Comet Meier (1984o) Elements MPC 9212

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1984 11 16	14 00.59	-11 47.6	1.907	1.048	21.2	19.9	13.1	
1984 11 26	13 50.33	-14 47.6						
1984 12 06	13 38.12	-17 56.2	1.770	1.276	44.8	32.9	13.8	
1984 12 16	13 22.26	-21 17.6						
1984 12 26	13 00.39	-24 52.1	1.534	1.531	71.1	37.4	14.3	
1985 01 05	12 29.35	-28 29.3						
1985 01 15	11 46.09	-31 37.0	1.314	1.794	101.7	32.5	14.6	
1985 01 25	10 50.43	-33 13.3						
1985 02 04	09 49.41	-32 18.5	1.275	2.055	130.3	21.5	15.2	
1985 02 14	08 54.71	-29 01.7						
1985 02 24	08 13.32	-24 37.7	1.523	2.312	132.7	18.3	16.1	
1985 03 06	07 45.18	-20 16.4						
1985 03 16	07 27.27	-16 30.4	1.982	2.562	114.7	20.7	17.1	
1985 03 26	07 16.60	-13 26.2						
1985 04 05	07 10.96	-11 00.3	2.533	2.807	95.2	20.8	18.0	
1985 04 15	07 08.81	-09 06.4						
1985 04 25	07 09.14	-07 38.9	3.101	3.047	77.6	18.8	18.8	
1985 05 05	07 11.23	-06 33.1						
1985 05 15	07 14.55	-05 45.4	3.638	3.280	61.6	15.7	19.5	

(3133) A907 TC a,e,i = 2.18, 0.16, 7 Elements MPC 9204

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	22 12.24	-17 58.6	1.236	1.887	115.1	28.5	16.5	
1984 11 06	22 19.49	-16 15.7						
1984 11 16	22 29.47	-14 21.3	1.414	1.866	100.4	31.4	16.8	
1984 11 26	22 41.71	-12 17.2						
1984 12 06	22 55.78	-10 04.5	1.604	1.849	87.8	32.2	17.1	
1984 12 16	23 11.32	-07 44.7						
1984 12 26	23 28.08	-05 18.9	1.797	1.838	76.7	31.4	17.3	
1985 01 05	23 45.84	-02 48.4						
1985 01 15	00 04.44	-00 14.7	1.985	1.833	66.6	29.5	17.5	

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

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	22 25.53	+01 51.2	2.291	2.973	124.8	15.9	16.0	
1984 11 06	22 26.67	+01 46.8						
1984 11 16	22 29.94	+01 53.1	2.542	2.975	106.3	18.6	16.3	
1984 11 26	22 35.15	+02 10.1						
1984 12 06	22 42.06	+02 38.0	2.819	2.977	89.5	19.3	16.6	
1984 12 16	22 50.42	+03 16.1						
1984 12 26	23 00.01	+04 03.6	3.096	2.980	74.1	18.5	16.8	
1985 01 05	23 10.64	+04 59.9						
1985 01 15	23 22.14	+06 03.8	3.354	2.984	59.9	16.6	16.9	

1984 QE a,e,i = 2.24, 0.18, 4 Elements MPC 9208

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	22 49.25	-14 29.5	1.149	1.899	124.6	25.5	16.8	
1984 11 06	22 55.37	-13 17.5						
1984 11 16	23 04.07	-11 50.7	1.361	1.926	109.1	29.0	17.3	
1984 11 26	23 14.89	-10 12.1						
1984 12 06	23 27.42	-08 23.9	1.598	1.957	95.6	30.1	17.7	

1984 12 16	23 41.30	-06 28.4					
1984 12 26	23 56.26	-04 27.4	1.848	1.992	83.5	29.4	18.0
1985 01 05	00 12.09	-02 22.5					
1985 01 15	00 28.62	-00 15.4	2.101	2.029	72.2	27.5	18.3

1980 PH a,e,i = 2.49, 0.22, 4 Elements MPC 9210

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27		22 55.90	-01 14.8	1.157	1.961	131.3	22.4	17.3
1984 11 06		22 59.42	-00 59.8					
1984 11 16		23 06.09	-00 27.6	1.326	1.950	114.0	27.6	17.7
1984 11 26		23 15.50	+00 20.9					
1984 12 06		23 27.24	+01 24.1	1.524	1.946	99.4	30.0	18.0
1984 12 16		23 40.88	+02 40.1					
1984 12 26		23 56.11	+04 06.9	1.737	1.948	86.8	30.3	18.3
1985 01 05		00 12.64	+05 42.3					
1985 01 15		00 30.26	+07 24.1	1.954	1.957	75.6	29.1	18.6

1934 CX a,e,i = 3.03, 0.13, 7 Elements MPC 9206

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27		23 05.70	+03 20.1	2.543	3.320	134.9	12.2	17.4
1984 11 06		23 04.43	+02 52.9					
1984 11 16		23 05.16	+02 37.0	2.798	3.336	114.8	15.6	17.7
1984 11 26		23 07.78	+02 32.9					
1984 12 06		23 12.12	+02 40.5	3.095	3.351	96.4	17.0	18.0
1984 12 16		23 17.98	+02 59.1					
1984 12 26		23 25.15	+03 27.7	3.402	3.365	79.5	16.7	18.2
1985 01 05		23 33.45	+04 05.6					
1985 01 15		23 42.68	+04 51.4	3.694	3.378	63.8	15.2	18.3

(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.
1984 10 27		23 12.04	+05 00.5	2.607	3.401	136.9	11.5	16.5
1984 11 06		23 10.09	+04 41.9					
1984 11 16		23 10.12	+04 32.8	2.828	3.388	116.6	15.1	16.8
1984 11 26		23 12.09	+04 34.1					
1984 12 06		23 15.86	+04 46.3	3.093	3.375	98.1	16.8	17.0
1984 12 16		23 21.25	+05 08.9					
1984 12 26		23 28.07	+05 41.6	3.371	3.362	81.1	16.8	17.2
1985 01 05		23 36.12	+06 23.5					
1985 01 15		23 45.23	+07 13.6	3.636	3.349	65.5	15.5	17.3

1974 QO2 a,e,i = 2.23, 0.18, 4 Elements MPC 9213

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27		23 18.39	-10 37.0	1.176	1.990	132.7	21.5	17.8
1984 11 06		23 21.24	-10 06.1					
1984 11 16		23 26.89	-09 15.5	1.399	2.029	115.3	26.1	18.4
1984 11 26		23 34.91	-08 08.8					
1984 12 06		23 44.91	-06 49.1	1.655	2.070	100.2	27.9	18.8
1984 12 16		23 56.50	-05 19.3					
1984 12 26		00 09.38	-03 41.7	1.926	2.113	86.8	27.7	19.2
1985 01 05		00 23.31	-01 58.4					
1985 01 15		00 38.08	-00 11.2	2.201	2.156	74.4	26.1	19.5

1977 QD2 a,e,i = 2.30, 0.19, 6 Elements MPC 9213

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27		23 29.90	+01 19.0	1.012	1.885	140.2	19.7	17.4
1984 11 06		23 30.81	+01 46.5					
1984 11 16		23 35.14	+02 28.7	1.189	1.906	121.8	26.2	17.9

1984 11 26	23 42.46	+03 24.6						
1984 12 06	23 52.33	+04 33.0	1.406	1.932	106.4	29.3	18.3
1984 12 16	00 04.28	+05 51.8					
1984 12 26	00 17.93	+07 19.2	1.646	1.963	93.1	30.0	18.7
1985 01 05	00 32.98	+08 53.4					
1985 01 15	00 49.17	+10 32.1	1.896	1.997	81.1	29.1	19.1

1931 VP a,e,i = 1.92, 0.21, 22 Elements MPC 9212

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	23 42.70	-05 06.8	0.786	1.677	140.6	22.1	16.1
1984 11 06	23 37.93	-01 37.3					
1984 11 16	23 38.04	+01 34.9	0.983	1.726	122.2	29.0	16.8
1984 11 26	23 42.16	+04 31.7					
1984 12 06	23 49.54	+07 16.7	1.221	1.777	106.8	32.1	17.4
1984 12 16	23 59.48	+09 52.6					
1984 12 26	00 11.49	+12 21.8	1.481	1.829	93.6	32.5	17.9
1985 01 05	00 25.20	+14 46.1					
1985 01 15	00 40.31	+17 06.1	1.748	1.882	81.9	31.2	18.3

(3134) A921 VA a,e,i = 3.97, 0.22, 8 Elements MPC 9204

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	04 06.99	+24 58.6	2.202	3.094	148.5	9.7	16.4
1984 11 06	04 01.42	+24 28.4					
1984 11 16	03 54.54	+23 49.8	2.109	3.090	171.1	2.8	16.0
1984 11 26	03 47.17	+23 05.1					
1984 12 06	03 40.22	+22 17.9	2.130	3.090	164.2	5.0	16.2
1984 12 16	03 34.49	+21 32.3					
1984 12 26	03 30.59	+20 52.1	2.261	3.092	141.5	11.4	16.5
1985 01 05	03 28.89	+20 20.2					
1985 01 15	03 29.48	+19 58.0	2.477	3.096	120.7	15.9	16.8
1985 01 25	03 32.32	+19 45.6					
1985 02 04	03 37.26	+19 42.1	2.745	3.104	102.1	18.1	17.1
1985 02 14	03 44.07	+19 46.2					
1985 02 24	03 52.53	+19 56.1	3.033	3.114	85.4	18.5	17.3
1985 03 06	04 02.43	+20 10.0					
1985 03 16	04 13.56	+20 26.1	3.319	3.127	70.3	17.4	17.5
1985 03 26	04 25.73	+20 42.8					
1985 04 05	04 38.79	+20 58.7	3.583	3.142	56.4	15.4	17.6

1929 PB a,e,i = 2.35, 0.24, 4 Elements MPC 9205

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984 10 27	08 31.82	+15 17.0	2.380	2.527	86.8	23.1	19.9
1984 11 06	08 39.49	+14 41.9					
1984 11 16	08 44.93	+14 14.1	2.156	2.573	103.5	21.9	19.7
1984 11 26	08 47.87	+13 55.9					
1984 12 06	08 48.05	+13 49.3	1.948	2.616	122.8	18.4	19.5
1984 12 16	08 45.34	+13 55.8					
1984 12 26	08 39.77	+14 15.7	1.790	2.657	145.1	12.2	19.2
1985 01 05	08 31.69	+14 47.7					
1985 01 15	08 21.83	+15 28.6	1.722	2.695	169.5	3.8	18.8
1985 01 25	08 11.22	+16 14.0					
1985 02 04	08 01.08	+16 59.2	1.769	2.730	163.9	5.8	19.0
1985 02 14	07 52.50	+17 40.4					
1985 02 24	07 46.26	+18 15.2	1.927	2.762	140.2	13.3	19.4
1985 03 06	07 42.80	+18 42.4					
1985 03 16	07 42.14	+19 01.6	2.167	2.791	119.2	18.1	19.8
1985 03 26	07 44.15	+19 13.1					
1985 04 05	07 48.54	+19 17.0	2.452	2.817	100.8	20.4	20.2

1941 UG a,e,i = 2.45, 0.20, 4 Elements MPC 9207

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984	11 16	09 19.02	+12 44.7	1.971	2.283	95.1	25.6	18.4
1984	11 26	09 26.04	+11 46.9					
1984	12 06	09 30.40	+10 59.2	1.771	2.328	112.1	23.1	18.1
1984	12 16	09 31.85	+10 24.0					
1984	12 26	09 30.18	+10 03.7	1.599	2.374	132.1	17.9	17.8
1985	01 05	09 25.42	+09 59.3					
1985	01 15	09 17.91	+10 10.5	1.492	2.420	155.1	9.9	17.5
1985	01 25	09 08.40	+10 35.0					
1985	02 04	08 58.04	+11 08.6	1.482	2.465	174.1	2.3	17.2
1985	02 14	08 48.15	+11 45.7					
1985	02 24	08 39.89	+12 21.6	1.583	2.509	153.7	10.1	17.7
1985	03 06	08 34.13	+12 52.2					
1985	03 16	08 31.25	+13 15.0	1.779	2.552	131.7	16.9	18.2
1985	03 26	08 31.26	+13 29.0					
1985	04 05	08 33.97	+13 33.5	2.038	2.593	112.6	20.9	18.6
1985	04 15	08 39.04	+13 28.7					
1985	04 25	08 46.11	+13 14.6	2.329	2.633	96.1	22.3	19.0

1938 DZ a,e,i = 2.35, 0.10, 6 Elements MPC 9206

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1984	12 26	12 13.56	-00 05.1	2.018	2.257	90.8	25.8	17.4
1985	01 05	12 23.35	-01 26.9					
1985	01 15	12 31.31	-02 39.6	1.755	2.236	106.1	25.0	17.0
1985	01 25	12 37.05	-03 41.3					
1985	02 04	12 40.16	-04 30.3	1.513	2.217	123.6	21.7	16.6
1985	02 14	12 40.33	-05 04.9					
1985	02 24	12 37.31	-05 23.5	1.319	2.199	144.1	15.3	16.2
1985	03 06	12 31.22	-05 25.8					
1985	03 16	12 22.63	-05 13.2	1.200	2.182	167.3	5.7	15.7
1985	03 26	12 12.55	-04 49.4					
1985	04 05	12 02.44	-04 20.6	1.180	2.167	167.1	5.9	15.7
1985	04 15	11 53.71	-03 54.2					
1985	04 25	11 47.47	-03 36.5	1.257	2.154	144.1	15.9	16.0
1985	05 05	11 44.34	-03 32.1					
1985	05 15	11 44.44	-03 43.0	1.405	2.143	124.1	23.0	16.4
1985	05 25	11 47.61	-04 09.5					
1985	06 04	11 53.53	-04 50.8	1.596	2.134	107.5	27.0	16.8

1979 OB a,e,i = 2.22, 0.28, 6 Elements MPC 7020

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	12 46.24	-06 02.1	2.324	2.695	101.3	21.0	20.5
1985	01 25	12 50.75	-06 19.4					
1985	02 04	12 53.09	-06 21.0	2.024	2.657	120.0	18.7	20.1
1985	02 14	12 52.99	-06 05.1					
1985	02 24	12 50.25	-05 30.1	1.770	2.616	141.1	13.7	19.6
1985	03 06	12 44.89	-04 36.1					
1985	03 16	12 37.25	-03 25.3	1.597	2.570	165.0	5.8	19.2
1985	03 26	12 28.00	-02 02.8					
1985	04 05	12 18.20	-00 36.3	1.531	2.521	169.7	4.1	19.0
1985	04 15	12 08.98	+00 45.1					
1985	04 25	12 01.38	+01 53.7	1.575	2.469	145.3	13.4	19.3
1985	05 05	11 56.15	+02 43.9					
1985	05 15	11 53.67	+03 13.5	1.702	2.413	123.6	20.4	19.5
1985	05 25	11 54.00	+03 22.4					
1985	06 04	11 57.00	+03 11.9	1.875	2.354	105.2	24.6	19.8
1985	06 14	12 02.42	+02 44.2					
1985	06 24	12 10.00	+02 01.3	2.063	2.293	89.5	26.3	20.0

1979 ME8 a,e,i = 2.28, 0.14, 4 Elements MPC 5847

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	12 48.61	-07 36.8	1.649	2.064	100.2	28.0	19.8
1985	01 25	12 57.13	-08 21.8					
1985	02 04	13 03.04	-08 48.0	1.452	2.090	116.7	24.9	19.5
1985	02 14	13 05.98	-08 53.2					
1985	02 24	13 05.67	-08 35.4	1.288	2.118	136.4	18.8	19.1
1985	03 06	13 02.12	-07 54.3					
1985	03 16	12 55.73	-06 52.3	1.187	2.147	159.4	9.4	18.7
1985	03 26	12 47.35	-05 35.0					
1985	04 05	12 38.28	-04 11.7	1.179	2.178	175.8	1.9	18.4
1985	04 15	12 29.90	-02 53.0					
1985	04 25	12 23.37	-01 48.2	1.270	2.209	151.8	12.4	19.0
1985	05 05	12 19.45	-01 03.1					
1985	05 15	12 18.39	-00 39.9	1.444	2.240	130.8	20.0	19.5
1985	05 25	12 20.13	-00 37.8					
1985	06 04	12 24.43	-00 54.8	1.673	2.272	113.1	24.3	20.0
1985	06 14	12 30.93	-01 28.1					
1985	06 24	12 39.31	-02 14.9	1.930	2.303	98.0	25.9	20.3

1980 FA a,e,i = 2.84, 0.09, 2 Elements MPC 8911

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 08.11	-06 43.5	2.804	3.067	96.0	18.6	17.6
1985	01 25	13 12.72	-07 05.2					
1985	02 04	13 15.42	-07 14.5	2.532	3.074	114.5	17.0	17.3
1985	02 14	13 16.03	-07 10.7					
1985	02 24	13 14.45	-06 53.2	2.299	3.080	135.1	13.1	17.1
1985	03 06	13 10.73	-06 22.4					
1985	03 16	13 05.12	-05 40.1	2.142	3.085	157.7	7.0	16.7
1985	03 26	12 58.09	-04 49.3					
1985	04 05	12 50.36	-03 54.5	2.089	3.089	177.9	0.7	16.3
1985	04 15	12 42.71	-03 01.2					
1985	04 25	12 35.91	-02 14.3	2.151	3.091	154.8	8.0	16.8
1985	05 05	12 30.58	-01 38.1					
1985	05 15	12 27.11	-01 14.8	2.313	3.093	133.1	13.8	17.1
1985	05 25	12 25.68	-01 05.5					
1985	06 04	12 26.30	-01 10.1	2.543	3.093	113.6	17.5	17.4
1985	06 14	12 28.83	-01 27.4					
1985	06 24	12 33.13	-01 56.2	2.809	3.092	96.4	19.1	17.6

