PRECISE ASTROMETRIC POSITIONS OF 40 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF ESO - LA SILLA IN 1987- 88

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SUMMARY: 543 precise astrometric positions of 40 minor planets, observed during two missions (January 1987 and September-October 1988) at La Silla were obtained. 21 new minor planets were discovered during these observational periods.
The measurements were made with Ascorecord of the Observatoire Royal de Belgique. The reductions were performed using the dependance method by means of five reference stars.

1. INTRODUCTION

Here we present the results of photographic observations of minor planets wich were carried out in February 1987 and September – October 1988 with Grand Prism Objective (f = 4m, d = 40 cm) at the European Southern Observatory, La Silla, Chile, by H. Debehogne.

543 precise positions are obtained and 21 new minor planets were discovered.

2. OBSERVATIONS, MEASUREMENTS AND REDUCTIONS

All minor planet observations were performed using the standard Kodak II-O plates with three exposures on each plate.

Five referent stars of SAO catalogue were selected per plate. All the plates were measured on the Ascorecord Zeiss machine by H. Debehogne at the Observatoire Royal de Belgique.

The reduction were performed using the dependance method by means of five reference stars.

The computation was carried out in the Uccle computing center using UNIVAC 9200.

3. RESULTS

The results of observations collecting during these missions are presented in two tables.

Table I contains respectively: the ordinal number of each position, the object designation, ordinal number of the plate, date in UT, the topocentric coordinates α and δ for the equinox 1950.0 and the residuals.

For the new asteroids the calculated positions only are presented.

All other data including the residuals of the referent stars and dependences can be obtained from the authors on request.

For six new asteroids orbital elements were calculated by V. Protitch-Benishek and D. Olevich on the basis of such observations.

TABLE 1

DATE III 1987

NO	OBJECT	PLAT	MON	DAY	ALPHA 1950 H M S			DELTA 1950 ° ' "		
1	175 Andromache	11456	9	13	132629	23 41	42 799	- 4	50	34 51
2	175 Andromache	11456	9	13	137848	23 41	42 548	- 4	50	35 82
3	175 Andromache	11456	9	13	143066	23 41	42 382	- 4	50	36 66
4	175 Andromache	12467	9	16	190617	23 39	23 821	- 5	0	56 00
5	175 Andromache	12467	9	16	195426	23 39	23 629	- 5	0	57 00
6	175 Andromache	12467	9	16	200348	23 39	23 366	- 5	0	58 00
7	175 Andromache	12476	9	17	157288	23 38	39 776	- 5	4	9 87
8	175 Andromache	12476	9	17	162140	23 38	39 560	- 5	4	10 88
9	175 Andromache	12476	9	17	167023	23 38	39 325	- 5	4	11 83
10	175 Andromache	12491	9	18	307983	23 37	46 935	- 5	7	58 79
11	175 Andromache	12491	9	13	312836	23 37	46 629	- 5	8	0 14
12	175 Andromache	12491	9	18	317719	23 37	46 466	- 5	8	1 00
13	175 Andromache	12526	9	24	239289	23 33	19 700	- 5	26	35 19
14	175 Andromache	12526	9	24	244791	23 33	19 462	- 5	26	36 00
15	175 Andromache	12526	9	24	249664	23 33	19 225	- 5	26	36 66
16	175 Andromache	11585	10	1	237152	23 29	25 421	- 5	45	7 38
17	175 Andromache	11585	10	1	242004	23 29	25 182	- 5	45	8 17
18	175 Andromache	11585	10	1	246887	23 29	25 000	- 5	45	9 00
19	555 Norma	11456	9	13	132629	23 42	28 211	- 4	37	57 74
20	555 Norma	11456	9	13	137848	23 42	27 984	- 4	37	59 10
21	555 Norma	11456	9	13	143066	23 42	27 773	- 4	38	0 46
22	555 Norma	12467	9	16	190617	23 40	18 257	- 4	53	32 80
23	555 Norma	12467	9	16	195496	23 40	18 047	- 4	53	34 49
24	555 Norma	12467	9	16	200348	23 40	17 851	- 4	53	35 76
25	555 Norma	12476	9	17	157288	23 39	36 970	- 4	58	27 22
26	555 Norma	12476	9	17	162140	23 39	36 751	- 4	58	28 70
27	555 Norma	12476	9	17	167023	23 39	36 518	- 4	58	30 00
28	555 Norma	12491	9	18	307983	23 38	47 455	- 5	4	16 53
29	555 Norma	12491	9	18	312836	23 38	47 246	- 5	4	18 20
30	555 Norma	12491	9	18	317719	23 38	47 044	- 5	4	20 02
31	555 Norma	12526	9	24	239289	23 34	33 908	- 5	33	47 23
32	555 Norma	12526	9	24	244791	23 34	33 693	- 5	33	48 64
33	555 Norma	12526	9	24	249664	23 34	33 484	- 5	33	50 03
34	555 Norma	12546	9	26	351746	23 33	4 869	- 5	43	55 69
35	555 Norma	12546	9	26	356529	23 33	4 635	- 5	43	57 06
36	555 Norma	12546	9	26	361450	23 33	4 421	- 5	43	58 43
37	555 Norma	12557	9	27	330902	23 32	24 081	- 5	48	33 54
38	555 Norma	12557	9	27	335754	23 32	23 876	- 5	48	34 89
39	555 Norma	12557	9	27	340637	23 32	23 672	- 5	48	36 25
40	555 Norma	11562	9	28	123260	23 31	51 561	- 5	52	15 56
41	555 Norma	11562	9	28	128113	23 31	51 351	- 5	52	17 11
42	555 Norma	11562	9	28	132996	23 31	51 123	- 5	52	18 64
43	555 Norma	11585	10	1	237152	23 29	45 003	- 6	6	23 09
44	555 Norma	11585	10	1	242004	23 29	44 791	- 6	6	24 52
45	555 Norma	11585	10	1	246887	23 29	44 607	- 6	6	25 92
46	990 Yerkes	12456	9	13	150360	23 41	34 972	- 2	31	6 09
47	990 Yerkes	12456	9	13	155212	23 41	34 669	- 2	31	5 76
48	990 Yerkes	12456	9	13	160065	23 41	34 405	- 2	31	5 49
49	1486 Marilyn	11467	9	16	176056	23 40	49 602	- 2	1	4 55
50	1486 Marilyn	11467	9	16	180908	23 40	49 347	- 2	1	6 30

DATE UT 1987

NO	OBJECT	PLATE	MON.	DAY	ALPHA 1950			DELTA 1950			
					H	M	S	°		′	″
51	1486 Marilyn	11467	9	16 .185760	23	40	49.078	− 2	1	8.00	
52	1486 Marilyn	11476	9	17 .142700	23	39	55.874	− 2	6	49.00	
53	1486 Marilyn	11476	9	17 .147583	23	39	55.615	− 2	6	51.11	
54	1486 Marilyn	11476	9	17 .152435	23	39	55.334	− 2	6	52.63	
55	1486 Marilyn	11491	9	18 .293396	23	38	51.310	− 2	13	39.01	
56	1486 Marilyn	11491	9	18 .298279	23	38	51.041	− 2	13	40.70	
57	1486 Marilyn	11491	9	18 .303131	23	38	50.761	− 2	13	42.32	
58	1486 Marilyn	11526	9	24 .225342	23	33	26.503	− 2	48	16.69	
59	1486 Marilyn	11526	9	24 .230194	23	33	26.247	− 2	48	18.48	
60	1486 Marilyn	11526	9	24 .235077	23	33	25.985	− 2	48	20.21	
61	2174 Asmodeus	11456	9	13 .132629	23	49	4.597	− 3	39	14.41	
62	2174 Asmodeus	11456	9	13 .137848	23	49	4.293	− 3	39	13.70	
63	2174 Asmodeus	11456	9	13 .143066	23	49	4.000	− 3	39	13.00	
64	2174 Asmodeus	12467	9	16 .190613	23	46	11.030	− 3	31	21.08	
65	2174 Asmodeus	12467	9	16 .195496	23	46	10.730	− 3	31	19.90	
66	2174 Asmodeus	12467	9	16 .200348	23	46	10.438	− 3	31	19.00	
67	2174 Asmodeus	12476	9	17 .157288	23	45	15.493	− 3	28	49.83	
68	2174 Asmodeus	12476	9	17 .162140	23	45	15.182	− 3	28	49.08	
69	2174 Asmodeus	12476	9	17 .167023	23	45	14.886	− 3	28	48.35	
70	2174 Asmodeus	11491	9	18 .293396	23	44	9.221	− 3	25	50.74	
71	2174 Asmodeus	11491	9	18 .298279	23	44	8.907	− 3	25	50.00	
72	2174 Asmodeus	11491	9	18 .303131	23	44	8.612	− 3	25	49.22	
73	2174 Asmodeus	12491	9	18 .307983	23	44	8.315	− 3	25	48.57	
74	2174 Asmodeus	12491	9	18 .312836	23	44	8.019	− 3	25	47.82	
75	2174 Asmodeus	12491	9	18 .317719	23	44	7.725	− 3	25	46.81	
76	2174 Asmodeus	11526	9	24 .225342	23	38	26.588	− 3	9	36.94	
77	2174 Asmodeus	11526	9	24 .230194	23	38	26.296	− 3	9	36.17	
78	2174 Asmodeus	11526	9	24 .235077	23	38	26.003	− 3	9	35.39	
79	2520 Novorossij	11456	9	13 .132629	23	46	13.994	− 3	57	27.69	
80	2520 Novorossij	1145?	9	13 .137848	23	46	13.747	− 3	57	28.77	
81	2520 Novorossij	1145.	9	13 .143066	23	46	13.501	− 3	57	29.82	
82	2520 Novorossij	12467	9	16 .190613	23	43	46.807	− 4	6	28.79	
83	2520 Novorossij	12467	9	16 .195496	23	43	46.578	− 4	6	29.54	
84	2520 Novorossij	12467	9	16 .200348	23	43	46.341	− 4	6	30.70	
85	2520 Novorossij	12476	9	17 .157288	23	43	0.006	− 4	9	18.30	
86	2520 Novorossij	12476	9	17 .162140	23	42	59.767	− 4	9	19.14	
87	2520 Novorossij	12476	9	17 .167023	23	42	59.512	− 4	9	20.15	
88	2520 Novorossij	12491	9	18 .307983	23	42	3.972	− 4	12	38.76	
89	2520 Novorossij	12491	9	18 .312836	23	42	3.714	− 4	12	39.84	
90	2520 Novorossij	12491	9	18 .317719	23	42	3.474	− 4	12	40.69	
91	2520 Novorossij	12526	9	24 .239929	23	37	18.037	− 4	29	18.61	
92	2520 Novorossij	12526	9	24 .244781	23	37	17.817	− 4	29	19.40	
93	2520 Novorossij	12526	9	24 .249664	23	37	17.576	− 4	29	20.12	
94	2520 Novorossij	12546	9	26 .351746	23	35	38.330	− 4	34	50.47	
95	2520 Novorossij	12546	9	26 .356599	23	35	38.107	− 4	34	51.44	
96	2520 Novorossij	12546	9	26 .361450	23	35	37.869	− 4	34	52.00	
97	2520 Novorossij	12557	9	27 .330902	23	34	52.766	− 4	37	19.22	
98	2520 Novorossij	12557	9	27 .335754	23	34	52.547	− 4	37	20.05	
99	2520 Novorossij	12557	9	27 .340637	23	34	52.341	− 4	37	20.91	
100	2520 Novorossij	11562	9	28 .123260	23	34	16.522	− 4	39	17.81	