(3007) 1979 UC a,e,i = 2.37, 0.13, 8 Elements MPC 8537

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 10.00	+02 37.8	2.278	2.620	99.1	21.8	18.4
1985	01 25	13 16.10	+02 30.7					
1985	02 04	13 20.05	+02 38.0	2.006	2.603	116.7	19.8	18.0
1985	02 14	13 21.56	+03 00.0					
1985	02 24	13 20.38	+03 36.0	1.774	2.584	136.5	15.3	17.7
1985	03 06	13 16.42	+04 23.3					
1985	03 16	13 09.88	+05 17.6	1.615	2.563	157.6	8.5	17.3
1985	03 26	13 01.29	+06 12.4					
1985	04 05	12 51.56	+07 00.0	1.555	2.541	167.2	5.0	17.1
1985	04 15	12 41.82	+07 33.6					
1985	04 25	12 33.16	+07 48.5	1.603	2.517	148.6	12.0	17.3
1985	05 05	12 26.50	+07 42.5					
1985	05 15	12 22.34	+07 16.5	1.738	2.491	128.0	18.6	17.6
1985	05 25	12 20.87	+06 32.4					
1985	06 04	12 22.04	+05 32.8	1.928	2.465	109.8	22.8	17.9
1985	06 14	12 25.62	+04 20.7					
1985	06 24	12 31.36	+02 58.1	2.144	2.437	94.1	24.6	18.2

(2971) 1980 YL a,e,i = 2.25, 0.12, 7 Elements MPC 8390

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 09.72	+01 37.5	1.901	2.269	98.8	25.4	18.3
1985	01 25	13 17.14	+01 25.5					
1985	02 04	13 22.06	+01 30.2	1.687	2.296	115.9	22.7	18.0
1985	02 14	13 24.17	+01 51.7					
1985	02 24	13 23.17	+02 29.4	1.508	2.321	135.6	17.4	17.6
1985	03 06	13 19.03	+03 20.0					
1985	03 16	13 12.05	+04 18.2	1.397	2.346	157.2	9.5	17.3
1985	03 26	13 02.92	+05 16.8					
1985	04 05	12 52.77	+06 06.9	1.381	2.369	168.1	5.0	17.1
1985	04 15	12 42.88	+06 41.4					
1985	04 25	12 34.43	+06 55.8	1.469	2.391	149.4	12.4	17.5
1985	05 05	12 28.29	+06 48.6					
1985	05 15	12 24.84	+06 21.3	1.643	2.412	129.0	19.0	17.9
1985	05 25	12 24.16	+05 36.7					
1985	06 04	12 26.09	+04 37.5	1.873	2.430	111.1	22.9	18.3
1985	06 14	12 30.32	+03 26.9					
1985	06 24	12 36.56	+02 07.1	2.130	2.447	95.6	24.4	18.6

(2998) 1975 TR3 a,e,i = 2.42, 0.19, 3 Elements MPC 8531

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 14.26	-06 27.1	2.642	2.894	94.7	19.8	19.9
1985	01 25	13 19.39	-06 46.7					
1985	02 04	13 22.54	-06 53.2	2.363	2.894	113.0	18.3	19.6
1985	02 14	13 23.48	-06 45.6					
1985	02 24	13 22.05	-06 23.0	2.119	2.890	133.5	14.4	19.3
1985	03 06	13 18.21	-05 45.9					
1985	03 16	13 12.19	-04 55.9	1.946	2.884	156.2	8.0	18.9
1985	03 26	13 04.43	-03 56.2					
1985	04 05	12 55.71	-02 52.4	1.876	2.876	177.1	1.0	18.4
1985	04 15	12 46.92	-01 50.4					
1985	04 25	12 38.97	-00 56.5	1.921	2.864	154.9	8.6	18.9
1985	05 05	12 32.61	-00 15.3					
1985	05 15	12 28.32	+00 10.5	2.066	2.850	132.7	15.1	19.2
1985	05 25	12 26.32	+00 19.9					
1985	06 04	12 26.62	+00 13.6	2.276	2.833	113.2	19.2	19.5
1985	06 14	12 29.07	-00 07.0					
1985	06 24	12 33.48	-00 40.4	2.520	2.814	96.0	21.1	19.7

2533 P-L a,e,i = 2.18, 0.22, 2 Elements MPC 5523

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 15.41	-06 17.4	2.218	2.496	94.5	23.1	20.4
1985	01 25	13 22.89	-06 53.2					
1985	02 04	13 28.41	-07 15.8	1.924	2.462	111.5	21.9	20.1
1985	02 14	13 31.63	-07 23.7					
1985	02 24	13 32.18	-07 15.3	1.660	2.425	130.8	18.0	19.6
1985	03 06	13 29.82	-06 49.8					
1985	03 16	13 24.55	-06 07.6	1.457	2.386	152.9	10.9	19.2
1985	03 26	13 16.67	-05 11.0					
1985	04 05	13 06.97	-04 05.5	1.344	2.344	176.4	1.6	18.5
1985	04 15	12 56.60	-02 58.7					
1985	04 25	12 46.86	-01 59.0	1.338	2.299	157.1	9.8	18.9
1985	05 05	12 38.97	-01 14.1					
1985	05 15	12 33.72	-00 48.3	1.426	2.252	134.4	18.7	19.2
1985	05 25	12 31.48	-00 43.3					
1985	06 04	12 32.32	-00 58.7	1.574	2.203	114.9	24.7	19.5
1985	06 14	12 36.01	-01 32.4					
1985	06 24	12 42.29	-02 22.2	1.750	2.153	98.7	27.8	19.7

(3046) 4120 P-L a,e,i = 3.13, 0.16, 18 Elements MPC 8784

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 16.64	-10 17.0	2.827	3.038	92.7	18.9	18.6
1985	01 25	13 22.37	-10 15.4					
1985	02 04	13 26.23	-09 58.8	2.574	3.069	111.0	17.5	18.4
1985	02 14	13 28.06	-09 26.1					
1985	02 24	13 27.76	-08 36.7	2.356	3.100	131.4	13.9	18.1
1985	03 06	13 25.36	-07 31.3					
1985	03 16	13 21.07	-06 12.0	2.208	3.131	153.7	8.1	17.9
1985	03 26	13 15.32	-04 42.7					
1985	04 05	13 08.71	-03 09.3	2.164	3.162	175.5	1.4	17.5
1985	04 15	13 01.98	-01 38.4					
1985	04 25	12 55.83	-00 16.3	2.237	3.192	158.1	6.8	17.9
1985	05 05	12 50.87	+00 52.0					
1985	05 15	12 47.51	+01 43.7	2.415	3.222	136.3	12.5	18.2
1985	05 25	12 45.96	+02 17.9					
1985	06 04	12 46.27	+02 35.1	2.668	3.251	116.6	16.2	18.6
1985	06 14	12 48.36	+02 37.1					
1985	06 24	12 52.10	+02 25.7	2.963	3.280	99.0	17.8	18.8

(3135) 1981 EC9 a,e,i = 2.42, 0.14, 6 Elements MPC 9205

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 26.67	-15 00.0	2.375	2.550	88.7	22.7	19.4
1985	01 25	13 33.88	-16 11.6					
1985	02 04	13 39.02	-17 13.1	2.134	2.577	105.3	21.6	19.2
1985	02 14	13 41.78	-18 02.9					
1985	02 24	13 41.89	-18 39.0	1.914	2.602	124.1	18.3	18.9
1985	03 06	13 39.19	-18 59.2					
1985	03 16	13 33.79	-19 01.5	1.747	2.626	145.2	12.5	18.6
1985	03 26	13 26.08	-18 44.5					
1985	04 05	13 16.84	-18 09.4	1.665	2.648	166.4	5.1	18.3
1985	04 15	13 07.11	-17 19.6					
1985	04 25	12 58.02	-16 21.3	1.691	2.668	162.7	6.4	18.4
1985	05 05	12 50.53	-15 21.9					
1985	05 15	12 45.30	-14 28.3	1.820	2.687	141.6	13.5	18.8
1985	05 25	12 42.61	-13 45.6					
1985	06 04	12 42.51	-13 16.6	2.028	2.703	121.8	18.6	19.1
1985	06 14	12 44.80	-13 02.3					
1985	06 24	12 49.27	-13 02.3	2.281	2.718	104.4	21.2	19.5

1982 RZ1 a,e,i = 3.11, 0.18, 3 Elements MPC 8683

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 33.45	-07 04.2	3.294	3.438	90.1	16.6	18.7
1985	01 25	13 38.02	-07 25.3					
1985	02 04	13 40.90	-07 36.3	3.022	3.463	108.5	15.7	18.5
1985	02 14	13 41.93	-07 36.8					
1985	02 24	13 41.02	-07 26.4	2.781	3.486	128.7	12.8	18.2
1985	03 06	13 38.16	-07 05.7					
1985	03 16	13 33.51	-06 35.8	2.607	3.508	150.7	8.0	18.0
1985	03 26	13 27.40	-05 58.8					
1985	04 05	13 20.34	-05 17.8	2.533	3.528	173.4	1.9	17.6
1985	04 15	13 12.95	-04 36.6					
1985	04 25	13 05.89	-03 59.0	2.576	3.547	162.2	5.0	17.9
1985	05 05	12 59.76	-03 28.6					
1985	05 15	12 55.01	-03 07.7	2.729	3.565	140.2	10.5	18.2
1985	05 25	12 51.90	-02 57.8					
1985	06 04	12 50.56	-02 59.2	2.966	3.581	119.9	14.2	18.5
1985	06 14	12 50.97	-03 11.4					
1985	06 24	12 53.04	-03 33.7	3.251	3.596	101.6	16.1	18.7

1982 TD1 a,e,i = 3.02, 0.04, 10 Elements MPC 8794

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 33.20	-09 08.4	2.735	2.896	89.4	19.9	18.0
1985	01 25	13 39.62	-10 10.1					
1985	02 04	13 44.24	-11 03.8	2.455	2.893	106.5	19.1	17.7
1985	02 14	13 46.81	-11 48.7					
1985	02 24	13 47.07	-12 24.0	2.202	2.892	125.6	16.2	17.4
1985	03 06	13 44.92	-12 48.8					
1985	03 16	13 40.38	-13 02.6	2.006	2.890	146.8	10.9	17.1
1985	03 26	13 33.75	-13 05.3					
1985	04 05	13 25.61	-12 57.9	1.900	2.890	169.4	3.6	16.7
1985	04 15	13 16.77	-12 43.1					
1985	04 25	13 08.18	-12 24.3	1.905	2.890	165.4	5.0	16.8
1985	05 05	13 00.72	-12 06.0					
1985	05 15	12 55.06	-11 52.4	2.016	2.890	143.3	12.1	17.1
1985	05 25	12 51.59	-11 46.7					
1985	06 04	12 50.47	-11 50.9	2.209	2.891	123.2	17.1	17.4
1985	06 14	12 51.64	-12 05.8					
1985	06 24	12 54.95	-12 31.2	2.451	2.893	105.5	19.8	17.7

1977 PE1 a,e,i = 2.78, 0.18, 5 Elements MPC 8786

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 37.91	-13 30.6	3.177	3.272	86.7	17.5	20.0
1985	01 25	13 43.57	-14 05.8					
1985	02 04	13 47.59	-14 31.4	2.875	3.264	104.5	17.0	19.8
1985	02 14	13 49.75	-14 46.4					
1985	02 24	13 49.87	-14 49.6	2.595	3.254	124.0	14.6	19.5
1985	03 06	13 47.86	-14 39.8					
1985	03 16	13 43.79	-14 16.7	2.373	3.242	145.5	10.0	19.2
1985	03 26	13 37.88	-13 40.7					
1985	04 05	13 30.64	-12 53.5	2.242	3.228	168.5	3.5	18.8
1985	04 15	13 22.72	-11 58.6					
1985	04 25	13 14.89	-11 00.4	2.225	3.213	166.9	4.1	18.8
1985	05 05	13 07.91	-10 04.3					
1985	05 15	13 02.37	-09 15.0	2.320	3.195	144.2	10.7	19.1
1985	05 25	12 58.67	-08 36.1					
1985	06 04	12 57.01	-08 09.8	2.502	3.176	123.4	15.5	19.4
1985	06 14	12 57.38	-07 56.7					
1985	06 24	12 59.71	-07 56.5	2.737	3.154	104.9	18.1	19.6

(2996) 1954 RJ a,e,i = 2.78, 0.03, 4 Elements MPC 8530

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	01 15	13 33.45	-11 54.7	2.635	2.786	88.3	20.7	17.8
1985	01 25	13 40.85	-12 52.3					
1985	02 04	13 46.49	-13 40.8	2.356	2.779	105.0	20.0	17.5
1985	02 14	13 50.09	-14 18.9					
1985	02 24	13 51.38	-14 45.5	2.099	2.773	123.7	17.3	17.2
1985	03 06	13 50.19	-14 59.1					
1985	03 16	13 46.53	-14 58.9	1.896	2.767	144.6	12.0	16.9
1985	03 26	13 40.60	-14 44.6					
1985	04 05	13 32.97	-14 17.3	1.777	2.761	167.2	4.6	16.5
1985	04 15	13 24.45	-13 40.0					
1985	04 25	13 16.01	-12 57.4	1.765	2.756	167.3	4.6	16.5
1985	05 05	13 08.63	-12 15.2					
1985	05 15	13 03.02	-11 38.9	1.859	2.750	145.1	12.1	16.8
1985	05 25	12 59.65	-11 12.5					
1985	06 04	12 58.71	-10 58.7	2.036	2.744	124.8	17.7	17.1
1985	06 14	13 00.14	-10 58.3					
1985	06 24	13 03.79	-11 10.9	2.264	2.739	107.0	20.8	17.4

1975 TS2 a,e,i = 3.39, 0.04, 14 Elements MPC 9024

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	13 55.85	-01 35.4	2.869	3.294	106.9	16.6	17.8
1985	02 14	13 58.02	-01 43.1					
1985	02 24	13 58.17	-01 42.1	2.606	3.289	126.1	14.1	17.5
1985	03 06	13 56.22	-01 33.4					
1985	03 16	13 52.23	-01 18.8	2.404	3.284	147.1	9.5	17.2
1985	03 26	13 46.42	-01 00.8					
1985	04 05	13 39.25	-00 42.7	2.295	3.279	167.6	3.7	16.9
1985	04 15	13 31.35	-00 28.0					
1985	04 25	13 23.45	-00 19.8	2.299	3.275	163.2	5.1	17.0
1985	05 05	13 16.29	-00 21.0					
1985	05 15	13 10.43	-00 32.9	2.412	3.272	142.4	10.9	17.2
1985	05 25	13 06.30	-00 56.1					
1985	06 04	13 04.09	-01 30.2	2.611	3.268	122.4	15.2	17.5
1985	06 14	13 03.84	-02 14.2					
1985	06 24	13 05.48	-03 07.0	2.862	3.265	104.3	17.6	17.8
1985	07 04	13 08.87	-04 07.4					
1985	07 14	13 13.83	-05 14.0	3.136	3.263	88.0	18.1	18.0

2630 P-L a,e,i = 2.43, 0.19, 3 Elements MPC 8144

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 04.14	-11 14.5	2.405	2.780	101.8	20.3	20.6
1985	02 14	14 07.57	-11 35.6					
1985	02 24	14 08.62	-11 44.8	2.163	2.803	120.8	17.6	20.3
1985	03 06	14 07.13	-11 41.5					
1985	03 16	14 03.08	-11 25.7	1.970	2.823	142.2	12.5	20.0
1985	03 26	13 56.67	-10 58.0					
1985	04 05	13 48.41	-10 20.7	1.859	2.840	165.8	5.0	19.7
1985	04 15	13 39.11	-09 37.5					
1985	04 25	13 29.70	-08 53.1	1.859	2.855	169.8	3.6	19.6
1985	05 05	13 21.18	-08 12.9					
1985	05 15	13 14.28	-07 41.5	1.969	2.867	146.4	11.2	20.0
1985	05 25	13 09.50	-07 21.9					
1985	06 04	13 07.08	-07 15.6	2.167	2.876	125.4	16.7	20.4
1985	06 14	13 06.97	-07 22.6					
1985	06 24	13 09.06	-07 42.2	2.418	2.883	106.9	19.7	20.7
1985	07 04	13 13.14	-08 13.0					
1985	07 14	13 18.96	-08 53.3	2.692	2.887	90.6	20.6	20.9

1984 AR a,e,i = 3.13, 0.14, 1 Elements MPC 8535

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 01.83	-12 08.3	2.619	2.985	102.1	18.8	18.4
1985	02 14	14 05.49	-12 29.8					
1985	02 24	14 06.99	-12 39.9	2.383	3.013	120.9	16.4	18.2
1985	03 06	14 06.22	-12 38.4					
1985	03 16	14 03.20	-12 25.2	2.196	3.041	141.9	11.6	17.9
1985	03 26	13 58.13	-12 01.1					
1985	04 05	13 51.47	-11 28.0	2.093	3.069	164.7	4.9	17.6
1985	04 15	13 43.89	-10 49.0					
1985	04 25	13 36.18	-10 08.4	2.098	3.097	171.7	2.7	17.5
1985	05 05	13 29.14	-09 30.6					
1985	05 15	13 23.43	-08 59.7	2.215	3.125	149.0	9.6	17.9
1985	05 25	13 19.47	-08 38.6					
1985	06 04	13 17.51	-08 29.0	2.422	3.153	128.2	14.6	18.3
1985	06 14	13 17.56	-08 31.1					
1985	06 24	13 19.55	-08 44.6	2.690	3.180	109.7	17.5	18.6
1985	07 04	13 23.32	-09 08.4					
1985	07 14	13 28.69	-09 41.1	2.987	3.207	93.1	18.5	18.8

(3000) 1981 EG19 a,e,i = 2.35, 0.18, 3 Elements MPC 8532

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 12.16	-13 38.0	2.443	2.777	99.2	20.5	18.6
1985	02 14	14 16.83	-13 56.0					
1985	02 24	14 19.27	-14 01.7	2.173	2.774	117.6	18.4	18.3
1985	03 06	14 19.24	-13 54.0					
1985	03 16	14 16.62	-13 32.4	1.945	2.769	138.4	13.8	18.0
1985	03 26	14 11.47	-12 56.8					
1985	04 05	14 04.16	-12 08.7	1.794	2.761	161.6	6.6	17.6
1985	04 15	13 55.36	-11 11.4					
1985	04 25	13 45.99	-10 09.9	1.748	2.751	173.9	2.2	17.3
1985	05 05	13 37.09	-09 10.6					
1985	05 15	13 29.55	-08 19.3	1.814	2.738	150.2	10.6	17.7
1985	05 25	13 24.03	-07 40.6					
1985	06 04	13 20.91	-07 17.1	1.971	2.722	128.6	16.9	18.0
1985	06 14	13 20.25	-07 09.3					
1985	06 24	13 21.98	-07 16.7	2.185	2.703	109.7	20.7	18.3
1985	07 04	13 25.91	-07 37.7					
1985	07 14	13 31.79	-08 10.5	2.425	2.682	93.2	22.2	18.6

(3087) 1981 QJ1 a,e,i = 3.07, 0.12, 20 Elements MPC 8904

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 19.58	-30 25.5	3.191	3.369	91.8	17.0	19.5
1985	02 14	14 23.04	-31 53.0					
1985	02 24	14 24.42	-33 14.9	2.926	3.381	109.1	16.1	19.3
1985	03 06	14 23.49	-34 29.1					
1985	03 16	14 20.15	-35 32.7	2.697	3.392	127.2	13.5	19.1
1985	03 26	14 14.43	-36 22.3					
1985	04 05	14 06.64	-36 54.2	2.536	3.402	144.7	9.8	18.9
1985	04 15	13 57.39	-37 06.0					
1985	04 25	13 47.50	-36 56.8	2.469	3.411	155.6	7.0	18.8
1985	05 05	13 37.92	-36 28.7					
1985	05 15	13 29.53	-35 46.0	2.510	3.418	149.4	8.7	18.9
1985	05 25	13 22.99	-34 54.5					
1985	06 04	13 18.71	-34 00.6	2.647	3.425	133.4	12.4	19.1
1985	06 14	13 16.81	-33 09.7					
1985	06 24	13 17.23	-32 25.8	2.857	3.430	116.2	15.4	19.3
1985	07 04	13 19.83	-31 51.4					
1985	07 14	13 24.38	-31 27.5	3.111	3.434	99.9	17.0	19.5

1979 TK a,e,i = 2.23, 0.19, 6 Elements MPC 8056

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 11.37	-10 17.0	2.056	2.437	100.5	23.4	19.5
1985	02 14	14 17.88	-10 56.4					
1985	02 24	14 22.12	-11 25.5	1.772	2.399	117.8	21.4	19.1
1985	03 06	14 23.69	-11 43.5					
1985	03 16	14 22.28	-11 50.0	1.528	2.360	137.6	16.5	18.7
1985	03 26	14 17.73	-11 44.5					
1985	04 05	14 10.24	-11 27.8	1.352	2.319	160.3	8.3	18.2
1985	04 15	14 00.43	-11 02.1					
1985	04 25	13 49.38	-10 31.5	1.272	2.276	174.8	2.3	17.7
1985	05 05	13 38.54	-10 01.9					
1985	05 15	13 29.23	-09 39.5	1.295	2.231	150.6	12.9	18.1
1985	05 25	13 22.49	-09 29.4					
1985	06 04	13 18.90	-09 34.8	1.401	2.186	129.0	21.1	18.4
1985	06 14	13 18.58	-09 56.3					
1985	06 24	13 21.41	-10 33.4	1.558	2.141	110.8	26.3	18.7
1985	07 04	13 27.12	-11 24.5					
1985	07 14	13 35.40	-12 27.4	1.736	2.096	95.6	28.9	19.0

(2990) 1981 EN27 a,e,i = 2.44, 0.12, 3 Elements MPC 8463

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 07.88	-11 52.3	1.860	2.262	100.8	25.4	18.2
1985	02 14	14 15.37	-12 15.7					
1985	02 24	14 20.29	-12 23.7	1.649	2.286	117.9	22.5	17.9
1985	03 06	14 22.32	-12 15.6					
1985	03 16	14 21.29	-11 51.2	1.476	2.312	137.9	16.8	17.6
1985	03 26	14 17.23	-11 11.4					
1985	04 05	14 10.57	-10 18.9	1.372	2.339	160.5	8.2	17.2
1985	04 15	14 02.15	-09 18.7					
1985	04 25	13 53.09	-08 17.5	1.363	2.366	174.1	2.5	17.0
1985	05 05	13 44.65	-07 23.0					
1985	05 15	13 37.85	-06 41.3	1.457	2.393	151.3	11.7	17.5
1985	05 25	13 33.39	-06 16.2					
1985	06 04	13 31.59	-06 09.1	1.636	2.421	130.5	18.6	17.9
1985	06 14	13 32.42	-06 19.1					
1985	06 24	13 35.72	-06 44.4	1.870	2.448	112.7	22.5	18.3
1985	07 04	13 41.23	-07 22.6					
1985	07 14	13 48.65	-08 11.0	2.135	2.475	97.1	24.0	18.7

1932 CN a,e,i = 2.41, 0.07, 8 Elements MPC 8390

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 17.94	-04 45.3	2.058	2.441	100.7	23.4	18.0
1985	02 14	14 24.25	-04 54.2					
1985	02 24	14 28.10	-04 50.2	1.829	2.456	118.2	20.8	17.7
1985	03 06	14 29.22	-04 33.9					
1985	03 16	14 27.43	-04 06.8	1.639	2.470	138.0	15.6	17.4
1985	03 26	14 22.74	-03 31.4					
1985	04 05	14 15.54	-02 51.9	1.522	2.484	159.5	8.1	17.1
1985	04 15	14 06.55	-02 13.8					
1985	04 25	13 56.79	-01 42.8	1.504	2.497	168.4	4.6	16.9
1985	05 05	13 47.47	-01 24.4					
1985	05 15	13 39.60	-01 21.6	1.589	2.510	148.9	12.0	17.3
1985	05 25	13 33.91	-01 35.7					
1985	06 04	13 30.78	-02 06.0	1.761	2.522	128.6	18.3	17.7
1985	06 14	13 30.27	-02 50.5					
1985	06 24	13 32.26	-03 47.2	1.988	2.533	110.7	22.1	18.0
1985	07 04	13 36.52	-04 53.5					
1985	07 14	13 42.78	-06 07.4	2.243	2.542	95.0	23.5	18.3

1934 AF a,e,i = 3.15, 0.15, 1 Elements MPC 8537

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 15.34	-12 38.2	2.526	2.849	98.8	20.0	18.2
1985	02 14	14 20.61	-13 00.4					
1985	02 24	14 23.75	-13 11.3	2.287	2.874	116.9	17.9	18.0
1985	03 06	14 24.56	-13 10.6					
1985	03 16	14 22.98	-12 58.1	2.090	2.900	137.1	13.5	17.7
1985	03 26	14 19.12	-12 34.3					
1985	04 05	14 13.32	-12 01.1	1.969	2.927	159.5	6.9	17.4
1985	04 15	14 06.18	-11 21.3					
1985	04 25	13 58.48	-10 38.7	1.949	2.954	176.7	1.1	17.1
1985	05 05	13 51.10	-09 58.4					
1985	05 15	13 44.80	-09 24.4	2.040	2.982	154.0	8.5	17.6
1985	05 25	13 40.15	-09 00.3					
1985	06 04	13 37.49	-08 48.1	2.227	3.011	132.9	14.3	18.0
1985	06 14	13 36.92	-08 48.2					
1985	06 24	13 38.41	-09 00.3	2.479	3.040	114.1	17.8	18.3
1985	07 04	13 41.82	-09 23.3					
1985	07 14	13 46.95	-09 55.6	2.768	3.069	97.4	19.2	18.6

1982 TL1 a,e,i = 3.02, 0.05, 8 Elements MPC 9032

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 21.88	-15 30.2	2.810	3.079	96.4	18.6	18.2
1985	02 14	14 26.28	-16 13.8					
1985	02 24	14 28.65	-16 49.2	2.542	3.088	114.6	16.9	18.0
1985	03 06	14 28.81	-17 15.6					
1985	03 16	14 26.65	-17 32.5	2.314	3.097	134.8	13.2	17.7
1985	03 26	14 22.24	-17 39.0					
1985	04 05	14 15.86	-17 34.9	2.160	3.105	156.8	7.3	17.4
1985	04 15	14 08.06	-17 21.2					
1985	04 25	13 59.56	-16 59.6	2.109	3.113	175.5	1.5	17.0
1985	05 05	13 51.25	-16 33.7					
1985	05 15	13 43.90	-16 07.3	2.171	3.120	155.8	7.6	17.4
1985	05 25	13 38.16	-15 44.5					
1985	06 04	13 34.42	-15 28.6	2.332	3.127	134.4	13.4	17.7
1985	06 14	13 32.83	-15 21.7					
1985	06 24	13 33.40	-15 24.7	2.563	3.134	115.2	17.1	18.0
1985	07 04	13 36.01	-15 37.9					
1985	07 14	13 40.46	-16 00.4	2.833	3.140	98.0	18.7	18.3

(3081) 1971 UP a,e,i = 2.41, 0.18, 5 Elements MPC 8902

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 20.79	-10 55.3	2.293	2.620	98.1	21.9	18.9
1985	02 14	14 27.10	-11 29.0					
1985	02 24	14 31.29	-11 52.9	2.001	2.586	115.5	20.2	18.5
1985	03 06	14 33.02	-12 06.4					
1985	03 16	14 32.04	-12 09.1	1.746	2.551	135.3	15.9	18.1
1985	03 26	14 28.20	-12 00.8					
1985	04 05	14 21.66	-11 42.4	1.560	2.514	157.6	8.7	17.7
1985	04 15	14 12.93	-11 16.0					
1985	04 25	14 02.89	-10 44.9	1.470	2.475	177.5	1.0	17.1
1985	05 05	13 52.75	-10 14.3					
1985	05 15	13 43.68	-09 49.6	1.487	2.436	153.9	10.5	17.5
1985	05 25	13 36.67	-09 35.3					
1985	06 04	13 32.33	-09 34.8	1.594	2.395	132.1	18.3	17.8
1985	06 14	13 30.89	-09 49.0					
1985	06 24	13 32.33	-10 17.6	1.761	2.354	113.2	23.4	18.1
1985	07 04	13 36.48	-10 59.6					
1985	07 14	13 43.05	-11 53.0	1.955	2.313	97.2	25.8	18.4

4113 P-L a,e,i = 2.43, 0.14, 2 Elements MPC 8145

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 15.22	-14 07.0	1.864	2.232	98.3	25.9	19.2
1985	02 14	14 23.42	-14 42.5					
1985	02 24	14 29.09	-15 03.6	1.656	2.260	115.1	23.4	18.9
1985	03 06	14 31.88	-15 09.4					
1985	03 16	14 31.56	-14 59.3	1.480	2.290	134.5	18.0	18.6
1985	03 26	14 28.09	-14 33.0					
1985	04 05	14 21.81	-13 51.8	1.367	2.321	156.9	9.7	18.2
1985	04 15	14 13.50	-12 59.1					
1985	04 25	14 04.24	-12 00.4	1.346	2.352	178.7	0.6	17.7
1985	05 05	13 55.34	-11 03.1					
1985	05 15	13 47.92	-10 14.2	1.428	2.383	155.1	10.3	18.4
1985	05 25	13 42.77	-09 38.9					
1985	06 04	13 40.29	-09 20.0	1.599	2.415	133.8	17.7	18.8
1985	06 14	13 40.52	-09 17.8					
1985	06 24	13 43.30	-09 31.1	1.830	2.446	115.4	22.0	19.3
1985	07 04	13 48.38	-09 58.0					
1985	07 14	13 55.46	-10 36.0	2.096	2.476	99.6	23.9	19.6

6627 P-L a,e,i = 3.06, 0.10, 3 Elements MPC 8385

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 29.13	-12 53.2	3.120	3.362	95.5	17.0	19.8
1985	02 14	14 33.43	-13 03.3					
1985	02 24	14 35.91	-13 03.8	2.839	3.367	114.1	15.6	19.6
1985	03 06	14 36.40	-12 54.2					
1985	03 16	14 34.85	-12 34.7	2.598	3.371	134.5	12.2	19.3
1985	03 26	14 31.29	-12 05.7					
1985	04 05	14 25.98	-11 28.7	2.432	3.374	156.6	6.8	19.0
1985	04 15	14 19.35	-10 45.9					
1985	04 25	14 11.99	-10 00.6	2.371	3.376	176.9	0.9	18.6
1985	05 05	14 04.61	-09 16.8					
1985	05 15	13 57.89	-08 38.3	2.425	3.377	156.6	6.8	19.0
1985	05 25	13 52.39	-08 08.2					
1985	06 04	13 48.53	-07 48.7	2.582	3.377	135.1	12.3	19.3
1985	06 14	13 46.49	-07 40.8					
1985	06 24	13 46.35	-07 44.4	2.811	3.375	115.5	15.8	19.5
1985	07 04	13 48.05	-07 58.9					
1985	07 14	13 51.46	-08 22.9	3.080	3.373	97.8	17.4	19.8

1984 AP a,e,i = 2.72, 0.12, 13 Elements MPC 9030

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 04	14 28.07	-29 27.1	2.581	2.770	-0.91	+2.9	17.8
1985	02 14	14 34.70	-30 44.9					
1985	02 24	14 39.12	-31 54.8	2.342	2.793	-1.04	+2.8	17.5
1985	03 06	14 41.01	-32 54.6					
1985	03 16	14 40.14	-33 41.7	2.128	2.817	-1.19	+3.0	17.3
1985	03 26	14 36.45	-34 12.6					
1985	04 05	14 30.15	-34 23.6	1.970	2.839	-1.32	+3.8	17.0
1985	04 15	14 21.82	-34 12.0					
1985	04 25	14 12.35	-33 36.9	1.897	2.861	-1.37	+4.9	16.8
1985	05 05	14 02.87	-32 40.8					
1985	05 15	13 54.46	-31 29.6	1.929	2.881	-1.29	+5.7	16.9
1985	05 25	13 47.96	-30 10.8					
1985	06 04	13 43.88	-28 52.7	2.060	2.901	-1.15	+5.6	17.2
1985	06 14	13 42.38	-27 41.3					
1985	06 24	13 43.41	-26 41.1	2.268	2.919	-1.00	+4.9	17.5
1985	07 04	13 46.77	-25 54.2					
1985	07 14	13 52.21	-25 20.9	2.525	2.937	-0.88	+4.1	17.8

1937 UE a,e,i = 3.15, 0.18, 0 Elements MPC 8900

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 32.29	-15 27.6	3.378	3.584	94.0	15.9	18.8
1985	02 14	14 35.92	-15 46.4					
1985	02 24	14 37.77	-15 56.9	3.102	3.603	112.8	14.7	18.6
1985	03 06	14 37.71	-15 58.4					
1985	03 16	14 35.71	-15 50.8	2.866	3.621	133.3	11.5	18.3
1985	03 26	14 31.83	-15 34.1					
1985	04 05	14 26.32	-15 08.8	2.704	3.638	155.5	6.6	18.1
1985	04 15	14 19.61	-14 36.7					
1985	04 25	14 12.24	-13 59.8	2.647	3.653	178.5	0.4	17.6
1985	05 05	14 04.88	-13 21.5					
1985	05 15	13 58.15	-12 45.2	2.708	3.667	158.3	5.9	18.1
1985	05 25	13 52.56	-12 13.9					
1985	06 04	13 48.48	-11 50.3	2.875	3.679	136.6	10.9	18.4
1985	06 14	13 46.12	-11 35.8					
1985	06 24	13 45.53	-11 31.1	3.120	3.689	116.7	14.3	18.6
1985	07 04	13 46.68	-11 36.1					
1985	07 14	13 49.43	-11 50.0	3.407	3.699	98.6	15.8	18.9