NO	OBJECT	PLATE	MON	DAY	ALPHA 1950			DELTA 1950		
					H	M	S	O	'	''
101	2520 Novorossijs	11565	9	28	128113	23	34	16.275	- 4	39	18.49
102	2520 Novorossijs	11562	9	28	132996	23	34	16.072	- 4	39	19.49
103	2520 Novorossijs	11585	10	1	237152	23	31	56.292	- 4	46	33.74
104	2520 Novorossijs	11585	10	1	242004	23	31	56.065	- 4	46	34.66
105	2520 Novorossijs	11585	10	1	246887	23	31	55.841	- 4	46	35.61
106	3473 Sapporo	11467	9	16	176056	23	45	53.038	- 2	42	44.42
107	3473 Sapporo	11467	9	16	180908	23	45	52.772	- 2	42	46.23
108	3473 Sapporo	11467	9	16	185760	23	45	52.503	- 2	42	48.00
109	3473 Sapporo	11491	9	18	293396	23	43	56.447	- 2	55	49.00
110	3473 Sapporo	11491	9	18	298279	23	43	56.187	- 2	55	50.61
111	3473 Sapporo	11491	9	18	303131	23	43	55.919	- 2	55	52.24
112	1987 RK1	11456	9	13	132629	23	46	37.817	- 3	15	41.71
113	1987 RK1	11456	9	13	137848	23	46	37.500	- 3	15	44.36
114	1987 RK1	11456	9	13	143066	23	46	37.203	- 3	15	47.00
115	1987 RK1	12467	9	16	190613	23	43	44.463	- 3	42	14.61
116	1987 RK1	12467	9	16	195496	23	43	44.198	- 3	42	17.15
117	1987 RK1	12467	9	16	200348	23	43	43.908	- 3	42	19.53
118	1987 RK1	12476	9	17	157288	23	42	49.605	- 3	50	37.16
119	1987 RK1	12476	9	17	162140	23	42	49.324	- 3	50	39.77
120	1987 RK1	12476	9	17	167023	23	42	49.044	- 3	50	42.36
121	1987 RK1	12491	9	18	307983	23	41	43.849	- 4	0	30.47
122	1987 RK1	12491	9	18	312836	23	41	43.572	- 4	0	33.00
123	1987 RK1	12491	9	18	317719	23	41	43.296	- 4	0	35.41
124	1987 RK1	12526	9	24	239929	23	36	11.721	- 4	50	7.72
125	1987 RK1	12526	9	24	244781	23	36	11.452	- 4	50	10.17
126	1987 RK1	12526	9	24	249664	23	36	11.192	- 4	50	12.65
127	1987 RK1	11562	9	28	123260	23	32	44.535	- 5	20	39.34
128	1987 RK1	11562	9	28	128113	23	32	44.293	- 5	20	41.78
129	1987 RK1	11562	9	28	132996	23	32	44.042	- 5	20	44.00
130	1987 RK1	11585	10	1	237152	23	30	7.229	- 5	43	35.56
131	1987 RK1	11585	10	1	242004	23	30	6.983	- 5	43	37.65
132	1987 RK1	11585	10	1	246887	23	30	6.737	- 5	43	39.70
133	1987 RP1	12456	9	13	150360	23	44	51.430	- 1	22	21.30
134	1987 RP1	12456	9	13	155212	23	44	51.164	- 1	22	22.14
135	1987 RP1	12456	9	13	160065	23	44	50.901	- 1	22	22.89
136	1987 RP1	11467	9	16	176056	23	42	11.765	- 1	30	34.93
137	1987 RP1	11467	9	16	180908	23	42	11.482	- 1	30	35.80
138	1987 RP1	11467	9	16	185760	23	42	11.207	- 1	30	36.61
139	1987 RP1	11491	9	18	293396	23	40	18.060	- 1	36	29.79
140	1987 RP1	11491	9	18	298279	23	40	17.816	- 1	36	30.54
141	1987 RP1	11491	9	18	303131	23	40	17.561	- 1	36	31.26
142	1987 RP1	11526	9	24	225342	23	34	59.890	- 1	53	10.63
143	1987 RP1	11526	9	24	230194	23	34	59.629	- 1	53	11.25
144	1987 RP1	11526	9	24	235077	23	34	59.372	- 1	53	11.93
145	1987 RM1	11456	9	13	132629	23	48	5.313	- 4	21	50.77
146	1987 RM1	11456	9	13	137848	23	48	5.007	- 4	21	53.33
147	1987 RM1	11456	9	13	143066	23	48	4.702	- 4	21	56.00
148	1987 RM1	12467	9	16	190613	23	45	15.872	- 4	45	39.90
149	1987 RM1	12467	9	16	195496	23	45	15.602	- 4	45	41.93
150	1987 RM1	12467	9	16	200348	23	45	15.319	- 4	45	44.22

NO	OBJECT	PLATE	MON	DAY	ALPHA 1950				DELTA 1950		
					H	M	S		O	'	''
151	1987 RM1	12476	9	17	157289	23	44	22	002	- 4	53	9 92
152	1987 RM1	12476	9	17	162140	23	44	21	734	- 4	53	12 23
153	1987 RM1	12476	9	17	167023	23	44	21	460	- 4	53	14 52
154	1987 RM1	12491	9	18	307983	23	43	17	342	5	2	1 34
155	1987 RM1	12491	9	18	312836	23	43	17	070	5	2	3 53
156	1987 RM1	12491	9	18	317719	23	43	16	799	5	2	5 86
157	1987 RM1	12526	9	24	239929	23	37	48	466	- 5	46	24 34
158	1987 RM1	12526	9	24	244781	23	37	48	181	- 5	46	26 40
159	1987 RM1	12526	9	24	249664	23	37	47	911	- 5	46	28 57
160	1987 RM1	12539	9	26	103821	23	36	8	048	- 5	59	41 13
161	1987 RM1	12539	9	26	108673	23	36	7	796	- 5	59	43 30
162	1987 RM1	12539	9	26	113556	23	36	7	526	- 5	59	45 36
163	1987 RM1	11562	9	28	123260	23	34	21	235	- 6	13	36 15
164	1987 RM1	11562	9	28	128113	23	34	20	992	- 6	13	38 08
165	1987 RM1	11562	9	28	132996	23	34	20	738	- 6	13	40 09
166	1987 SV3	1246	9	16	190613	23	45	36	591	- 5	6	8 27
167	1987 SV3	1246	9	16	195496	23	45	36	266	5	6	8 25
168	1987 SV3	12467	9	16	200349	23	45	35	933	5	6	8 18
169	1987 SV3	12476	9	17	157289	23	44	32	647	5	5	7 59
170	1987 SV3	12476	9	17	162140	23	44	32	329	5	5	7 45
171	1987 SV3	12476	9	17	167023	23	44	31	991	5	5	7 34
172	1987 SV3	12491	9	18	307983	23	43	15	818	5	3	51 38
173	1987 SV3	12491	9	18	312836	23	43	15	492	5	3	51 18
174	1987 SV3	12491	9	18	317719	23	43	15	182	5	3	50 94
175	1987 SV3	12526	9	24	239929	23	36	46	843	- 4	56	9 27
176	1987 SV3	12526	9	24	244781	23	36	46	525	- 4	56	9 06
177	1987 SV3	12526	9	24	249664	23	36	46	218	4	56	8 75
178	1987 SV3	12546	9	26	351746	23	34	32	759	4	52	48 44
179	1987 SV3	12546	9	26	356598	23	34	32	451	4	52	47 87
180	1987 SV3	12546	9	26	361450	23	34	32	151	- 4	52	47 32
181	1987 SV3	12557	9	27	330902	23	33	32	019	- 4	51	6 46
182	1987 SV3	12557	9	27	335754	23	33	31	709	4	51	5 92
183	1987 SV3	12557	9	27	340637	23	33	31	404	4	51	5 32
184	1987 SV3	11562	9	28	123260	23	32	44	140	- 4	49	41 14
185	1987 SV3	11562	9	28	128113	23	32	43	828	- 4	49	41 02
186	1987 SV3	11562	9	28	132996	23	32	43	515	4	49	40 79
187	1987 SX11	11467	9	16	176056	23	41	50	821	2	37	3 64
188	1987 SX11	11467	9	16	180908	23	41	50	630	2	37	12 24
189	1987 SX11	11467	9	16	185760	23	41	50	443	2	37	20 85
190	1987 SX11	11476	9	17	142700	23	41	23	504	3	5	41 56
191	1987 SX11	11476	9	17	147583	23	41	23	345	- 3	5	50 19
192	1987 SX11	11476	9	17	152435	23	41	23	186	3	5	58 88
193	1987 SX11	12491	9	18	307983	23	40	49	341	- 3	40	30 26
194	1987 SX11	12491	9	18	312836	23	40	49	154	- 3	40	39 04
195	1987 SX11	12491	9	18	317719	23	40	48	979	- 3	40	47 89
196	1987 SX11	12539	9	26	103821	23	37	2	410	- 7	37	39 39
197	1987 SX11	12539	9	26	108673	23	37	2	246	7	37	48 29
198	1987 SX11	12539	9	26	113556	23	37	2	095	7	37	57 25
199	1987 RL1	11456	9	13	132629	23	47	48	456	- 3	22	51 86
200	1987 RL1	11456	9	13	137848	23	47	48	180	- 3	22	53 89