1971 OV a,e,i = 2.36, 0.33, 5 Elements MPC 8785

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 27.21	-14 03.8	2.509	2.784	95.6	20.6	20.7
1985	02 14	14 33.51	-14 21.5					
1985	02 24	14 37.87	-14 27.6	2.183	2.729	113.2	19.5	20.3
1985	03 06	14 39.97	-14 21.1					
1985	03 16	14 39.53	-14 00.8	1.891	2.671	133.0	15.8	19.9
1985	03 26	14 36.38	-13 26.1					
1985	04 05	14 30.57	-12 37.1	1.667	2.609	155.2	9.2	19.4
1985	04 15	14 22.50	-11 35.9					
1985	04 25	14 12.87	-10 26.5	1.538	2.544	177.2	1.1	18.7
1985	05 05	14 02.78	-09 15.3					
1985	05 15	13 53.38	-08 09.7	1.520	2.475	155.4	9.8	19.1
1985	05 25	13 45.69	-07 16.3					
1985	06 04	13 40.47	-06 39.9	1.596	2.404	132.8	18.0	19.3
1985	06 14	13 38.06	-06 22.4					
1985	06 24	13 38.55	-06 23.8	1.734	2.330	113.2	23.6	19.6
1985	07 04	13 41.84	-06 42.8					
1985	07 14	13 47.68	-07 17.1	1.898	2.253	96.6	26.6	19.8

1983 WG a,e,i = 2.80, 0.22, 11 Elements MPC 8540

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 35.45	-03 28.2	2.371	2.675	96.9	21.5	18.5
1985	02 14	14 41.17	-03 32.1					
1985	02 24	14 44.59	-03 24.9	2.157	2.720	114.5	19.3	18.3
1985	03 06	14 45.49	-03 07.7					
1985	03 16	14 43.78	-02 42.4	1.979	2.766	134.1	15.0	18.0
1985	03 26	14 39.49	-02 11.5					
1985	04 05	14 32.96	-01 38.9	1.872	2.810	155.0	8.7	17.8
1985	04 15	14 24.76	-01 09.0					
1985	04 25	14 15.73	-00 46.4	1.864	2.855	167.7	4.3	17.7
1985	05 05	14 06.82	-00 34.9					
1985	05 15	13 58.89	-00 36.9	1.965	2.898	152.2	9.4	18.0
1985	05 25	13 52.62	-00 53.1					
1985	06 04	13 48.42	-01 22.9	2.161	2.940	132.1	14.8	18.4
1985	06 14	13 46.42	-02 04.6					
1985	06 24	13 46.59	-02 56.4	2.424	2.981	113.6	18.2	18.7
1985	07 04	13 48.80	-03 56.4					
1985	07 14	13 52.83	-05 02.6	2.723	3.020	97.0	19.5	19.0

1983 WP a,e,i = 2.63, 0.12, 14 Elements MPC 8679

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 04	14 31.21	+01 42.6	2.058	2.423	-0.98	+9.1	17.5
1985	02 14	14 38.47	+01 48.7					
1985	02 24	14 43.31	+02 07.1	1.843	2.443	-1.10	+10.5	17.3
1985	03 06	14 45.42	+02 36.1					
1985	03 16	14 44.62	+03 12.5	1.666	2.465	-1.26	+11.8	17.0
1985	03 26	14 40.86	+03 52.3					
1985	04 05	14 34.43	+04 29.3	1.554	2.487	-1.41	+12.6	16.7
1985	04 15	14 25.97	+04 57.1					
1985	04 25	14 16.40	+05 09.7	1.535	2.511	-1.45	+12.3	16.6
1985	05 05	14 06.90	+05 02.7					
1985	05 15	13 58.51	+04 35.1	1.617	2.535	-1.36	+11.2	16.8
1985	05 25	13 52.05	+03 47.9					
1985	06 04	13 47.99	+02 43.9	1.787	2.559	-1.20	+9.8	17.2
1985	06 14	13 46.48	+01 26.7					
1985	06 24	13 47.44	-00 00.3	2.017	2.584	-1.03	+8.7	17.6
1985	07 04	13 50.68	-01 34.3					
1985	07 14	13 55.94	-03 12.8	2.281	2.608	-0.89	+7.7	17.9

1984 BT a,e,i = 3.21, 0.04, 10 Elements MPC 8795

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 34.21	-05 34.1	2.894	3.163	96.6	18.0	17.7
1985	02 14	14 39.14	-05 40.4					
1985	02 24	14 42.17	-05 37.3	2.628	3.170	114.6	16.5	17.5
1985	03 06	14 43.12	-05 25.4					
1985	03 16	14 41.91	-05 05.9	2.401	3.177	134.3	13.0	17.2
1985	03 26	14 38.55	-04 40.4					
1985	04 05	14 33.28	-04 11.7	2.248	3.184	155.2	7.6	16.9
1985	04 15	14 26.52	-03 42.9					
1985	04 25	14 18.90	-03 17.7	2.196	3.192	170.0	3.1	16.7
1985	05 05	14 11.16	-02 59.8					
1985	05 15	14 04.05	-02 51.8	2.256	3.199	154.7	7.8	17.0
1985	05 25	13 58.18	-02 55.5					
1985	06 04	13 54.01	-03 11.3	2.415	3.207	134.2	13.1	17.2
1985	06 14	13 51.74	-03 38.7					
1985	06 24	13 51.46	-04 16.7	2.646	3.214	115.3	16.6	17.5
1985	07 04	13 53.10	-05 03.7					
1985	07 14	13 56.52	-05 58.3	2.916	3.222	98.1	18.2	17.8

1982 UT6 a,e,i = 2.84, 0.09, 2 Elements MPC 9032

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 35.84	-16 02.7	2.818	3.033	93.0	18.9	19.2
1985	02 14	14 41.64	-16 35.5					
1985	02 24	14 45.54	-16 59.6	2.528	3.023	110.7	17.8	18.9
1985	03 06	14 47.31	-17 14.4					
1985	03 16	14 46.78	-17 19.3	2.271	3.012	130.3	14.6	18.6
1985	03 26	14 43.88	-17 13.6					
1985	04 05	14 38.76	-16 57.4	2.079	3.000	152.1	9.0	18.3
1985	04 15	14 31.81	-16 31.4					
1985	04 25	14 23.67	-15 57.5	1.983	2.987	175.1	1.6	17.8
1985	05 05	14 15.19	-15 19.3					
1985	05 15	14 07.26	-14 40.9	1.999	2.973	161.0	6.4	18.1
1985	05 25	14 00.64	-14 06.8					
1985	06 04	13 55.92	-13 40.9	2.118	2.959	138.9	13.0	18.4
1985	06 14	13 53.38	-13 25.6					
1985	06 24	13 53.12	-13 21.9	2.313	2.944	119.0	17.6	18.7
1985	07 04	13 55.08	-13 30.0					
1985	07 14	13 59.09	-13 48.8	2.551	2.928	101.5	19.9	18.9

1978 SE1 a,e,i = 2.53, 0.20, 8 Elements MPC 7367

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 41.50	-08 04.2	2.723	2.961	94.1	19.4	20.0
1985	02 14	14 47.19	-08 13.6					
1985	02 24	14 50.95	-08 13.0	2.427	2.943	111.8	18.2	19.7
1985	03 06	14 52.54	-08 02.4					
1985	03 16	14 51.75	-07 42.4	2.166	2.922	131.5	14.8	19.3
1985	03 26	14 48.50	-07 14.0					
1985	04 05	14 42.89	-06 39.4	1.971	2.898	152.9	9.0	19.0
1985	04 15	14 35.32	-06 01.6					
1985	04 25	14 26.41	-05 24.7	1.874	2.873	171.2	3.1	18.6
1985	05 05	14 17.06	-04 53.2					
1985	05 15	14 08.20	-04 31.2	1.889	2.845	156.5	8.1	18.8
1985	05 25	14 00.67	-04 21.9					
1985	06 04	13 55.10	-04 26.7	2.004	2.815	135.1	14.7	19.1
1985	06 14	13 51.82	-04 45.7					
1985	06 24	13 50.93	-05 18.0	2.189	2.783	115.6	19.2	19.4
1985	07 04	13 52.39	-06 02.0					
1985	07 14	13 56.01	-06 55.8	2.410	2.749	98.4	21.5	19.6

(2970) 1978 UC a,e,i = 2.64, 0.15, 12 Elements MPC 8894

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 50.64	-25 54.1	2.860	2.971	86.7	19.3	18.6
1985	02 14	14 56.99	-27 07.7					
1985	02 24	15 01.36	-28 16.4	2.594	2.987	103.6	18.8	18.4
1985	03 06	15 03.44	-29 18.9					
1985	03 16	15 02.99	-30 13.7	2.350	3.000	122.1	16.3	18.1
1985	03 26	14 59.84	-30 58.3					
1985	04 05	14 54.06	-31 29.7	2.160	3.012	141.9	11.8	17.8
1985	04 15	14 45.99	-31 45.0					
1985	04 25	14 36.31	-31 42.0	2.056	3.021	160.1	6.5	17.6
1985	05 05	14 25.99	-31 21.0					
1985	05 15	14 16.08	-30 44.8	2.058	3.029	160.3	6.5	17.6
1985	05 25	14 07.56	-29 58.6					
1985	06 04	14 01.14	-29 08.8	2.166	3.035	142.5	11.7	17.9
1985	06 14	13 57.18	-28 21.3					
1985	06 24	13 55.79	-27 40.7	2.358	3.039	123.5	16.2	18.1
1985	07 04	13 56.90	-27 09.8					
1985	07 14	14 00.27	-26 49.8	2.601	3.041	105.9	18.8	18.4

1982 UB7 a,e,i = 3.16, 0.04, 15 Elements MPC 9153

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 04	14 42.55	-22 24.3	3.035	3.183	-0.74	+0.3	17.8
1985	02 14	14 48.86	-22 43.6					
1985	02 24	14 53.35	-22 52.7	2.756	3.190	-0.83	+0.1	17.6
1985	03 06	14 55.79	-22 50.7					
1985	03 16	14 56.04	-22 36.4	2.504	3.197	-0.92	+0.2	17.4
1985	03 26	14 54.07	-22 08.8					
1985	04 05	14 50.03	-21 27.5	2.312	3.204	-1.00	+0.5	17.1
1985	04 15	14 44.27	-20 33.2					
1985	04 25	14 37.34	-19 27.8	2.214	3.211	-1.04	+0.9	16.7
1985	05 05	14 30.01	-18 15.2					
1985	05 15	14 23.03	-17 00.5	2.229	3.217	-1.02	+1.2	16.8
1985	05 25	14 17.09	-15 49.0					
1985	06 04	14 12.72	-14 45.5	2.354	3.223	-0.94	+1.2	17.2
1985	06 14	14 10.22	-13 53.4					
1985	06 24	14 09.71	-13 14.3	2.563	3.229	-0.84	+1.0	17.4
1985	07 04	14 11.17	-12 48.7					
1985	07 14	14 14.47	-12 35.7	2.825	3.235	-0.75	+0.8	17.7

1981 EY31 a,e,i = 2.40, 0.18, 2 Elements MPC 8382

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 24.49	-16 17.3	1.822	2.153	95.5	27.1	20.1
1985	02 14	14 36.19	-17 19.5					
1985	02 24	14 46.08	-18 11.1	1.561	2.118	110.2	26.0	19.7
1985	03 06	14 53.72	-18 51.0					
1985	03 16	14 58.66	-19 18.3	1.329	2.085	127.0	22.4	19.2
1985	03 26	15 00.46	-19 31.3					
1985	04 05	14 58.92	-19 28.8	1.145	2.056	146.7	15.5	18.7
1985	04 15	14 54.14	-19 10.1					
1985	04 25	14 46.73	-18 35.8	1.033	2.030	169.1	5.4	18.2
1985	05 05	14 37.90	-17 49.7					
1985	05 15	14 29.15	-16 58.4	1.011	2.008	166.6	6.7	18.2
1985	05 25	14 22.00	-16 10.2					
1985	06 04	14 17.59	-15 33.0	1.077	1.991	144.4	17.2	18.6
1985	06 14	14 16.48	-15 11.6					
1985	06 24	14 18.79	-15 07.8	1.208	1.980	125.5	24.7	19.0
1985	07 04	14 24.36	-15 21.0					
1985	07 14	14 32.82	-15 48.7	1.380	1.973	109.9	29.0	19.3

1978 UH2 a,e,i = 2.60, 0.15, 13 Elements MPC 7599

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 04	14 49.30	-19 34.2	2.788	2.939	88.9	19.6	19.5
1985	02 14	14 56.56	-19 48.6					
1985	02 24	15 01.98	-19 52.1	2.489	2.923	106.1	19.0	19.2
1985	03 06	15 05.32	-19 43.7					
1985	03 16	15 06.33	-19 22.3	2.214	2.905	125.3	16.2	18.9
1985	03 26	15 04.88	-18 47.0					
1985	04 05	15 00.98	-17 57.4	1.996	2.885	146.7	11.0	18.6
1985	04 15	14 54.94	-16 54.4					
1985	04 25	14 47.27	-15 40.4	1.867	2.863	170.1	3.5	18.1
1985	05 05	14 38.80	-14 20.0					
1985	05 15	14 30.46	-12 59.3	1.849	2.840	165.7	5.0	18.2
1985	05 25	14 23.13	-11 44.6					
1985	06 04	14 17.54	-10 41.5	1.940	2.815	142.8	12.6	18.5
1985	06 14	14 14.10	-09 53.4					
1985	06 24	14 13.01	-09 21.6	2.111	2.789	122.2	18.0	18.8
1985	07 04	14 14.26	-09 06.1					
1985	07 14	14 17.71	-09 05.2	2.331	2.761	104.2	20.9	19.0

1983 WL a,e,i = 2.33, 0.09, 11 Elements MPC 8462

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 15.24	-08 57.1	1.953	2.419	-1.02	+8.2	18.4
1985	03 06	15 19.64	-09 07.9					
1985	03 16	15 21.26	-09 10.4	1.736	2.436	-1.19	+9.3	18.1
1985	03 26	15 19.85	-09 05.8					
1985	04 05	15 15.37	-08 55.9	1.567	2.453	-1.36	+10.5	17.7
1985	04 15	15 08.08	-08 43.1					
1985	04 25	14 58.60	-08 30.4	1.478	2.469	-1.48	+11.3	17.4
1985	05 05	14 47.99	-08 21.6					
1985	05 15	14 37.45	-08 20.1	1.494	2.483	-1.45	+11.2	17.5
1985	05 25	14 28.16	-08 28.8					
1985	06 04	14 21.03	-08 49.1	1.611	2.496	-1.30	+10.4	17.8
1985	06 14	14 16.54	-09 21.3					
1985	06 24	14 14.85	-10 04.5	1.806	2.508	-1.11	+9.2	18.2
1985	07 04	14 15.89	-10 57.5					
1985	07 14	14 19.42	-11 58.3	2.047	2.518	-0.96	+8.0	18.6
1985	07 24	14 25.18	-13 05.4					
1985	08 03	14 32.92	-14 17.0	2.309	2.527	-0.86	+7.0	18.9

(3051) 1974 YP a,e,i = 2.59, 0.26, 13 Elements MPC 8787

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 16.46	-31 58.0	2.852	3.168	99.4	18.0	19.2
1985	03 06	15 19.85	-32 41.6					
1985	03 16	15 20.91	-33 17.5	2.558	3.143	117.4	16.3	18.9
1985	03 26	15 19.42	-33 43.2					
1985	04 05	15 15.31	-33 55.9	2.310	3.116	136.9	12.7	18.6
1985	04 15	15 08.76	-33 52.7					
1985	04 25	15 00.20	-33 30.7	2.138	3.086	156.2	7.5	18.3
1985	05 05	14 50.46	-32 49.2					
1985	05 15	14 40.51	-31 50.0	2.070	3.053	163.5	5.4	18.1
1985	05 25	14 31.38	-30 37.7					
1985	06 04	14 23.96	-29 19.0	2.112	3.017	147.5	10.4	18.3
1985	06 14	14 18.79	-28 00.9					
1985	06 24	14 16.15	-26 49.2	2.247	2.979	127.8	15.6	18.5
1985	07 04	14 16.09	-25 48.2					
1985	07 14	14 18.45	-24 59.8	2.442	2.939	109.3	19.1	18.7
1985	07 24	14 23.05	-24 24.5					
1985	08 03	14 29.65	-24 01.8	2.666	2.896	92.6	20.5	18.9

(3024) 1981 UW9 a,e,i = 3.43, 0.11, 15 Elements MPC 8674

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 17.75	-21 08.4	3.413	3.750	102.2	14.9	17.9
1985	03 06	15 19.50	-21 45.9					
1985	03 16	15 19.35	-22 18.4	3.122	3.740	121.5	13.1	17.6
1985	03 26	15 17.20	-22 45.3					
1985	04 05	15 13.10	-23 05.7	2.887	3.729	142.3	9.4	17.4
1985	04 15	15 07.23	-23 18.8					
1985	04 25	14 59.96	-23 24.1	2.741	3.717	163.8	4.3	17.1
1985	05 05	14 51.88	-23 22.0					
1985	05 15	14 43.64	-23 13.7	2.707	3.705	169.3	2.9	17.0
1985	05 25	14 35.93	-23 01.2					
1985	06 04	14 29.36	-22 47.6	2.788	3.692	148.6	8.2	17.2
1985	06 14	14 24.38	-22 35.7					
1985	06 24	14 21.23	-22 27.8	2.964	3.678	128.0	12.6	17.5
1985	07 04	14 20.05	-22 25.9					
1985	07 14	14 20.78	-22 30.8	3.203	3.664	109.1	15.2	17.7
1985	07 24	14 23.36	-22 43.0					
1985	08 03	14 27.63	-23 02.2	3.472	3.649	91.9	16.1	17.9