NO	OBJECT	PLATE	MON	DAY	ALPHA 1950 H M S	DELTA 1950 0 ' ''
201	1987 RL1	11456	9	13 143066	23 47 47 923	- 3 22 56.00
202	1987 RL1	12467	9	16 190613	23 45 21 756	- 3 41 44.22
203	1987 RL1	12467	9	16 195496	23 45 21 522	- 3 41 46.13
204	1987 RL1	12467	9	16 200348	23 45 21 291	- 3 41 48 08
205	1987 RL1	12491	9	18 307983	23 43 39 089	- 3 54 38.86
206	1987 RL1	12491	9	18 312836	23 43 38 838	- 3 54 40 91
207	1987 RL1	12491	9	18 317719	23 43 38 585	- 3 54 43.00
208	1987 RL1	12526	9	24 239929	23 38 58 349	- 4 29 10.65
209	1987 RL1	12526	9	24 244781	23 38 58 115	- 4 29 12.39
210	1987 RL1	12526	9	24 249664	23 38 57 883	- 4 29 13.93
211	1987 RL1	11562	9	28 123260	23 36 7 033	- 4 49 33.73
212	1987 RL1	11562	9	28 128113	23 36 6 817	- 4 49 35 21
213	1987 RL1	11562	9	28 132996	23 36 6 603	- 4 49 36.68
214	1987 RL1	11585	10	1 237152	23 34 0 241	- 5 4 10.01
215	1987 RL1	11585	10	1 242004	23 34 0 043	- 5 4 11 37
216	1987 RL1	11585	10	1 246887	23 33 59 840	- 5 4 12 94
217	1987 RN1	11456	9	13 132629	23 48 10 943	- 3 22 51.49
218	1987 RN1	11456	9	13 137848	23 48 10 717	- 3 22 53 48
219	1987 RN1	11456	9	13 143066	23 48 10 510	- 3 22 55.55
220	1987 RN1	12467	9	16 190613	23 46 2 477	- 3 42 29.67
221	1987 RN1	12467	9	16 195496	23 46 2 272	- 3 42 31 54
222	1987 RN1	12467	9	16 200348	23 46 2 068	- 3 42 33.36
223	1987 RN1	12491	9	18 307983	23 44 31 500	- 3 56 7.76
224	1987 RN1	12491	9	18 312836	23 44 31 277	- 3 56 9 70
225	1987 RN1	12491	9	18 317719	23 44 31 059	- 3 56 11.57
226	1987 RN1	12526	9	24 239929	23 40 16 854	- 4 33 33.48
227	1987 RN1	12526	9	24 244781	23 40 16 637	- 4 33 35.33
228	1987 RN1	12526	9	24 249664	23 40 16 417	- 4 33 37 05
229	1987 RN1	11562	9	28 123260	23 37 35 892	- 4 56 42 72
230	1987 RN1	11562	9	28 128113	23 37 35 701	- 4 56 44.39
231	1987 RN1	1156	9	28 132996	23 37 35 512	- 4 56 46.00
232	1987 RN1	11585	10	1 237152	23 35 33 176	- 5 14 3.93
233	1987 RN1	11585	10	1 242004	23 35 32 980	- 5 14 5.57
234	1987 RN1	11585	10	1 246887	23 35 32 782	- 5 14 7.15
235	1987 SW11	11467	9	16 176056	23 39 14 254	- 3 0 55.23
236	1987 SW11	11467	9	16 180908	23 39 14 035	- 3 0 57.45
237	1987 SW11	11467	9	16 185760	23 39 13 794	- 3 0 59.71
238	1987 SW11	11476	9	17 142700	23 38 29 470	- 3 8 13.89
239	1987 SW11	11476	9	17 147583	23 38 29 261	- 3 8 16.09
240	1987 SW11	11476	9	17 152435	23 38 29 023	- 3 8 18.26
241	1987 SW11	11491	9	18 293396	23 37 35 876	- 3 16 54.29
242	1987 SW11	11491	9	18 298279	23 37 35 622	- 3 16 56.55
243	1987 SW11	11491	9	18 303131	23 37 35 395	- 3 16 58.77
244	1987 SW11	12510	9	23 110779	23 33 55 303	- 3 52 41.14
245	1987 SW11	12510	9	23 115631	23 33 55 084	- 3 52 43.31
246	1987 SW11	12510	9	23 120483	23 33 54 852	- 3 52 45.45
247	1987 SW11	11539	9	26 088531	23 31 42 817	- 4 14 6.79
248	1987 SW11	11539	9	26 093414	23 31 42 608	- 4 14 8.69
249	1987 SW11	11539	9	26 098267	23 31 42 392	- 4 14 10.73
250	1987 SW11	11467	9	16 176056	23 45 31 911	- 3 0 55.00