1981 EG14 a,e,i = 2.35, 0.10, 6 Elements MPC 8676

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 13.34	-19 49.2	2.151	2.570	103.6	22.0	18.7
1985	03 06	15 18.20	-19 55.9					
1985	03 16	15 20.49	-19 50.5	1.910	2.579	122.0	19.1	18.4
1985	03 26	15 19.94	-19 32.0					
1985	04 05	15 16.51	-19 00.0	1.717	2.586	142.9	13.5	18.0
1985	04 15	15 10.44	-18 14.7					
1985	04 25	15 02.27	-17 17.8	1.603	2.591	166.2	5.3	17.7
1985	05 05	14 52.92	-16 13.2					
1985	05 15	14 43.51	-15 06.5	1.594	2.595	169.5	4.1	17.6
1985	05 25	14 35.11	-14 04.1					
1985	06 04	14 28.62	-13 11.9	1.691	2.596	146.2	12.5	18.0
1985	06 14	14 24.54	-12 33.7					
1985	06 24	14 23.07	-12 11.1	1.870	2.596	125.5	18.6	18.4
1985	07 04	14 24.20	-12 04.1					
1985	07 14	14 27.73	-12 11.0	2.100	2.594	107.5	21.9	18.7
1985	07 24	14 33.42	-12 30.0					
1985	08 03	14 41.05	-12 58.7	2.352	2.591	91.8	23.0	19.0

(3021) 1967 CB a,e,i = 3.17, 0.26, 17 Elements MPC 8673

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 23.34	-32 30.7	3.297	3.569	97.8	15.9	18.7
1985	03 06	15 25.32	-33 33.2					
1985	03 16	15 25.09	-34 30.0	3.057	3.608	116.1	14.3	18.5
1985	03 26	15 22.54	-35 19.3					
1985	04 05	15 17.69	-35 58.3	2.865	3.645	135.3	11.1	18.3
1985	04 15	15 10.79	-36 24.6					
1985	04 25	15 02.30	-36 35.7	2.753	3.680	153.4	7.0	18.2
1985	05 05	14 52.93	-36 30.8					
1985	05 15	14 43.50	-36 10.6	2.746	3.713	160.3	5.3	18.1
1985	05 25	14 34.83	-35 38.0					
1985	06 04	14 27.59	-34 57.4	2.850	3.745	147.4	8.4	18.3
1985	06 14	14 22.24	-34 13.6					
1985	06 24	14 19.00	-33 31.1	3.049	3.775	129.2	12.0	18.6
1985	07 04	14 17.91	-32 53.3					
1985	07 14	14 18.87	-32 22.7	3.315	3.803	111.2	14.4	18.8
1985	07 24	14 21.74	-32 00.2					
1985	08 03	14 26.31	-31 46.4	3.616	3.829	94.3	15.3	19.1

(2968) 1978 QJ a,e,i = 2.37, 0.31, 9 Elements MPC 8389

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	14 57.95	-28 05.1	1.837	2.293	104.4	24.7	19.2
1985	03 06	15 05.96	-29 10.7					
1985	03 16	15 11.62	-30 07.2	1.545	2.222	120.5	22.7	18.7
1985	03 26	15 14.40	-30 51.9					
1985	04 05	15 13.88	-31 20.8	1.295	2.149	138.5	18.0	18.1
1985	04 15	15 09.87	-31 29.1					
1985	04 25	15 02.56	-31 11.0	1.109	2.076	157.8	10.5	17.6
1985	05 05	14 52.84	-30 22.9					
1985	05 15	14 42.18	-29 05.5	1.009	2.004	165.7	7.1	17.2
1985	05 25	14 32.38	-27 25.5					
1985	06 04	14 25.14	-25 35.8	0.999	1.934	147.8	16.2	17.3
1985	06 14	14 21.49	-23 49.6					
1985	06 24	14 21.90	-22 17.6	1.060	1.868	128.1	25.3	17.6
1985	07 04	14 26.36	-21 05.8					
1985	07 14	14 34.52	-20 15.4	1.165	1.806	111.6	31.6	17.8
1985	07 24	14 46.00	-19 45.0					
1985	08 03	15 00.39	-19 31.2	1.291	1.751	98.1	35.0	18.1

(3128) 1979 FJ2 a,e,i = 3.11, 0.16, 3 Elements MPC 9159

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 10.94	-14 25.4	2.562	2.984	105.5	18.6	17.3
1985	03 06	15 15.05	-14 33.3					
1985	03 16	15 17.04	-14 32.5	2.278	2.953	124.1	16.2	17.0
1985	03 26	15 16.71	-14 23.3					
1985	04 05	15 14.03	-14 06.1	2.049	2.922	144.6	11.4	16.6
1985	04 15	15 09.16	-13 42.0					
1985	04 25	15 02.50	-13 12.9	1.904	2.892	166.7	4.6	16.3
1985	05 05	14 54.74	-12 41.6					
1985	05 15	14 46.71	-12 11.8	1.864	2.863	168.7	4.0	16.2
1985	05 25	14 39.31	-11 47.1					
1985	06 04	14 33.33	-11 31.2	1.931	2.834	146.7	11.3	16.5
1985	06 14	14 29.30	-11 26.0					
1985	06 24	14 27.54	-11 32.6	2.083	2.807	126.3	17.0	16.7
1985	07 04	14 28.13	-11 50.9					
1985	07 14	14 30.99	-12 19.8	2.288	2.781	108.3	20.3	17.0
1985	07 24	14 35.99	-12 58.0					
1985	08 03	14 42.94	-13 43.7	2.519	2.756	92.4	21.6	17.2

1981 CB1 a,e,i = 2.31, 0.15, 6 Elements MPC 8683

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 21.76	-17 33.7	1.931	2.349	102.2	24.3	18.8
1985	03 06	15 27.23	-18 11.1					
1985	03 16	15 29.87	-18 40.3	1.721	2.381	120.1	21.2	18.6
1985	03 26	15 29.38	-19 00.7					
1985	04 05	15 25.64	-19 11.8	1.553	2.412	140.8	15.2	18.2
1985	04 15	15 18.85	-19 13.0					
1985	04 25	15 09.59	-19 04.3	1.459	2.442	164.0	6.5	17.9
1985	05 05	14 58.89	-18 47.2					
1985	05 15	14 48.04	-18 24.9	1.466	2.470	171.2	3.6	17.8
1985	05 25	14 38.32	-18 01.9					
1985	06 04	14 30.74	-17 43.2	1.578	2.497	148.1	12.4	18.3
1985	06 14	14 25.87	-17 32.5					
1985	06 24	14 23.90	-17 32.2	1.772	2.522	127.4	18.7	18.7
1985	07 04	14 24.76	-17 42.8					
1985	07 14	14 28.20	-18 03.7	2.018	2.545	109.5	22.1	19.1
1985	07 24	14 33.94	-18 33.8					
1985	08 03	14 41.69	-19 11.3	2.290	2.566	93.8	23.2	19.4

1984 DU a,e,i = 2.77, 0.14, 7 Elements MPC 9067

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 19.84	-10 55.1	2.714	3.109	104.3	18.0	18.5
1985	03 06	15 22.96	-10 36.8					
1985	03 16	15 23.94	-10 09.3	2.463	3.121	123.2	15.5	18.3
1985	03 26	15 22.65	-09 33.4					
1985	04 05	15 19.13	-08 50.8	2.267	3.131	143.9	10.8	18.0
1985	04 15	15 13.62	-08 03.9					
1985	04 25	15 06.54	-07 16.0	2.159	3.140	164.5	4.9	17.7
1985	05 05	14 58.56	-06 31.1					
1985	05 15	14 50.46	-05 53.0	2.160	3.147	164.7	4.9	17.7
1985	05 25	14 42.99	-05 25.3					
1985	06 04	14 36.82	-05 10.1	2.271	3.152	144.5	10.8	18.0
1985	06 14	14 32.40	-05 08.1					
1985	06 24	14 29.96	-05 19.1	2.467	3.156	124.4	15.4	18.3
1985	07 04	14 29.57	-05 41.8					
1985	07 14	14 31.18	-06 14.6	2.718	3.158	106.3	18.0	18.6
1985	07 24	14 34.64	-06 55.7					
1985	08 03	14 39.79	-07 43.3	2.993	3.158	89.9	18.7	18.8

1981 VW1 a,e,i = 3.10, 0.18, 2 Elements MPC 8895

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 21.77	-16 06.3	2.982	3.341	102.6	16.8	18.4
1985	03 06	15 25.17	-16 10.3					
1985	03 16	15 26.61	-16 06.4	2.681	3.311	121.5	14.8	18.1
1985	03 26	15 25.95	-15 54.8					
1985	04 05	15 23.15	-15 35.6	2.432	3.280	142.1	10.8	17.8
1985	04 15	15 18.36	-15 09.6					
1985	04 25	15 11.91	-14 38.0	2.268	3.248	164.4	4.8	17.4
1985	05 05	15 04.37	-14 03.1					
1985	05 15	14 56.45	-13 28.1	2.213	3.216	171.4	2.7	17.2
1985	05 25	14 48.91	-12 56.1					
1985	06 04	14 42.48	-12 30.5	2.269	3.182	149.1	9.4	17.5
1985	06 14	14 37.66	-12 13.7					
1985	06 24	14 34.81	-12 07.3	2.417	3.148	128.2	14.7	17.7
1985	07 04	14 34.07	-12 11.6					
1985	07 14	14 35.42	-12 26.3	2.625	3.113	109.4	17.9	18.0
1985	07 24	14 38.77	-12 50.2					
1985	08 03	14 43.98	-13 22.2	2.861	3.078	92.6	19.2	18.2

1977 RL6 a,e,i = 2.79, 0.16, 4 Elements MPC 9031

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 10.27	-19 45.1	1.916	2.364	104.3	23.9	19.7
1985	03 06	15 18.04	-20 06.2					
1985	03 16	15 23.38	-20 15.1	1.676	2.351	121.2	21.2	19.4
1985	03 26	15 25.92	-20 11.0					
1985	04 05	15 25.50	-19 53.4	1.481	2.342	140.6	15.7	19.0
1985	04 15	15 22.17	-19 22.2					
1985	04 25	15 16.32	-18 38.3	1.356	2.335	162.6	7.4	18.6
1985	05 05	15 08.80	-17 45.1					
1985	05 15	15 00.73	-16 47.4	1.325	2.333	173.9	2.6	18.3
1985	05 25	14 53.30	-15 51.8					
1985	06 04	14 47.60	-15 04.7	1.393	2.334	151.2	12.1	18.7
1985	06 14	14 44.31	-14 30.5					
1985	06 24	14 43.76	-14 11.7	1.543	2.338	130.9	19.2	19.1
1985	07 04	14 45.98	-14 08.4					
1985	07 14	14 50.80	-14 19.1	1.747	2.346	113.5	23.4	19.5
1985	07 24	14 57.96	-14 41.6					
1985	08 03	15 07.20	-15 13.3	1.983	2.357	98.5	25.2	19.8

(3062) 1982 XC a,e,i = 3.01, 0.12, 11 Elements MPC 8791

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 34.90	-06 44.1	3.013	3.354	101.5	16.8	17.4
1985	03 06	15 38.31	-06 25.8					
1985	03 16	15 39.79	-06 00.3	2.739	3.348	119.9	14.9	17.2
1985	03 26	15 39.20	-05 29.0					
1985	04 05	15 36.53	-04 53.8	2.515	3.340	139.5	11.2	16.9
1985	04 15	15 31.90	-04 17.2					
1985	04 25	15 25.63	-03 42.5	2.373	3.330	158.7	6.3	16.6
1985	05 05	15 18.22	-03 13.0					
1985	05 15	15 10.33	-02 52.1	2.337	3.320	163.8	4.9	16.5
1985	05 25	15 02.67	-02 42.3					
1985	06 04	14 55.92	-02 45.1	2.411	3.308	147.0	9.6	16.7
1985	06 14	14 50.60	-03 00.8					
1985	06 24	14 47.05	-03 28.6	2.577	3.296	127.5	14.2	17.0
1985	07 04	14 45.44	-04 07.1					
1985	07 14	14 45.79	-04 54.6	2.804	3.282	109.2	17.0	17.2
1985	07 24	14 48.03	-05 49.3					
1985	08 03	14 52.03	-06 49.5	3.062	3.268	92.5	18.1	17.4

1980 DG a,e,i = 2.66, 0.13, 11 Elements MPC 8901

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 20.92	-30 36.1	2.036	2.397	98.9	24.1	17.5
1985	03 06	15 29.88	-31 31.4					
1985	03 16	15 36.45	-32 16.8	1.783	2.378	114.7	22.3	17.2
1985	03 26	15 40.18	-32 50.2					
1985	04 05	15 40.77	-33 08.9	1.566	2.361	132.6	18.2	16.8
1985	04 15	15 38.11	-33 09.7					
1985	04 25	15 32.42	-32 48.6	1.408	2.346	152.3	11.5	16.4
1985	05 05	15 24.45	-32 03.7					
1985	05 15	15 15.36	-30 55.7	1.337	2.334	167.6	5.4	16.1
1985	05 25	15 06.55	-29 29.7					
1985	06 04	14 59.37	-27 54.5	1.363	2.324	155.4	10.5	16.2
1985	06 14	14 54.72	-26 20.1					
1985	06 24	14 53.08	-24 54.7	1.479	2.317	135.6	17.9	16.6
1985	07 04	14 54.53	-23 43.7					
1985	07 14	14 58.89	-22 49.0	1.659	2.313	117.7	22.9	16.9
1985	07 24	15 05.86	-22 10.4					
1985	08 03	15 15.13	-21 46.0	1.877	2.312	102.0	25.4	17.3

(3060) 1982 RD1 a,e,i = 2.28, 0.18, 7 Elements MPC 8790

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 30.40	-27 01.4	2.060	2.405	97.9	24.1	18.5
1985	03 06	15 38.70	-28 09.8					
1985	03 16	15 44.73	-29 13.4	1.781	2.367	114.0	22.6	18.1
1985	03 26	15 47.97	-30 10.9					
1985	04 05	15 48.02	-31 00.4	1.537	2.329	132.1	18.6	17.7
1985	04 15	15 44.60	-31 38.9					
1985	04 25	15 37.72	-32 01.6	1.352	2.289	151.9	11.9	17.2
1985	05 05	15 27.96	-32 04.3					
1985	05 15	15 16.47	-31 44.3	1.253	2.249	166.8	5.9	16.9
1985	05 25	15 04.81	-31 03.0					
1985	06 04	14 54.69	-30 06.6	1.251	2.208	154.0	11.6	17.0
1985	06 14	14 47.38	-29 04.4					
1985	06 24	14 43.60	-28 05.1	1.334	2.167	134.0	19.7	17.3
1985	07 04	14 43.59	-27 15.8					
1985	07 14	14 47.16	-26 39.6	1.475	2.126	116.0	25.5	17.6
1985	07 24	14 54.01	-26 17.3					
1985	08 03	15 03.76	-26 07.8	1.646	2.087	100.6	28.5	17.8

(3030) Vehrenberg a,e,i = 2.27, 0.25, 3 Elements MPC 8681

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 44.60	-23 36.5	2.551	2.825	95.6	20.4	20.3
1985	03 06	15 49.88	-24 03.7					
1985	03 16	15 52.85	-24 23.9	2.278	2.826	113.5	18.8	20.0
1985	03 26	15 53.21	-24 36.4					
1985	04 05	15 50.78	-24 40.0	2.039	2.824	133.7	14.9	19.6
1985	04 15	15 45.56	-24 33.4					
1985	04 25	15 37.82	-24 15.1	1.869	2.818	155.9	8.4	19.3
1985	05 05	15 28.19	-23 45.0					
1985	05 15	15 17.60	-23 04.4	1.800	2.809	175.3	1.7	18.9
1985	05 25	15 07.15	-22 16.9					
1985	06 04	14 57.93	-21 27.6	1.843	2.795	155.0	8.8	19.3
1985	06 14	14 50.73	-20 41.9					
1985	06 24	14 46.04	-20 04.1	1.983	2.779	133.1	15.5	19.6
1985	07 04	14 44.04	-19 37.1					
1985	07 14	14 44.67	-19 21.9	2.189	2.758	113.6	19.7	19.9
1985	07 24	14 47.75	-19 18.4					
1985	08 03	14 53.06	-19 25.4	2.428	2.735	96.4	21.6	20.1