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NO	OBJECT	PLATE	MON	DAY	ALPHA 1950 H M S			DELTA 1950 ° ' "			
251	1987 SU11	11466	9	16	180909	23 45 31	679	-	3	0	57.24
252	1987 SU11	11467	9	16	185760	23 45 31	444	-	3	0	59.77
253	1987 SU11	11491	9	18	293396	23 43 52	077	-	3	17	11.00
254	1987 SU11	11491	9	18	298279	23 43 51	847	-	3	17	13.00
255	1987 SU11	11491	9	18	303131	23 43 51	648	-	3	17	14.91
256	1987 SU11	12526	9	24	239929	23 39 14	081	-	4	1	54.91
257	1987 SU11	12526	9	24	244781	23 39 13	844	-	4	1	56.77
258	1987 SU11	12526	9	24	249664	23 39 13	622	-	4	1	58.66
259	1987 SU11	11562	9	28	123260	23 36 22	093	-	4	29	16.21
260	1987 SU11	11562	9	28	128113	23 36 21	903	-	4	29	18.15
261	1987 SU11	11562	9	28	132996	23 36 21	692	-	4	29	20.03
262	1935 SP1	12526	9	24	239929	23 37 13	603	-	5	41	39.85
263	1935 SP1	12526	9	24	244781	23 37 13	162	-	5	41	36.48
264	1935 SP1	12526	9	24	249664	23 37 12	718	-	5	41	33.19
265	1935 SP1	12546	9	26	351746	23 34 2	165	-	5	18	54.77
266	1935 SP1	12546	9	26	356598	23 34 1	703	-	5	18	51.61
267	1935 SP1	12546	9	26	361450	23 34 1	249	-	5	18	48.47
268	1935 SP1	12557	9	27	330902	23 32 35	627	-	5	8	20.14
269	1935 SP1	12557	9	27	335754	23 32 35	192	-	5	8	17.08
270	1935 SP1	12557	9	27	340637	23 32 34	774	-	5	8	13.94
271	1935 SP1	11562	9	28	123260	23 31 27	253	-	4	59	47.26
272	1935 SP1	11562	9	28	128113	23 31 26	821	-	4	59	44.31
273	1935 SP1	11562	9	28	132996	23 31 26	385	-	4	59	41.38
274	1935 SP1	11571	9	30	309397	23 29 21	873	-	4	36	9.16
275	1935 SP1	11571	9	30	314240	23 29 21	481	-	4	36	5.92
276	1935 SP1	11571	9	30	319022	23 29 21	091	-	4	36	2.75
277	1935 SP1	11573	9	30	292004	23 27 26	783	-	4	29	46.21
278	1935 SP1	11573	9	30	297223	23 27 26	346	-	4	29	42.86
279	1935 SP1	11573	10	1	002441	23 27 25	914	-	4	29	39.72
280	1935 SP1	11592	10	2	031586	23 26 3	141	-	4	17	32.28
281	1935 SP1	11592	10	2	035065	23 26 2	858	-	4	17	30.09
282	1935 SP1	11592	10	2	039544	23 26 2	572	-	4	17	27.49
283	1935 SP1	11594	10	2	096191	23 25 57	822	-	4	16	50.38
284	1935 SP1	11594	10	2	098267	23 25 57	664	-	4	16	49.29
285	1935 SP1	11594	10	2	100342	23 25 57	493	-	4	16	48.24
286	1935 SP1	11602	10	3	223969	23 24 29	340	-	4	4	39.85
287	1935 SP1	11602	10	3	226746	23 24 29	129	-	4	4	38.00
288	1935 SP1	11602	10	3	229523	23 24 28	921	-	4	4	36.22
289	1987 SV11	12526	9	24	239929	23 40 26	207	-	5	34	2.26
290	1987 SV11	12526	9	24	244781	23 40 25	231	-	5	34	3.50
291	1987 SV11	12526	9	24	249664	23 40 25	650	-	5	34	4.83
292	1987 SV11	12546	9	26	351746	23 38 24	773	-	5	42	53.38
293	1987 SV11	12546	9	26	356598	23 38 24	529	-	5	42	54.62
294	1987 SV11	12546	9	26	361450	23 38 24	264	-	5	42	55.89
295	1987 SV11	11562	9	28	123260	23 36 44	777	-	5	50	3.76
296	1987 SV11	11562	9	28	128113	23 36 44	513	-	5	50	5.22
297	1987 SV11	11562	9	28	132996	23 36 44	237	-	5	50	6.41
298	1987 SV11	11585	10	1	237152	23 33 52	220	-	6	1	59.00
299	1987 SV11	11585	10	1	242004	23 33 51	958	-	6	2	0.10
300	1987 SV11	11585	10	1	246887	23 33 51	701	-	6	2	1.12

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NO	OBJECT	PLATE	DATE UT 1987 MON. DAY		ALPHA 1950 H M S			DELTA 1950 O ' ''			
301	1987 SL12	11467	9	16.176056	23	39	6.757	- 1	42	25.59
302	1987 SL12	11467	9	16.180908	23	39	6.534	- 1	42	27.00
303	1987 SL12	11467	9	16.185760	23	39	6.316	- 1	42	28.16
304	1987 SL12	11491	9	18.293396	23	37	30.624	- 1	52	19.05
305	1987 SL12	11491	9	18.298279	23	37	30.405	- 1	52	20.52
306	1987 SL12	11491	9	18.303131	23	37	30.183	- 1	52	22.00
307	1987 SY11	12539	9	26.103821	23	38	27.813	- 6	58	38.70
308	1987 SY11	12539	9	26.108673	23	38	27.470	- 6	58	39.24
309	1987 SY11	12539	9	26.113556	23	38	27.249	- 6	58	39.55