1984 HA1 a,e,i = 5.10, 0.07, 25 Elements MPC 9078

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 35.07	-00 49.3	4.740	5.049	-0.37	-0.1	16.1
1985	03 06	15 37.00	-00 02.0					
1985	03 16	15 37.64	+00 50.6	4.454	5.038	-0.39	-0.1	16.0
1985	03 26	15 36.98	+01 47.1					
1985	04 05	15 35.06	+02 45.2	4.230	5.027	-0.42	-0.0	15.8
1985	04 15	15 32.01	+03 42.6					
1985	04 25	15 28.04	+04 36.4	4.096	5.017	-0.43	-0.1	15.6
1985	05 05	15 23.43	+05 24.0					
1985	05 15	15 18.53	+06 02.9	4.070	5.006	-0.44	-0.1	15.6
1985	05 25	15 13.70	+06 31.3					
1985	06 04	15 09.28	+06 48.1	4.152	4.996	-0.43	-0.2	15.7
1985	06 14	15 05.59	+06 53.3					
1985	06 24	15 02.84	+06 47.4	4.326	4.985	-0.41	-0.2	15.9
1985	07 04	15 01.21	+06 31.4					
1985	07 14	15 00.76	+06 06.7	4.562	4.975	-0.38	-0.2	16.0
1985	07 24	15 01.54	+05 34.9					
1985	08 03	15 03.51	+04 57.6	4.831	4.965	-0.36	-0.2	16.2

1982 MH a,e,i = 2.26, 0.07, 4 Elements MPC 8538

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 37.92	-17 17.4	1.966	2.328	98.6	24.9	19.4
1985	03 06	15 45.48	-17 46.7					
1985	03 16	15 50.49	-18 08.1	1.735	2.342	115.5	22.6	19.1
1985	03 26	15 52.57	-18 21.6					
1985	04 05	15 51.45	-18 27.4	1.538	2.354	135.0	17.5	18.7
1985	04 15	15 47.08	-18 25.3					
1985	04 25	15 39.71	-18 15.5	1.405	2.366	157.3	9.4	18.3
1985	05 05	15 30.10	-17 59.1					
1985	05 15	15 19.38	-17 38.2	1.365	2.376	178.3	0.7	17.8
1985	05 25	15 08.88	-17 16.5					
1985	06 04	14 59.92	-16 58.6	1.429	2.385	154.6	10.5	18.4
1985	06 14	14 53.37	-16 48.3					
1985	06 24	14 49.74	-16 48.2	1.581	2.394	133.1	18.1	18.8
1985	07 04	14 49.15	-16 59.4					
1985	07 14	14 51.43	-17 21.2	1.793	2.401	114.6	22.6	19.2
1985	07 24	14 56.36	-17 52.4					
1985	08 03	15 03.63	-18 31.3	2.036	2.406	98.6	24.6	19.5

1982 TP a,e,i = 2.55, 0.13, 6 Elements MPC 8777

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 28.17	-25 11.9	2.117	2.471	-1.26	+3.1	17.6
1985	03 06	15 36.36	-25 55.7					
1985	03 16	15 42.29	-26 31.2	1.846	2.443	-1.50	+3.1	17.3
1985	03 26	15 45.55	-26 57.3					
1985	04 05	15 45.83	-27 12.2	1.612	2.416	-1.77	+3.6	16.9
1985	04 15	15 43.00	-27 14.0					
1985	04 25	15 37.21	-27 00.4	1.440	2.389	-2.01	+4.8	16.4
1985	05 05	15 29.08	-26 30.1					
1985	05 15	15 19.65	-25 44.1	1.357	2.364	-2.08	+6.2	16.0
1985	05 25	15 10.22	-24 46.3					
1985	06 04	15 02.14	-23 43.6	1.375	2.339	-1.94	+6.7	16.3
1985	06 14	14 56.41	-22 43.4					
1985	06 24	14 53.61	-21 52.0	1.482	2.317	-1.70	+6.1	16.6
1985	07 04	14 53.95	-21 13.6					
1985	07 14	14 57.30	-20 49.4	1.650	2.296	-1.48	+4.9	16.9
1985	07 24	15 03.44	-20 38.8					
1985	08 03	15 12.06	-20 40.1	1.852	2.277	-1.31	+3.7	17.2

(3052) 1976 YJ3 a,e,i = 2.37, 0.18, 4 Elements MPC 8788

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 28.55	-21 32.3	1.647	2.059	99.7	28.3	17.8
1985	03 06	15 38.46	-22 00.2					
1985	03 16	15 45.52	-22 15.3	1.460	2.093	115.7	25.4	17.5
1985	03 26	15 49.29	-22 17.0					
1985	04 05	15 49.49	-22 05.0	1.303	2.129	134.6	19.5	17.2
1985	04 15	15 46.11	-21 38.8					
1985	04 25	15 39.53	-20 58.5	1.206	2.167	156.7	10.6	16.8
1985	05 05	15 30.67	-20 06.5					
1985	05 15	15 20.84	-19 07.3	1.195	2.206	178.9	0.5	16.3
1985	05 25	15 11.52	-18 07.5					
1985	06 04	15 04.00	-17 14.4	1.283	2.247	155.6	10.8	17.0
1985	06 14	14 59.08	-16 33.4					
1985	06 24	14 57.12	-16 07.4	1.457	2.288	134.6	18.4	17.5
1985	07 04	14 58.13	-15 56.8					
1985	07 14	15 01.87	-16 00.3	1.689	2.329	116.6	23.0	18.0
1985	07 24	15 08.04	-16 15.7					
1985	08 03	15 16.32	-16 40.3	1.957	2.370	101.0	24.9	18.4

1981 EP26 a,e,i = 2.39, 0.09, 6 Elements MPC 8135

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 25.64	-14 08.4	1.756	2.190	-1.47	+4.3	18.5
1985	03 06	15 34.92	-14 00.3					
1985	03 16	15 41.69	-13 38.3	1.532	2.187	-1.71	+4.9	18.2
1985	03 26	15 45.56	-13 02.6					
1985	04 05	15 46.25	-12 14.6	1.346	2.187	-2.00	+5.9	17.8
1985	04 15	15 43.72	-11 16.6					
1985	04 25	15 38.21	-10 12.6	1.224	2.189	-2.24	+7.0	17.4
1985	05 05	15 30.47	-09 08.5					
1985	05 15	15 21.62	-08 11.0	1.191	2.192	-2.29	+7.4	17.2
1985	05 25	15 12.96	-07 27.0					
1985	06 04	15 05.78	-07 01.5	1.253	2.198	-2.11	+6.8	17.5
1985	06 14	15 00.94	-06 56.2					
1985	06 24	14 58.92	-07 10.5	1.395	2.206	-1.82	+5.7	17.9
1985	07 04	14 59.85	-07 42.1					
1985	07 14	15 03.57	-08 27.5	1.591	2.216	-1.56	+4.8	18.3
1985	07 24	15 09.85	-09 23.4					
1985	08 03	15 18.41	-10 26.3	1.818	2.227	-1.35	+4.0	18.6

(3119) 1972 YX a,e,i = 3.05, 0.21, 5 Elements MPC 9154

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 48.80	-15 09.9	3.277	3.528	96.5	16.2	19.2
1985	03 06	15 52.26	-15 10.2					
1985	03 16	15 53.84	-15 04.3	3.011	3.551	115.2	14.7	19.0
1985	03 26	15 53.42	-14 52.6					
1985	04 05	15 50.98	-14 35.6	2.787	3.572	135.7	11.3	18.8
1985	04 15	15 46.62	-14 14.3					
1985	04 25	15 40.62	-13 49.7	2.641	3.591	157.5	6.2	18.5
1985	05 05	15 33.44	-13 23.8					
1985	05 15	15 25.66	-12 58.5	2.601	3.609	174.3	1.6	18.2
1985	05 25	15 17.95	-12 36.1					
1985	06 04	15 10.96	-12 19.0	2.678	3.625	155.3	6.7	18.6
1985	06 14	15 05.19	-12 08.9					
1985	06 24	15 01.01	-12 06.7	2.857	3.639	134.2	11.6	18.8
1985	07 04	14 58.61	-12 12.8					
1985	07 14	14 58.05	-12 27.0	3.109	3.651	114.6	14.7	19.1
1985	07 24	14 59.28	-12 48.5					
1985	08 03	15 02.19	-13 16.3	3.400	3.662	96.8	16.0	19.3

2808 P-L a,e,i = 2.42, 0.15, 2 Elements MPC 9033

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 41.92	-18 20.4	1.980	2.325	97.4	25.0	19.9
1985	03 06	15 49.93	-18 34.6					
1985	03 16	15 55.34	-18 38.9	1.769	2.359	114.2	22.6	19.6
1985	03 26	15 57.83	-18 33.2					
1985	04 05	15 57.17	-18 17.8	1.590	2.393	133.7	17.6	19.3
1985	04 15	15 53.38	-17 53.3					
1985	04 25	15 46.74	-17 20.6	1.474	2.427	155.8	9.8	19.0
1985	05 05	15 38.00	-16 41.8					
1985	05 15	15 28.22	-16 00.6	1.450	2.460	177.2	1.1	18.5
1985	05 25	15 18.62	-15 21.4					
1985	06 04	15 10.37	-14 49.1	1.531	2.493	156.3	9.4	19.1
1985	06 14	15 04.28	-14 27.1					
1985	06 24	15 00.80	-14 17.6	1.703	2.525	134.9	16.6	19.5
1985	07 04	15 00.07	-14 20.8					
1985	07 14	15 01.95	-14 35.6	1.938	2.555	116.2	20.9	20.0
1985	07 24	15 06.23	-15 00.3					
1985	08 03	15 12.64	-15 33.0	2.210	2.584	99.8	22.8	20.3

1973 UX5 a,e,i = 2.15, 0.17, 1 Elements MPC 6054

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 26.38	-17 49.9	1.698	2.124	101.1	27.2	18.9
1985	03 06	15 36.75	-18 21.9					
1985	03 16	15 44.90	-18 44.0	1.438	2.083	116.6	25.3	18.5
1985	03 26	15 50.33	-18 55.9					
1985	04 05	15 52.57	-18 57.5	1.212	2.043	134.6	20.4	17.9
1985	04 15	15 51.29	-18 48.6					
1985	04 25	15 46.39	-18 29.1	1.043	2.003	155.7	11.9	17.4
1985	05 05	15 38.36	-18 00.0					
1985	05 15	15 28.24	-17 24.2	0.954	1.964	178.5	0.8	16.6
1985	05 25	15 17.62	-16 46.5					
1985	06 04	15 08.29	-16 14.0	0.955	1.928	156.3	12.2	17.1
1985	06 14	15 01.64	-15 52.7					
1985	06 24	14 58.56	-15 46.9	1.034	1.894	134.8	22.4	17.5
1985	07 04	14 59.36	-15 57.9					
1985	07 14	15 03.88	-16 24.4	1.164	1.863	117.2	29.0	17.8
1985	07 24	15 11.85	-17 03.8					
1985	08 03	15 22.88	-17 52.8	1.321	1.836	102.8	32.6	18.2

1981 DK1 a,e,i = 2.37, 0.30, 12 Elements MPC 8143

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 22.98	-19 55.5	1.858	2.271	101.4	25.3	18.7
1985 03 06	15 33.05	-19 49.1					
1985 03 16	15 41.12	-19 25.8	1.559	2.201	117.4	23.7	18.2
1985 03 26	15 46.72	-18 43.6					
1985 04 05	15 49.46	-17 40.8	1.298	2.131	135.6	19.2	17.7
1985 04 15	15 49.05	-16 16.4					
1985 04 25	15 45.40	-14 30.8	1.100	2.061	156.3	11.3	17.0
1985 05 05	15 38.92	-12 28.3					
1985 05 15	15 30.50	-10 17.0	0.987	1.993	171.5	4.3	16.5
1985 05 25	15 21.47	-08 08.8					
1985 06 04	15 13.43	-06 17.2	0.969	1.927	152.6	14.0	16.7
1985 06 14	15 07.67	-04 51.9					
1985 06 24	15 05.08	-03 58.1	1.027	1.865	131.7	24.0	17.0
1985 07 04	15 06.10	-03 35.5					
1985 07 14	15 10.66	-03 40.6	1.132	1.808	114.5	30.8	17.3
1985 07 24	15 18.60	-04 08.4					
1985 08 03	15 29.60	-04 53.6	1.257	1.758	100.8	34.5	17.5

1982 UH2 a,e,i = 2.84, 0.01, 1 Elements MPC 8794

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 45.10	-21 10.2	2.545	2.826	96.0	20.4	17.8
1985 03 06	15 51.58	-21 36.8					
1985 03 16	15 55.93	-21 56.6	2.279	2.826	113.4	18.8	17.5
1985 03 26	15 57.87	-22 09.4					
1985 04 05	15 57.21	-22 14.8	2.049	2.826	132.9	15.0	17.2
1985 04 15	15 53.96	-22 12.2					
1985 04 25	15 48.29	-22 01.2	1.885	2.826	154.5	8.8	16.8
1985 05 05	15 40.74	-21 42.1					
1985 05 15	15 32.10	-21 16.1	1.817	2.827	176.9	1.1	16.3
1985 05 25	15 23.32	-20 45.9					
1985 06 04	15 15.41	-20 15.1	1.857	2.827	158.9	7.4	16.8
1985 06 14	15 09.16	-19 47.8					
1985 06 24	15 05.09	-19 27.1	1.995	2.828	137.3	14.1	17.1
1985 07 04	15 03.47	-19 15.4					
1985 07 14	15 04.30	-19 13.2	2.205	2.829	118.0	18.5	17.4
1985 07 24	15 07.48	-19 20.3					
1985 08 03	15 12.80	-19 35.8	2.455	2.829	101.0	20.6	17.7

(3071) 1973 FT1 a,e,i = 3.20, 0.09, 2 Elements MPC 8897

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 46.78	-17 26.7	2.749	3.024	96.5	19.0	17.5
1985 03 06	15 52.43	-17 36.3					
1985 03 16	15 56.03	-17 38.7	2.493	3.040	114.3	17.4	17.3
1985 03 26	15 57.38	-17 34.3					
1985 04 05	15 56.39	-17 23.3	2.275	3.056	134.0	13.6	17.0
1985 04 15	15 53.11	-17 06.2					
1985 04 25	15 47.77	-16 44.0	2.128	3.073	155.6	7.8	16.7
1985 05 05	15 40.89	-16 18.2					
1985 05 15	15 33.14	-15 51.0	2.080	3.090	176.6	1.1	16.3
1985 05 25	15 25.34	-15 25.0					
1985 06 04	15 18.30	-15 03.3	2.143	3.107	158.1	7.0	16.8
1985 06 14	15 12.67	-14 48.3					
1985 06 24	15 08.87	-14 41.6	2.305	3.125	136.8	12.9	17.1
1985 07 04	15 07.16	-14 44.0					
1985 07 14	15 07.56	-14 55.2	2.540	3.142	117.6	16.7	17.4
1985 07 24	15 09.99	-15 14.6					
1985 08 03	15 14.32	-15 40.9	2.817	3.160	100.3	18.4	17.7

1981 SM1 a,e,i = 3.14, 0.19, 2 Elements MPC 7362

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 54.18	-18 15.9	3.415	3.630	94.6	15.8	19.3
1985 03 06	15 58.28	-18 22.9					
1985 03 16	16 00.61	-18 24.3	3.105	3.613	113.0	14.7	19.1
1985 03 26	16 01.01	-18 20.0					
1985 04 05	15 59.41	-18 10.2	2.835	3.594	133.2	11.7	18.8
1985 04 15	15 55.84	-17 55.1					
1985 04 25	15 50.49	-17 35.2	2.637	3.574	154.9	6.9	18.5
1985 05 05	15 43.73	-17 11.4					
1985 05 15	15 36.11	-16 45.4	2.542	3.552	176.7	0.9	18.0
1985 05 25	15 28.28	-16 19.1					
1985 06 04	15 20.94	-15 55.2	2.563	3.529	159.0	5.9	18.4
1985 06 14	15 14.69	-15 35.8					
1985 06 24	15 09.99	-15 23.1	2.689	3.505	137.3	11.3	18.6
1985 07 04	15 07.12	-15 18.1					
1985 07 14	15 06.18	-15 21.3	2.892	3.479	117.4	15.0	18.9
1985 07 24	15 07.19	-15 32.5					
1985 08 03	15 10.05	-15 50.9	3.139	3.452	99.3	16.9	19.1

(3013) 1979 SD7 a,e,i = 2.36, 0.14, 4 Elements MPC 8669

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 57.68	-22 39.4	2.221	2.476	92.9	23.5	18.7
1985 03 06	16 05.64	-23 19.0					
1985 03 16	16 11.21	-23 52.6	1.988	2.504	109.6	22.0	18.5
1985 03 26	16 14.02	-24 20.1					
1985 04 05	16 13.81	-24 40.9	1.782	2.530	128.6	18.0	18.2
1985 04 15	16 10.45	-24 54.0					
1985 04 25	16 04.05	-24 57.8	1.632	2.554	150.1	11.3	17.9
1985 05 05	15 55.17	-24 51.0					
1985 05 15	15 44.73	-24 33.6	1.572	2.577	172.5	2.9	17.5
1985 05 25	15 33.93	-24 07.3					
1985 06 04	15 24.05	-23 36.0	1.617	2.598	161.2	7.2	17.8
1985 06 14	15 16.10	-23 04.8					
1985 06 24	15 10.74	-22 38.2	1.762	2.617	139.3	14.7	18.2
1985 07 04	15 08.24	-22 19.6					
1985 07 14	15 08.57	-22 10.5	1.978	2.634	119.7	19.6	18.5
1985 07 24	15 11.54	-22 11.1					
1985 08 03	15 16.89	-22 20.6	2.236	2.649	102.6	22.0	18.9

1984 CN a,e,i = 2.79, 0.09, 8 Elements MPC 8684

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985 02 24	15 53.48	-19 39.8	2.412	2.677	94.4	21.6	17.5
1985 03 06	16 01.18	-20 24.6					
1985 03 16	16 06.84	-21 05.4	2.134	2.659	111.1	20.4	17.2
1985 03 26	16 10.11	-21 42.4					
1985 04 05	16 10.71	-22 15.8	1.887	2.642	129.8	16.9	16.9
1985 04 15	16 08.47	-22 45.0					
1985 04 25	16 03.42	-23 09.0	1.701	2.626	150.8	10.8	16.5
1985 05 05	15 55.92	-23 26.7					
1985 05 15	15 46.71	-23 37.2	1.604	2.611	172.9	2.7	16.1
1985 05 25	15 36.83	-23 40.8					
1985 06 04	15 27.49	-23 39.5	1.613	2.596	162.0	6.9	16.3
1985 06 14	15 19.74	-23 36.3					
1985 06 24	15 14.37	-23 34.9	1.719	2.583	140.2	14.6	16.6
1985 07 04	15 11.80	-23 38.4					
1985 07 14	15 12.11	-23 48.3	1.897	2.571	120.9	19.8	16.9
1985 07 24	15 15.21	-24 05.3					
1985 08 03	15 20.88	-24 29.1	2.119	2.561	104.0	22.6	17.2

1978 VG6 a,e,i = 5.26, 0.13, 2 Elements MPC 7662

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 02.19	-22 52.4	4.902	5.031	91.8	11.3	18.7
1985	03 06	16 05.24	-23 04.0					
1985	03 16	16 06.95	-23 12.0	4.574	5.012	110.7	10.7	18.5
1985	03 26	16 07.26	-23 16.1					
1985	04 05	16 06.15	-23 16.1	4.285	4.994	130.6	8.7	18.3
1985	04 15	16 03.68	-23 12.0					
1985	04 25	15 59.99	-23 03.6	4.068	4.976	151.6	5.5	18.1
1985	05 05	15 55.32	-22 51.2					
1985	05 15	15 50.03	-22 35.3	3.953	4.958	173.0	1.4	17.8
1985	05 25	15 44.49	-22 16.8					
1985	06 04	15 39.12	-21 57.1	3.955	4.940	164.6	3.1	17.9
1985	06 14	15 34.33	-21 37.6					
1985	06 24	15 30.43	-21 19.8	4.068	4.923	143.5	7.1	18.2
1985	07 04	15 27.67	-21 05.1					
1985	07 14	15 26.21	-20 54.5	4.272	4.906	123.4	10.0	18.3
1985	07 24	15 26.11	-20 48.6					
1985	08 03	15 27.39	-20 47.6	4.534	4.889	104.6	11.6	18.5

(2995) 1978 QK a,e,i = 2.61, 0.14, 15 Elements MPC 8466

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 56.97	-07 54.8	2.181	2.486	95.9	23.3	18.2
1985	03 06	16 05.19	-07 01.4					
1985	03 16	16 11.10	-05 55.2	1.966	2.515	112.1	21.5	18.0
1985	03 26	16 14.44	-04 37.8					
1985	04 05	16 15.03	-03 12.1	1.786	2.545	129.9	17.6	17.7
1985	04 15	16 12.84	-01 42.4					
1985	04 25	16 08.07	-00 14.5	1.668	2.575	147.6	12.1	17.4
1985	05 05	16 01.22	+01 04.8					
1985	05 15	15 53.06	+02 08.6	1.640	2.605	158.1	8.3	17.3
1985	05 25	15 44.55	+02 51.6					
1985	06 04	15 36.69	+03 10.5	1.710	2.635	149.4	11.3	17.5
1985	06 14	15 30.30	+03 05.8					
1985	06 24	15 25.94	+02 39.6	1.868	2.664	132.6	16.3	17.9
1985	07 04	15 23.88	+01 55.8					
1985	07 14	15 24.18	+00 58.5	2.090	2.692	115.7	19.9	18.2
1985	07 24	15 26.73	-00 08.5					
1985	08 03	15 31.35	-01 21.5	2.350	2.720	100.2	21.5	18.5

(3032) 1984 CA1 a,e,i = 2.89, 0.08, 3 Elements MPC 8682

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 03.99	-18 18.2	2.868	3.071	92.3	18.8	18.2
1985	03 06	16 10.33	-18 32.8					
1985	03 16	16 14.79	-18 41.7	2.578	3.060	109.7	17.8	17.9
1985	03 26	16 17.09	-18 45.3					
1985	04 05	16 17.08	-18 43.6	2.318	3.048	128.9	14.8	17.6
1985	04 15	16 14.66	-18 37.0					
1985	04 25	16 09.94	-18 25.8	2.120	3.035	150.2	9.5	17.3
1985	05 05	16 03.24	-18 10.5					
1985	05 15	15 55.16	-17 52.4	2.016	3.021	172.8	2.4	16.8
1985	05 25	15 46.47	-17 33.2					
1985	06 04	15 38.10	-17 15.5	2.021	3.007	163.3	5.5	17.0
1985	06 14	15 30.85	-17 01.8					
1985	06 24	15 25.35	-16 54.3	2.131	2.992	141.3	12.3	17.3
1985	07 04	15 22.03	-16 54.6					
1985	07 14	15 21.03	-17 03.1	2.319	2.977	121.3	17.0	17.6
1985	07 24	15 22.34	-17 19.8					
1985	08 03	15 25.85	-17 43.8	2.555	2.961	103.5	19.5	17.8

1982 OK a,e,i = 2.24, 0.21, 4 Elements MPC 8379

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 45.56	-15 09.5	1.914	2.263	-1.33	+4.6	19.3
1985	03 06	15 56.06	-15 16.8					
1985	03 16	16 04.60	-15 13.6	1.632	2.215	-1.62	+5.2	18.9
1985	03 26	16 10.74	-14 59.9					
1985	04 05	16 14.05	-14 36.3	1.381	2.165	-1.97	+6.1	18.4
1985	04 15	16 14.20	-14 03.9					
1985	04 25	16 10.97	-13 24.2	1.184	2.116	-2.35	+7.3	17.8
1985	05 05	16 04.56	-12 40.4					
1985	05 15	15 55.64	-11 56.7	1.064	2.067	-2.58	+8.3	17.3
1985	05 25	15 45.39	-11 18.5					
1985	06 04	15 35.37	-10 52.0	1.036	2.018	-2.52	+8.5	17.3
1985	06 14	15 27.06	-10 41.6					
1985	06 24	15 21.62	-10 50.0	1.093	1.972	-2.22	+7.7	17.6
1985	07 04	15 19.68	-11 17.0					
1985	07 14	15 21.38	-12 00.3	1.208	1.928	-1.91	+6.8	18.0
1985	07 24	15 26.60	-12 56.9					
1985	08 03	15 35.07	-14 03.0	1.355	1.887	-1.69	+5.9	18.3

1984 CO1 a,e,i = 3.00, 0.10, 9 Elements MPC 8795

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 08.27	-29 44.8	3.143	3.281	89.1	17.6	18.0
1985	03 06	16 14.54	-30 32.4					
1985	03 16	16 18.90	-31 16.9	2.852	3.275	106.3	16.9	17.7
1985	03 26	16 21.07	-31 57.8					
1985	04 05	16 20.86	-32 34.0	2.589	3.268	125.0	14.5	17.5
1985	04 15	16 18.16	-33 03.9					
1985	04 25	16 13.03	-33 24.9	2.384	3.259	145.0	10.2	17.2
1985	05 05	16 05.81	-33 34.8					
1985	05 15	15 57.09	-33 31.8	2.268	3.250	163.5	5.1	16.9
1985	05 25	15 47.69	-33 15.4					
1985	06 04	15 38.59	-32 47.2	2.260	3.240	161.9	5.6	16.9
1985	06 14	15 30.66	-32 10.9					
1985	06 24	15 24.56	-31 30.8	2.359	3.229	143.0	10.9	17.2
1985	07 04	15 20.74	-30 51.5					
1985	07 14	15 19.33	-30 16.4	2.541	3.217	123.5	15.3	17.4
1985	07 24	15 20.33	-29 48.0					
1985	08 03	15 23.60	-29 27.3	2.777	3.204	105.7	17.8	17.7

4805 P-L a,e,i = 2.39, 0.16, 2 Elements MPC 7943

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	15 42.11	-20 04.7	1.635	2.011	97.0	29.2	19.3
1985	03 06	15 55.00	-20 58.4					
1985	03 16	16 05.67	-21 44.1	1.419	2.007	111.3	27.5	18.9
1985	03 26	16 13.60	-22 22.1					
1985	04 05	16 18.31	-22 52.8	1.230	2.007	128.0	23.1	18.5
1985	04 15	16 19.43	-23 16.2					
1985	04 25	16 16.78	-23 31.3	1.089	2.013	147.7	15.5	18.1
1985	05 05	16 10.68	-23 37.1					
1985	05 15	16 02.00	-23 32.8	1.019	2.023	170.1	4.9	17.6
1985	05 25	15 52.15	-23 19.5					
1985	06 04	15 42.86	-23 00.7	1.039	2.037	165.5	7.2	17.8
1985	06 14	15 35.60	-22 41.5					
1985	06 24	15 31.36	-22 27.1	1.145	2.055	143.9	16.9	18.2
1985	07 04	15 30.59	-22 21.0					
1985	07 14	15 33.24	-22 24.4	1.317	2.077	125.3	23.5	18.7
1985	07 24	15 39.06	-22 36.9					
1985	08 03	15 47.67	-22 56.7	1.532	2.103	109.6	27.0	19.2

1981 GN1 a,e,i = 2.33, 0.13, 10 Elements MPC 7935

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	02 24	15 50.47	-13 13.8	1.976	2.307	-1.29	+2.4	17.4
1985	03 06	16 00.86	-12 48.8					
1985	03 16	16 09.21	-12 09.7	1.711	2.278	-1.51	+2.7	17.0
1985	03 26	16 15.11	-11 16.5					
1985	04 05	16 18.22	-10 10.5	1.478	2.249	-1.79	+3.3	16.6
1985	04 15	16 18.28	-08 53.7					
1985	04 25	16 15.22	-07 29.9	1.301	2.220	-2.07	+4.0	16.1
1985	05 05	16 09.32	-06 04.8					
1985	05 15	16 01.27	-04 45.9	1.204	2.192	-2.24	+4.2	15.8
1985	05 25	15 52.14	-03 41.5					
1985	06 04	15 43.28	-02 58.4	1.201	2.165	-2.18	+3.6	15.8
1985	06 14	15 35.91	-02 40.4					
1985	06 24	15 30.97	-02 47.9	1.283	2.140	-1.95	+2.9	16.1
1985	07 04	15 28.99	-03 18.3					
1985	07 14	15 30.10	-04 07.4	1.426	2.116	-1.68	+2.4	16.5
1985	07 24	15 34.20	-05 10.7					
1985	08 03	15 41.09	-06 23.7	1.603	2.095	-1.47	+2.1	16.8

(3055) 1978 TR3 a,e,i = 2.56, 0.11, 15 Elements MPC 8789

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 13.89	-32 23.4	2.684	2.819	87.5	20.5	18.4
1985	03 06	16 21.99	-33 42.4					
1985	03 16	16 28.02	-35 00.7	2.421	2.826	103.7	20.0	18.1
1985	03 26	16 31.56	-36 17.9					
1985	04 05	16 32.27	-37 32.8	2.180	2.832	121.3	17.6	17.9
1985	04 15	16 29.85	-38 42.8					
1985	04 25	16 24.19	-39 43.9	1.992	2.836	139.8	13.2	17.6
1985	05 05	16 15.55	-40 30.9					
1985	05 15	16 04.62	-40 58.9	1.884	2.838	156.1	8.3	17.3
1985	05 25	15 52.49	-41 04.5					
1985	06 04	15 40.59	-40 48.1	1.877	2.838	157.0	8.0	17.3
1985	06 14	15 30.22	-40 13.7					
1985	06 24	15 22.38	-39 27.9	1.970	2.837	141.5	12.9	17.5
1985	07 04	15 17.61	-38 37.9					
1985	07 14	15 16.03	-37 49.9	2.144	2.835	123.5	17.4	17.8
1985	07 24	15 17.53	-37 07.8					
1985	08 03	15 21.82	-36 33.8	2.368	2.831	106.6	20.1	18.1

(2999) 1981 CY a,e,i = 2.27, 0.11, 7 Elements MPC 8531

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 07.75	-16 15.7	2.054	2.307	91.8	25.4	18.5
1985	03 06	16 17.20	-16 41.8					
1985	03 16	16 24.34	-17 01.7	1.827	2.330	107.7	24.0	18.2
1985	03 26	16 28.79	-17 16.1					
1985	04 05	16 30.20	-17 26.2	1.621	2.353	126.0	20.1	17.9
1985	04 15	16 28.37	-17 32.6					
1985	04 25	16 23.25	-17 35.9	1.466	2.374	147.1	13.3	17.5
1985	05 05	16 15.24	-17 36.6					
1985	05 15	16 05.11	-17 35.3	1.392	2.395	170.4	4.0	17.1
1985	05 25	15 54.03	-17 33.3					
1985	06 04	15 43.39	-17 32.9	1.420	2.414	164.6	6.4	17.3
1985	06 14	15 34.39	-17 36.5					
1985	06 24	15 27.90	-17 46.4	1.547	2.431	142.1	14.9	17.7
1985	07 04	15 24.38	-18 04.1					
1985	07 14	15 23.87	-18 29.5	1.748	2.447	122.3	20.6	18.1
1985	07 24	15 26.24	-19 02.2					
1985	08 03	15 31.23	-19 41.0	1.993	2.462	105.2	23.4	18.5

1984 AB1 a,e,i = 2.24, 0.16, 4 Elements MPC 9020

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 11.10	-16 27.6	2.401	2.612	91.0	22.3	19.0
1985	03 06	16 19.11	-16 35.9					
1985	03 16	16 25.05	-16 37.2	2.129	2.608	107.6	21.3	18.7
1985	03 26	16 28.59	-16 32.1					
1985	04 05	16 29.43	-16 21.1	1.881	2.601	126.3	18.1	18.4
1985	04 15	16 27.38	-16 05.0					
1985	04 25	16 22.40	-15 44.6	1.686	2.591	147.4	12.1	18.0
1985	05 05	16 14.80	-15 21.3					
1985	05 15	16 05.21	-14 56.9	1.577	2.578	169.7	4.0	17.6
1985	05 25	15 54.61	-14 34.0					
1985	06 04	15 44.21	-14 15.8	1.574	2.563	163.4	6.5	17.7
1985	06 14	15 35.11	-14 05.1					
1985	06 24	15 28.18	-14 04.3	1.672	2.544	141.0	14.5	18.0
1985	07 04	15 23.94	-14 14.4					
1985	07 14	15 22.56	-14 35.2	1.845	2.524	120.9	20.2	18.3
1985	07 24	15 23.97	-15 05.6					
1985	08 03	15 28.01	-15 44.0	2.061	2.500	103.5	23.2	18.6

(3049) 1968 FH a,e,i = 3.12, 0.13, 2 Elements MPC 8787

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 01.65	-18 26.3	2.590	2.817	92.8	20.5	17.3
1985	03 06	16 09.72	-18 45.3					
1985	03 16	16 15.91	-18 58.1	2.308	2.800	109.4	19.6	17.0
1985	03 26	16 19.91	-19 05.1					
1985	04 05	16 21.51	-19 06.6	2.056	2.784	127.8	16.5	16.7
1985	04 15	16 20.56	-19 03.1					
1985	04 25	16 17.07	-18 54.7	1.862	2.770	148.4	11.0	16.3
1985	05 05	16 11.36	-18 42.3					
1985	05 15	16 03.98	-18 26.9	1.754	2.757	170.8	3.4	15.9
1985	05 25	15 55.76	-18 10.1					
1985	06 04	15 47.71	-17 54.6	1.751	2.746	165.7	5.2	16.0
1985	06 14	15 40.74	-17 42.9					
1985	06 24	15 35.60	-17 37.5	1.850	2.737	143.8	12.7	16.3
1985	07 04	15 32.76	-17 40.0					
1985	07 14	15 32.41	-17 50.8	2.027	2.730	124.1	18.0	16.6
1985	07 24	15 34.54	-18 09.7					
1985	08 03	15 39.03	-18 35.6	2.253	2.724	106.7	20.9	16.9