TABLE 2

NO	OBJECT		PLATE	MON.	DAY	ALPHA 1950 H M S				DELTA 1950 ° ' "			
					DATE UT 1988								
1	220	Stephania	11183	1	22.300694	9	59	27.392	+	1	50	7.00
2	220	Stephania	11183	1	22.310417	9	59	26.931	+	1	50	7.89
3	220	Stephania	11833	1	22.320139	9	59	26.474	+	1	50	8.76
4	220	Stephania	11862	1	24.307639	9	57	53.555	+	1	52	41.84
5	220	Stephania	11862	1	24.315971	9	57	53.144	+	1	52	42.33
6	220	Stephania	11862	1	24.324306	9	57	52.740	+	1	52	42.94
7	220	Stephania	12900	1	27.343750	9	55	23.492	+	1	57	49.37
8	220	Stephania	12900	1	27.353472	9	55	23.015	+	1	57	50.77
9	220	Stephania	12931	1	29.353472	9	53	39.346	+	2	2	0.30
10	220	Stephania	12931	1	29.363194	9	53	38.872	+	2	2	1.15
11	536	Merapi	11863	1	24.348612	10	7	28.440	+	3	49	9.32
12	536	Merapi	11863	1	24.356945	10	7	28.067	+	3	49	9.55
13	536	Merapi	11863	1	24.365278	10	7	27.711	+	3	49	10.54
14	539	Pamina	11834	1	22.335764	10	8	50.894	+	3	46	45.14
15	539	Pamina	11834	1	22.347569	10	8	50.384	+	3	46	45.70
16	539	Pamina	11834	1	22.359375	10	8	49.876	+	3	46	46.16
17	539	Pamina	12887	1	26.337152	10	6	3.046	+	3	52	0.50
18	539	Pamina	12887	1	26.347569	10	6	2.613	+	3	52	1.55
19	539	Pamina	12916	1	28.352083	10	4	32.829	+	3	55	27.27
20	539	Pamina	12916	1	28.361805	10	4	32.413	+	3	55	28.08
21	539	Pamina	12945	1	30.351389	10	2	59.914	+	3	59	21.71
22	539	Pamina	12945	1	30.361111	10	2	59.388	+	3	59	23.00
23	970	Primula	11769	1	17.336111	9	34	55.596	+14	27	3.00
24	970	Primula	11769	1	17.345833	9	34	55.054	+14	27	3.85
25	970	Primula	11769	1	17.355556	9	34	54.524	+14	27	4.77
26	970	Primula	11780	1	18.305555	9	34	3.952	+14	28	48.29
27	970	Primula	11780	1	18.315277	9	34	3.408	+14	28	49.18
28	970	Primula	11806	1	20.313194	9	32	12.953	+14	32	40.87
29	970	Primula	11806	1	20.322916	9	32	12.411	+14	32	42.00
30	970	Primula	11831	1	22.242361	9	30	22.127	+14	36	42.73
31	970	Primula	11831	1	22.252083	9	30	21.535	+14	36	43.61
32	970	Primula	12944	1	30.306250	9	22	3.351	+14	55	32.05
33	970	Primula	12944	1	30.315971	9	22	2.716	+14	55	33.47
34	1181	Lilith	11732	1	14.215278	10	1	31.109	+	4	36	20.93
35	1181	Lilith	11732	1	14.225000	10	1	30.734	+	4	36	20.60
36	1181	Lilith	11732	1	14.234722	10	1	30.494	+	4	36	20.44
37	1181	Lilith	11745	1	15.267361	10	0	56.597	+	4	36	1.37
38	1181	Lilith	11745	1	15.277083	10	0	56.190	+	4	36	1.19
39	1181	Lilith	11745	1	15.286805	10	0	55.865	+	4	36	1.01
40	1315	Bronislawa	11833	1	22.300694	9	57	6.040	+	2	15	48.19
41	1315	Bronislawa	11833	1	22.310417	9	57	5.691	+	2	15	49.01
42	1315	Bronislawa	11833	1	22.320139	9	57	5.705	+	2	15	49.61
43	1315	Bronislawa	11848	1	23.320139	9	56	30.767	+	2	17	2.13
44	1315	Bronislawa	11848	1	23.328472	9	56	30.661	+	2	17	3.10
45	1315	Bronislawa	11848	1	23.336805	9	56	30.765	+	2	17	4.02
46	1315	Bronislawa	11862	1	24.307639	9	55	56.202	+	2	18	21.80
47	1315	Bronislawa	11862	1	24.315971	9	55	55.900	+	2	18	22.32
48	1315	Bronislawa	11862	1	24.324306	9	55	55.587	+	2	18	23.20
49	1315	Bronislawa	12875	1	25.340272	9	55	19.886	+	2	19	53.38
50	1315	Bronislawa	12875	1	25.350000	9	55	19.510	+	2	19	54.22

NO	OBJECT		PLATE	MON	DAY	ALPHA 1950			DELTA 1950		
						H	M	S	°	'	''
51	1315	Bronislawa	12900	1	27.343750	9	54	3.983	+ 2	23	14.47
52	1315	Bronislawa	12900	1	27.353472	9	54	3.621	+ 2	23	15.46
53	1315	Bronislawa	12931	1	29.353472	9	52	45.971	+ 2	27	8.44
54	1315	Bronislawa	12931	1	29.363194	9	52	45.507	+ 2	27	9.62
55	1905	Ambartsumia	11818	1	21.277082	9	44	48.991	+ 9	26	31.76
56	1905	Ambartsumia	11818	1	21.286806	9	44	48.492	+ 9	26	33.89
57	1905	Ambartsumia	11818	1	21.296528	9	44	47.977	+ 9	26	35.94
58	1905	Ambartsumia	11832	1	22.277082	9	44	1.842	+ 9	30	3.22
59	1905	Ambartsumia	11832	1	22.286806	9	44	1.317	+ 9	30	5.53
60	1905	Ambartsumia	11861	1	24.280556	9	42	23.104	+ 9	37	33.77
61	1905	Ambartsumia	11861	1	24.298889	9	42	22.682	+ 9	37	36.19
62	1905	Ambartsumia	11861	1	24.297222	9	42	22.236	+ 9	37	38.08
63	1905	Ambartsumia	11897	1	26.315971	9	40	37.071	+ 9	45	51.66
64	1905	Ambartsumia	11897	1	26.325695	9	40	36.576	+ 9	45	54.08
65	1905	Ambartsumia	11916	1	28.331249	9	38	47.077	+ 9	54	37.00
66	1905	Ambartsumia	11916	1	28.340973	9	38	46.552	+ 9	54	39.83
67	1905	Ambartsumia	11945	1	30.330555	9	36	53.608	+10	3	48.52
68	1905	Ambartsumia	11945	1	30.340279	9	36	53.010	+10	3	51.76
69	2173	Maresjev	11833	1	22.300694	9	59	33.458	+ 1	25	43.48
70	2173	Maresjev	11833	1	22.310417	9	59	33.129	+ 1	25	45.76
71	2173	Maresjev	11833	1	22.320139	9	59	32.801	+ 1	25	48.07
72	2714	Matti	11860	1	24.260416	9	36	30.612	+14	25	10.17
73	2714	Matti	11860	1	24.270140	9	36	30.083	+14	25	14.07
74	2714	Matti	12886	1	26.293751	9	34	11.625	+14	38	58.55
75	2714	Matti	12886	1	26.303473	9	34	41.092	+14	39	1.73
76	2714	Matti	12915	1	28.307638	9	32	49.535	+14	52	55.51
77	2714	Matti	12915	1	28.317362	9	32	48.966	+14	52	58.69
78	3047	Goethe	11769	1	17.336111	9	37	26.834	+14	24	2.21
79	3047	Goethe	11769	1	17.345833	9	37	26.465	+14	24	4.00
80	3047	Goethe	11769	1	17.355556	9	37	26.045	+14	24	5.56
81	3047	Goethe	11780	1	18.305555	9	36	45.474	+14	26	54.00
82	3047	Goethe	1175?	1	18.315277	9	36	45.094	+14	26	55.20
83	3047	Goethe	1180.	1	20.313194	9	35	16.024	+14	33	4.10
84	3047	Goethe	11806	1	20.322916	9	35	15.580	+14	33	6.01
85	3047	Goethe	11831	1	22.242341	9	33	45.769	+14	39	18.55
86	3047	Goethe	11831	1	22.252083	9	33	45.277	+14	39	20.25
87	3047	Goethe	11860	1	24.260416	9	32	6.981	+14	46	6.58
88	3047	Goethe	11860	1	24.270140	9	32	6.477	+14	46	8.60
89	3047	Goethe	12886	1	26.293751	9	30	23.548	+14	53	12.00
90	3047	Goethe	12886	1	26.303473	9	30	23.019	+14	53	14.01
91	3047	Goethe	12915	1	28.307638	9	28	37.709	+15	0	25.75
92	3047	Goethe	12915	1	28.317362	9	28	37.256	+15	0	27.91
93	3047	Goethe	12944	1	30.306250	9	26	49.990	+15	7	43.81
94	3047	Goethe	12944	1	30.315971	9	26	49.476	+15	7	46.00
95		1988BM3	11769	1	17.336111	9	35	14.510	+13	41	36.79
96		1988BM3	11769	1	17.345833	9	35	14.153	+13	41	38.05
97		1988BM3	11769	1	17.355556	9	35	13.809	+13	41	39.38
98		1988BM3	11780	1	18.305555	9	34	37.674	+13	43	17.07
99		1988BM3	11780	1	18.315277	9	34	37.257	+13	43	18.21
100		1988BM3	11806	1	20.313194	9	33	15.431	+13	47	8.29

NO	OBJECT	PLATE	MON	DAY	ALPHA 1950 H M S	DELTA 1950 O ' ''
101	1988BM3	11806	1	20 322916	9 33 15 039	+13 47 9 64
102	1988BM3	11831	1	22 242361	9 31 50 022	+13 51 20 85
103	1988BM3	11831	1	22 252083	9 31 49 540	+13 51 22 06
104	1988BM3	11860	1	24 260416	9 30 13 790	+13 56 13 56
105	1988BM3	11860	1	24 270140	9 30 13 305	+13 56 15 11
106	1988BM3	12886	1	26 293751	9 28 30 579	+14 1 35 07
107	1988BM3	12886	1	26 303473	9 28 30 086	+14 1 36 59
108	1988BM3	12915	1	28 307638	9 26 42 950	+14 7 16 84
109	1988BM3	12915	1	28 317362	9 26 42 454	+14 7 18 25
110	1988BM3	12944	1	30 306250	9 24 51 451	+14 13 15 42
111	1988BM3	12944	1	30 315971	9 24 50 858	+14 13 17 41
112	1988BD2	11769	1	17 336111	9 38 3 308	+13 23 11 74
113	1988BD2	11769	1	17 345833	9 38 2 885	+13 23 16 12
114	1988BD2	11769	1	17 355556	9 38 2 490	+13 23 20 45
115	1988BD2	11780	1	18 305555	9 37 23 540	+13 30 25 02
116	1988BD2	11780	1	18 315277	9 37 23 160	+13 30 28 74
117	1988BD2	11806	1	20 313194	9 35 56 467	+13 45 47 35
118	1988BD2	11806	1	20 322916	9 35 56 004	+13 45 51 34
119	1988BD2	11831	1	22 242361	9 34 27 611	+14 1 4 35
120	1988BD2	11831	1	22 252083	9 34 27 149	+14 1 8 45
121	1988BD2	11860	1	24 260416	9 32 49 228	+14 17 32 48
122	1988BD2	11860	1	24 270140	9 32 48 758	+14 17 37 25
123	1988BD2	12886	1	26 293751	9 31 5 281	+14 34 32 61
124	1988BD2	12886	1	26 303473	9 31 4 752	+14 34 37 88
125	1988BD2	12915	1	28 307638	9 29 18 273	+14 51 42 23
126	1988BD2	12915	1	28 317362	9 29 17 733	+14 51 46 80
127	1988BD2	12944	1	30 306250	9 27 28 680	+15 9 0 81
128	1988BD2	12944	1	30 315971	9 27 28 126	+15 9 3 90
129	1988BL4	11818	1	21 277082	9 44 23 732	+ 9 14 34 47
130	1988BL4	11818	1	21 286806	9 44 23 323	+ 9 14 35 74
131	1988BL4	11818	1	21 296528	9 44 22 936	+ 9 14 37 00
132	1988BL4	11832	1	22 277082	9 43 44 421	+ 9 16 31 26
133	1988BL4	11832	1	22 286806	9 43 44 054	+ 9 16 32 64
134	1988BL4	11861	1	24 280556	9 42 23 022	+ 9 20 45 03
135	1988BL4	11861	1	24 288889	9 42 22 677	+ 9 20 46 05
136	1988BL4	11861	1	24 297222	9 42 22 327	+ 9 20 47 16
137	1988BL4	11887	1	26 315971	9 40 56 767	+ 9 25 25 00
138	1988BL4	11887	1	26 325695	9 40 56 557	+ 9 25 26 32
139	1988BL4	11916	1	28 331249	9 39 28 682	+ 9 30 23 30
140	1988BL4	11916	1	28 340973	9 39 28 271	+ 9 30 24 73
141	1988BL4	11945	1	30 330555	9 37 58 617	+ 9 35 38 48
142	1988BL4	11945	1	30 340277	9 37 58 179	+ 9 35 40 00
143	1988BK4	11818	1	21 277082	9 43 38 311	+ 9 43 1 00
144	1988BK4	11818	1	21 286806	9 43 37 946	+ 9 43 5 73
145	1988BK4	11818	1	21 296528	9 43 37 604	+ 9 43 11 00
146	1988BK4	11832	1	22 277082	9 43 2 815	+ 9 51 38 78
147	1988BK4	11832	1	22 286806	9 43 2 498	+ 9 51 44 47
148	1988BK4	11861	1	24 280556	9 41 49 092	+10 9 22 17
149	1988BK4	11861	1	24 288882	9 41 48 769	+10 9 26 72
150	1988BK4	11861	1	24 297222	9 41 48 467	+10 9 31 16