(3059) 1981 EF23 a,e,i = 2.27, 0.13, 2 Elements MPC 8790

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 12.33	-19 26.3	2.336	2.539	90.1	22.9	19.4
1985	03 06	16 21.02	-19 36.9					
1985	03 16	16 27.58	-19 40.0	2.079	2.548	106.6	22.0	19.1
1985	03 26	16 31.66	-19 35.9					
1985	04 05	16 32.96	-19 24.9	1.845	2.555	125.1	18.7	18.8
1985	04 15	16 31.30	-19 07.3					
1985	04 25	16 26.64	-18 43.4	1.662	2.560	146.2	12.6	18.4
1985	05 05	16 19.30	-18 13.9					
1985	05 15	16 09.95	-17 40.2	1.562	2.562	169.3	4.2	18.0
1985	05 25	15 59.57	-17 05.0					
1985	06 04	15 49.39	-16 31.9	1.567	2.562	165.5	5.7	18.1
1985	06 14	15 40.52	-16 04.6					
1985	06 24	15 33.82	-15 46.4	1.675	2.560	142.9	13.9	18.5
1985	07 04	15 29.79	-15 39.1					
1985	07 14	15 28.57	-15 43.0	1.859	2.555	122.7	19.6	18.8
1985	07 24	15 30.10	-15 57.4					
1985	08 03	15 34.19	-16 20.8	2.089	2.548	105.1	22.6	19.2

(3092) 6550 P-L a,e,i = 3.54, 0.11, 11 Elements MPC 8906

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	02 24	16 18.62	-29 16.2	3.737	3.816	87.0	15.0	18.6
1985	03 06	16 23.99	-29 59.0					
1985	03 16	16 27.69	-30 40.0	3.427	3.803	104.6	14.7	18.4
1985	03 26	16 29.50	-31 18.5					
1985	04 05	16 29.28	-31 53.8	3.144	3.789	123.5	12.7	18.2
1985	04 15	16 26.95	-32 24.6					
1985	04 25	16 22.57	-32 49.3	2.919	3.775	143.4	9.1	17.9
1985	05 05	16 16.38	-33 06.0					
1985	05 15	16 08.83	-33 13.2	2.784	3.760	162.5	4.6	17.7
1985	05 25	16 00.53	-33 10.1					
1985	06 04	15 52.23	-32 57.4	2.758	3.745	164.1	4.2	17.6
1985	06 14	15 44.67	-32 37.1					
1985	06 24	15 38.44	-32 12.0	2.843	3.729	145.9	8.8	17.8
1985	07 04	15 34.01	-31 45.6					
1985	07 14	15 31.60	-31 20.8	3.019	3.712	126.3	12.8	18.0
1985	07 24	15 31.28	-30 59.8					
1985	08 03	15 33.02	-30 44.1	3.255	3.695	107.9	15.1	18.2

1980 BV a,e,i = 2.64, 0.10, 13 Elements MPC 8676

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 27.91	-06 08.5	1.913	2.413	108.0	23.1	17.9
1985	03 26	16 32.79	-05 44.4					
1985	04 05	16 34.91	-05 16.8	1.710	2.427	125.1	19.7	17.5
1985	04 15	16 34.11	-04 48.9					
1985	04 25	16 30.36	-04 24.5	1.558	2.443	143.8	14.1	17.2
1985	05 05	16 23.99	-04 08.3					
1985	05 15	16 15.65	-04 04.2	1.484	2.461	160.8	7.7	17.0
1985	05 25	16 06.26	-04 15.5					
1985	06 04	15 57.00	-04 43.7	1.506	2.480	158.8	8.5	17.1
1985	06 14	15 48.92	-05 28.1					
1985	06 24	15 42.85	-06 26.5	1.625	2.499	141.1	14.8	17.4
1985	07 04	15 39.28	-07 36.1					
1985	07 14	15 38.39	-08 53.5	1.820	2.520	122.8	19.8	17.8
1985	07 24	15 40.12	-10 15.8					
1985	08 03	15 44.31	-11 40.5	2.063	2.541	106.2	22.5	18.1
1985	08 13	15 50.70	-13 05.5					
1985	08 23	15 59.06	-14 29.0	2.331	2.562	91.3	23.2	18.4

(3019) 1940 AC a,e,i = 2.86, 0.06, 3 Elements MPC 8672

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 36.10	-19 03.5	2.607	3.016	104.6	18.6	17.4
1985	03 26	16 39.64	-19 05.7					
1985	04 05	16 40.89	-19 03.6	2.351	3.018	123.3	16.1	17.1
1985	04 15	16 39.72	-18 57.6					
1985	04 25	16 36.12	-18 48.1	2.147	3.019	144.0	11.3	16.8
1985	05 05	16 30.33	-18 35.6					
1985	05 15	16 22.81	-18 20.8	2.028	3.020	166.3	4.6	16.5
1985	05 25	16 14.26	-18 04.9					
1985	06 04	16 05.56	-17 49.8	2.016	3.019	169.6	3.5	16.4
1985	06 14	15 57.59	-17 37.4					
1985	06 24	15 51.08	-17 30.0	2.112	3.018	147.4	10.5	16.8
1985	07 04	15 46.58	-17 29.1					
1985	07 14	15 44.32	-17 35.3	2.296	3.016	126.8	15.7	17.1
1985	07 24	15 44.39	-17 48.8					
1985	08 03	15 46.72	-18 08.8	2.536	3.014	108.4	18.6	17.3
1985	08 13	15 51.13	-18 34.4					
1985	08 23	15 57.45	-19 04.3	2.803	3.011	91.9	19.6	17.6

(3038) 1978 QB3 a,e,i = 2.44, 0.20, 5 Elements MPC 8782

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 37.05	-26 53.0	2.293	2.701	103.3	21.0	18.9
1985	03 26	16 42.31	-27 26.8					
1985	04 05	16 45.04	-27 57.4	2.008	2.665	121.1	18.8	18.6
1985	04 15	16 44.94	-28 24.1					
1985	04 25	16 41.78	-28 45.3	1.769	2.628	141.0	13.9	18.2
1985	05 05	16 35.61	-28 58.8					
1985	05 15	16 26.84	-29 01.9	1.607	2.589	162.5	6.7	17.7
1985	05 25	16 16.26	-28 52.8					
1985	06 04	16 05.11	-28 31.6	1.544	2.548	169.0	4.4	17.5
1985	06 14	15 54.71	-28 01.1					
1985	06 24	15 46.25	-27 26.0	1.586	2.505	147.7	12.5	17.8
1985	07 04	15 40.56	-26 52.1					
1985	07 14	15 38.02	-26 23.6	1.711	2.461	127.1	19.2	18.1
1985	07 24	15 38.69	-26 03.4					
1985	08 03	15 42.43	-25 52.3	1.887	2.416	109.0	23.4	18.3
1985	08 13	15 48.96	-25 49.8					
1985	08 23	15 58.00	-25 54.5	2.086	2.371	93.4	25.2	18.6

1981 ER14 a,e,i = 2.34, 0.22, 9 Elements MPC 7587

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		Mag.
1985	03 16	16 23.80	-33 14.8	1.668	2.151	-1.93	+3.3	18.4
1985	03 26	16 34.16	-34 34.3					
1985	04 05	16 41.98	-35 50.9	1.415	2.101	-2.43	+2.8	17.9
1985	04 15	16 46.68	-37 03.5					
1985	04 25	16 47.66	-38 09.4	1.202	2.053	-3.05	+3.4	17.4
1985	05 05	16 44.60	-39 03.3					
1985	05 15	16 37.60	-39 38.3	1.049	2.007	-3.59	+6.0	16.9
1985	05 25	16 27.45	-39 46.3					
1985	06 04	16 15.90	-39 22.6	0.974	1.964	-3.71	+9.8	16.6
1985	06 14	16 05.05	-38 28.9					
1985	06 24	15 56.91	-37 13.1	0.983	1.925	-3.33	+11.5	16.8
1985	07 04	15 52.82	-35 47.3					
1985	07 14	15 53.22	-34 22.2	1.062	1.891	-2.81	+9.8	17.1
1985	07 24	15 58.01	-33 04.8					
1985	08 03	16 06.78	-31 58.3	1.190	1.864	-2.40	+6.6	17.4
1985	08 13	16 18.94	-31 02.1					
1985	08 23	16 33.99	-30 14.1	1.346	1.842	-2.12	+3.3	17.7

(2983) 1981 RW2 a,e,i = 2.85, 0.06, 4 Elements MPC 8399

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 44.48	-23 34.9	2.499	2.877	102.1	19.8	17.7
1985	03 26	16 49.70	-23 37.5					
1985	04 05	16 52.59	-23 34.8	2.230	2.865	120.1	17.6	17.4
1985	04 15	16 52.96	-23 26.6					
1985	04 25	16 50.70	-23 12.8	2.007	2.853	140.1	13.1	17.1
1985	05 05	16 45.94	-22 53.0					
1985	05 15	16 39.07	-22 27.2	1.861	2.840	162.3	6.2	16.7
1985	05 25	16 30.74	-21 56.3					
1985	06 04	16 21.89	-21 22.0	1.817	2.828	174.4	2.0	16.4
1985	06 14	16 13.51	-20 47.2					
1985	06 24	16 06.48	-20 15.2	1.880	2.816	151.6	9.9	16.8
1985	07 04	16 01.51	-19 49.2					
1985	07 14	15 58.92	-19 30.9	2.033	2.803	130.6	16.0	17.1
1985	07 24	15 58.87	-19 21.4					
1985	08 03	16 01.30	-19 20.3	2.248	2.791	112.0	19.7	17.4
1985	08 13	16 06.01	-19 26.6					
1985	08 23	16 12.83	-19 38.8	2.493	2.780	95.5	21.2	17.7

(3058) Delmary a,e,i = 2.25, 0.16, 4 Elements MPC 8789

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 53.00	-20 48.2	2.229	2.601	100.5	22.1	19.8
1985	03 26	16 58.63	-20 41.4					
1985	04 05	17 01.72	-20 29.0	1.975	2.603	118.3	19.8	19.5
1985	04 15	17 01.99	-20 11.3					
1985	04 25	16 59.28	-19 48.6	1.762	2.602	138.5	14.9	19.1
1985	05 05	16 53.66	-19 21.3					
1985	05 15	16 45.53	-18 50.1	1.622	2.599	160.9	7.3	18.8
1985	05 25	16 35.62	-18 16.2					
1985	06 04	16 25.02	-17 42.3	1.582	2.592	173.3	2.6	18.5
1985	06 14	16 14.90	-17 11.3					
1985	06 24	16 06.35	-16 46.6	1.649	2.583	150.6	11.1	18.9
1985	07 04	16 00.15	-16 30.8					
1985	07 14	15 56.69	-16 25.2	1.804	2.572	129.4	17.8	19.2
1985	07 24	15 56.09	-16 29.7					
1985	08 03	15 58.24	-16 43.4	2.015	2.557	110.7	21.8	19.6
1985	08 13	16 02.91	-17 04.4					
1985	08 23	16 09.86	-17 31.1	2.253	2.540	94.5	23.4	19.8

(3048) 1964 TH1 a,e,i = 2.40, 0.15, 2 Elements MPC 8786

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 54.83	-21 54.6	2.115	2.488	100.0	23.2	18.1
1985	03 26	17 01.10	-21 55.5					
1985	04 05	17 04.67	-21 51.3	1.895	2.518	117.5	20.6	17.9
1985	04 15	17 05.30	-21 42.3					
1985	04 25	17 02.85	-21 28.9	1.712	2.546	137.5	15.5	17.6
1985	05 05	16 57.42	-21 10.9					
1985	05 15	16 49.47	-20 48.7	1.600	2.573	160.0	7.7	17.2
1985	05 25	16 39.78	-20 22.9					
1985	06 04	16 29.49	-19 55.4	1.586	2.599	175.5	1.7	16.9
1985	06 14	16 19.77	-19 29.0					
1985	06 24	16 11.66	-19 06.8	1.679	2.623	152.5	10.3	17.5
1985	07 04	16 05.89	-18 51.4					
1985	07 14	16 02.80	-18 44.2	1.861	2.645	131.3	16.8	17.8
1985	07 24	16 02.47	-18 45.6					
1985	08 03	16 04.77	-18 54.9	2.103	2.665	112.7	20.6	18.2
1985	08 13	16 09.45	-19 10.7					
1985	08 23	16 16.26	-19 31.4	2.376	2.683	96.3	22.0	18.5

1953 NB a,e,i = 2.76, 0.39, 7 Elements MPC 7015

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 42.87	-19 00.3	2.154	2.568	103.1	22.2	18.2
1985	03 26	16 50.13	-19 19.6					
1985	04 05	16 55.27	-19 36.7	1.828	2.483	119.9	20.5	17.8
1985	04 15	16 57.93	-19 52.5					
1985	04 25	16 57.72	-20 07.9	1.545	2.396	138.8	16.1	17.2
1985	05 05	16 54.45	-20 23.5					
1985	05 15	16 48.13	-20 39.4	1.331	2.308	160.3	8.5	16.6
1985	05 25	16 39.17	-20 55.1					
1985	06 04	16 28.54	-21 10.3	1.208	2.221	175.9	1.9	16.0
1985	06 14	16 17.58	-21 25.4					
1985	06 24	16 07.80	-21 41.9	1.184	2.136	152.1	12.9	16.3
1985	07 04	16 00.58	-22 02.0					
1985	07 14	15 56.76	-22 27.9	1.240	2.053	130.7	22.1	16.5
1985	07 24	15 56.80	-23 00.8					
1985	08 03	16 00.74	-23 40.6	1.346	1.974	112.7	28.3	16.8
1985	08 13	16 08.39	-24 25.9					
1985	08 23	16 19.50	-25 14.6	1.474	1.901	98.0	31.8	17.0

1984 CR a,e,i = 2.43, 0.18, 3 Elements MPC 9024

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 59.96	-23 19.1	2.544	2.867	98.6	20.1	19.3
1985	03 26	17 04.83	-23 35.1					
1985	04 05	17 07.33	-23 48.5	2.280	2.872	116.7	18.1	19.0
1985	04 15	17 07.22	-23 59.4					
1985	04 25	17 04.34	-24 07.3	2.057	2.875	136.9	13.8	18.7
1985	05 05	16 58.77	-24 11.6					
1985	05 15	16 50.84	-24 11.2	1.907	2.875	159.3	7.1	18.3
1985	05 25	16 41.18	-24 05.3					
1985	06 04	16 30.76	-23 54.1	1.859	2.872	176.2	1.3	17.9
1985	06 14	16 20.63	-23 39.0					
1985	06 24	16 11.80	-23 22.7	1.922	2.867	153.3	9.2	18.4
1985	07 04	16 05.05	-23 08.1					
1985	07 14	16 00.81	-22 57.8	2.080	2.859	131.7	15.4	18.7
1985	07 24	15 59.23	-22 53.4					
1985	08 03	16 00.29	-22 55.5	2.302	2.848	112.5	19.2	19.0
1985	08 13	16 03.79	-23 03.8					
1985	08 23	16 09.51	-23 17.3	2.555	2.835	95.4	20.8	19.3

1984 EB a,e,i = 3.11, 0.07, 14 Elements MPC 8896

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 53.37	-06 10.7	2.678	3.039	101.6	18.7	18.0
1985	03 26	16 57.74	-05 26.6					
1985	04 05	16 59.98	-04 38.3	2.443	3.053	118.8	16.7	17.7
1985	04 15	16 59.98	-03 48.1					
1985	04 25	16 57.74	-02 59.0	2.255	3.067	136.9	13.0	17.5
1985	05 05	16 53.40	-02 14.7					
1985	05 15	16 47.32	-01 38.9	2.143	3.082	153.6	8.4	17.3
1985	05 25	16 40.05	-01 15.3					
1985	06 04	16 32.31	-01 06.5	2.129	3.096	158.5	6.9	17.2
1985	06 14	16 24.87	-01 13.6					
1985	06 24	16 18.42	-01 36.5	2.218	3.110	145.5	10.7	17.4
1985	07 04	16 13.52	-02 13.5					
1985	07 14	16 10.51	-03 02.0	2.395	3.124	127.9	14.9	17.7
1985	07 24	16 09.54	-03 59.2					
1985	08 03	16 10.64	-05 02.4	2.633	3.138	110.7	17.6	18.0
1985	08 13	16 13.70	-06 09.1					
1985	08 23	16 18.58	-07 17.2	2.905	3.152	94.6	18.7	18.2

(3069) 1982 UG2 a,e,i = 2.35, 0.24, 2 Elements MPC 8896

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	Mag.
1985	03 16	16 46.52	-21 56.6	2.017	2.425	101.9	23.7	18.5
1985	03 26	16 54.58	-22 02.7					
1985	04 05	17 00.30	-22 02.9	1.726	2.373	118.5	21.8	18.1
1985	04 15	17 03.32	-21 57.8					
1985	04 25	17 03.26	-21 47.3	1.475	2.318	137.4	17.1	17.6
1985	05 05	16 59.96	-21 31.5					
1985	05 15	16 53.52	-21 10.1	1.290	2.263	159.1	9.2	17.0
1985	05 25	16 44.47	-20 43.5					
1985	06 04	16 33.92	-20 13.0	1.194	2.207	176.6	1.6	16.4
1985	06 14	16 23.26	-19 41.8					
1985	06 24	16 14.00	-19 13.9	1.196	2.152	153.1	12.4	16.8
1985	07 04	16 07.35	-18 53.7					
1985	07 14	16 04.04	-18 44.0	1.279	2.097	131.6	21.3	17.1
1985	07 24	16 04.33	-18 45.8					
1985	08 03	16 08.17	-18 58.5	1.414	2.043	113.5	27.1	17.4
1985	08 13	16 15.31	-19 19.8					
1985	08 23	16 25.44	-19 47.3	1.574	1.993	98.5	30.1	17.7