NO	OBJECT	PLATE	MON	DAY	ALPHA 1950 H M S			DELTA 1950 ° ' ''			
151	1988BK4	1188?	1	26 315971	9	40	30 517	+10	27	51 48
152	1988BK4	1181	1	26 325695	9	40	30 120	+10	27	56 41
153	1988BK4	11916	1	28 331249	9	39	9 646	+10	46	34 29
154	1988BK4	11916	1	28 340273	9	39	9 215	+10	46	39 70
155	1988BK4	11945	1	30 330555	9	37	46 622	+11	5	31 90
156	1988BK4	11945	1	30 340279	9	37	46 311	+11	5	37 09
157	1988AH5	11732	1	14 215278	9	59	55 781	+ 3	40	22 92
158	1988AH5	11732	1	14 225000	9	59	55 508	+ 3	40	21 02
159	1988AH5	11732	1	14 234722	9	59	55 256	+ 3	40	19 20
160	1988AH5	11745	1	15 267361	9	59	25 604	+ 3	37	26 21
161	1988AH5	11745	1	15 277083	9	59	25 298	+ 3	37	24 67
162	1988AH5	11745	1	15 286805	9	59	25 012	+ 3	37	23 06
163	1988AH5	11848	1	23 320139	9	54	32 139	+ 3	21	49 79
164	1988AH5	11848	1	23 328472	9	54	31 756	+ 3	21	49 02
165	1988AH5	11848	1	23 336805	9	54	31 377	+ 3	21	48 24
166	1988AH5	12875	1	25 340279	9	53	2 250	+ 3	19	51 47
167	1988AH5	12875	1	25 350000	9	53	1 817	+ 3	19	51 00
168	1988AH5	12900	1	27 343750	9	51	27 462	+ 3	18	39 75
169	1988AH5	12900	1	27 353472	9	51	26 993	+ 3	18	39 41
170	1988AH5	12931	1	29 353472	9	49	47 102	+ 3	18	13 93
171	1988AH5	12931	1	29 363194	9	49	46 524	+ 3	18	13 77
172	1988BO4	11833	1	22 300694	10	0	35 989	+ 2	26	54 58
173	1988BO4	11833	1	22 310417	10	0	35 607	+ 2	26	54 41
174	1988BO4	11833	1	22 320139	10	0	35 237	+ 2	26	54 21
175	1988BO4	11848	1	23 320139	9	59	57 770	+ 2	26	39 34
176	1988BO4	11848	1	23 328472	9	59	57 442	+ 2	26	39 15
177	1988BO4	11848	1	23 336805	9	59	57 122	+ 2	26	39 24
178	1988BO4	11862	1	24 307639	9	59	19 811	+ 2	26	32 68
179	1988BO4	11862	1	24 315971	9	59	19 477	+ 2	26	32 65
180	1988BO4	11862	1	24 324306	9	59	19 141	+ 2	26	32 61
181	1988BO4	12875	1	25 340279	9	58	39 053	+ 2	26	34 62
182	1988BO4	12875	1	25 350000	9	58	38 668	+ 2	26	34 64
183	1988BO4	12900	1	27 343750	9	57	17 188	+ 2	27	1 17
184	1988BO4	12900	1	27 353472	9	57	16 768	+ 2	27	1 27
185	1988BO4	12931	1	29 353472	9	55	51 550	+ 2	27	59 08
186	1988BO4	12931	1	29 363194	9	55	51 102	+ 2	27	59 26
187	1988BP4	11834	1	22 335764	10	10	19 418	+ 4	43	0 27
188	1988BP4	11834	1	22 347569	10	10	18 964	+ 4	43	1 19
189	1988BP4	11834	1	22 359375	10	10	18 507	+ 4	43	2 50
190	1988BP4	11863	1	24 348612	10	8	58 737	+ 4	46	42 26
191	1988BP4	11863	1	24 356945	10	8	58 376	+ 4	46	43 21
192	1988BP4	11863	1	24 365278	10	8	58 019	+ 4	46	44 29
193	1988BP4	12887	1	26 337152	10	7	34 010	+ 4	50	57 61
194	1988BP4	12887	1	26 347569	10	7	33 588	+ 4	50	59 27
195	1988BP4	12916	1	29 352083	10	6	3 483	+ 4	55	52 50
196	1988BP4	12916	1	29 361805	10	6	3 004	+ 4	55	53 94
197	1988BP4	1294	1	30 351389	10	4	29 352	+ 5	1	20 73
198	1988BP4	129	1	30 361111	10	4	28 881	+ 5	1	23 00
199	1981UV1	11769	1	17 336111	9	38	50 204	+14	35	34 76
200	1991UV1	11769	1	17 345833	9	38	19 774	+14	35	36 50

NO	OBJECT	PLATE	DATE UT 1988 MON.	DAY	ALPHA 1950 H M S	DELTA 1950 ° ' ''
201	1981UV1	11769	1	17 355556	9 38 49.367	+14 35 38.90
202	1981UV1	11780	1	18 305555	9 38 11.489	+14 38 32.80
203	1981UV1	11780	1	18 315277	9 38 11.054	+14 38 35.02
204	1981UV1	11806	1	20 313194	9 36 48.158	+14 44 54.05
205	1981UV1	11806	1	20 322916	9 36 47.759	+14 44 55.87
206	1981UV1	11831	1	22 242361	9 35 24.571	+14 51 15.36
207	1981UV1	11831	1	22 252083	9 35 24.154	+14 51 16.92
208	1981UV1	11860	1	24 260416	9 33 53.509	+14 58 7.64
209	1981UV1	11860	1	24 270140	9 33 53.047	+14 58 9.54
210	1981UV1	12886	1	26 293751	9 32 18.538	+15 5 14.01
211	1981UV1	12886	1	26 303473	9 32 18.044	+15 5 16.04
212	1981UV1	12915	1	28 307639	9 30 41.630	+15 12 26.00
213	1981UV1	12915	1	28 317362	9 30 41.138	+15 12 28.12
214	1981UV1	12944	1	30 306250	9 29 3.116	+15 19 41.86
215	1981UV1	12944	1	30 315971	9 29 2.579	+15 19 43.93
216	1988BN3	11761	1	17 336111	9 39 35.960	+14 29 19.08
217	1988BN3	11761	1	17 345833	9 39 35.613	+14 29 20.74
218	1988BN3	11769	1	17 355556	9 39 35.257	+14 29 22.38
219	1988BN3	12886	1	26 293751	9 31 59.564	+15 12 37.44
220	1988BN3	12886	1	26 303473	9 31 59.027	+15 12 42.25
221	1978GR3	11780	1	18 305555	9 35 9.137	+13 4 12.00
222	1978GR3	11780	1	18 315277	9 35 8.716	+13 4 13.64
223	1978GR3	11806	1	20 313194	9 33 52.692	+13 10 39.87
224	1978GR3	11806	1	20 322916	9 33 52.289	+13 10 41.69
225	1978GR3	11831	1	22 242361	9 32 35.452	+13 17 12.61
226	1978GR3	11831	1	22 252083	9 32 35.042	+13 17 14.56
227	1978GR3	11860	1	24 260416	9 31 10.659	+13 24 24.22
228	1978GR3	11860	1	24 270140	9 31 10.262	+13 24 26.26
229	1978GR3	12886	1	26 293751	9 29 41.573	+13 31 56.63
230	1978GR3	12886	1	26 303473	9 29 41.150	+13 31 58.90
231	1978GR3	12915	1	28 307639	9 28 10.297	+13 39 40.20
232	1978GR3	12915	1	28 317362	9 28 9.870	+13 39 42.66
233	1978GR3	12944	1	30 306250	9 26 36.984	+13 47 34.22
234	1978GR3	12944	1	30 315971	9 26 36.554	+13 47 36.54

АСТРОМЕТРИЈСКИ ПОЛОЖАЈИ 40 МАЛИХ ПЛАНЕТА СНИМЉЕНИХ СА ЕСО – ЛА СИЛА 1987-1988

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У току фебруара 1987. године и периода септембар-октобар 1988. године снимљено је 40 малих планета и изведено 543 прецизних положаја са опсерваторије ЕСО, Ла Сила у Чилеу. Том приликом откривени су нови астероиди, укупно 21. За шест нових В. Протић-Бенишек и Д. Олевић су извели орбиталне елементе.