

183 PHOTOGRAPHIC POSITIONS OF NINE MINOR PLANETS OBTAINED
AT ESO-LA SILLA IN FEBRUARY 1986

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SUMMARY: Precise astrometric positions of minor planets: 54 Aleksandra, 673 Edda, 809 Lundia, 883 Matterania, 1352 Wawel, 1986 CT1, 1986 CS1, 1986 CZ1 and E 3678 are presented in this paper. Photographic observations of minor planets were carried out in February 1986 with the Grand Prism Objective (GPO), 40/400 cm, at the European Southern Observatory, La Silla, Chile, by H. Debehogne.

1. INTRODUCTION

During his mission in February 1986, H. Debehogne obtained 183 precise astrometric positions of nine minor planets with Grand Prism Objective 40/400 cm at the European Southern Observatory, La Silla.

Four new objects were discovered and the provisional designations are given by the Minor Planet Center. V. Protić-Benišek and D. Olević have used these positions for the orbit calculations.

2. OBSERVATIONS, MEASUREMENTS AND REDUCTIONS

The minor planet observations were performed by using Kodak II-O plates, which were very well sensibilised in the Optical Laboratory of La Silla.

Three exposures on each plate were taken.

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

Method of dependences was used to obtain the precise positions and the Least Square Method was applied to derive the residuals of the star positions. The computations were performed at the Uccle Observatory with the UNIVAC 9200 computer by using the programme defined by H. Debehogne.

3. RESULTS

The results of observations collected during this mission are presented in two Tables.

Table I contains, respectively: the ordinal number of each position, the object designation, ordinal number of the plate, data in UT, the topoce-

TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1986		ALPHA 1950			DELTA 1950			RESIDUALS		
			MON.	DAY	H	M	S	O	'	''	M	'	
1	54 ALEXANDRA	2263	2	6.110764	9	56	19.121	+08	56	35.63	+	.1	0
2	54 ALEXANDRA	2263	2	6.115625	9	56	18.861	+08	56	35.90	+	.1	0
3	54 ALEXANDRA	2263	2	6.120486	9	56	18.601	+08	56	36.28	+	.1	0
4	54 ALEXANDRA	2290	2	9.170486	9	53	30.092	+09	01	45.65	-	.0	0
5	54 ALEXANDRA	2290	2	9.175347	9	53	29.811	+09	01	46.27	-	.0	0
6	54 ALEXANDRA	2290	2	9.180208	9	53	29.543	+09	01	46.82	-	.0	0
7	54 ALEXANDRA	2301	2	10.240625	9	52	30.071	+09	03	38.69	-	.0	0
8	54 ALEXANDRA	2301	2	10.245486	9	52	29.786	+09	03	39.11	-	.0	0
9	54 ALEXANDRA	2301	2	10.250347	9	52	29.517	+09	03	39.60	-	.0	0
10	54 ALEXANDRA	2309	2	11.234375	9	51	34.076	+09	05	27.66	-	.0	0
11	54 ALEXANDRA	2309	2	11.239236	9	51	33.792	+09	05	28.05	-	.0	0
12	54 ALEXANDRA	2309	2	11.244097	9	51	33.518	+09	05	28.31	-	.0	0
13	54 ALEXANDRA	2323	2	12.265625	9	50	35.553	+09	07	24.81	-	.0	0
14	54 ALEXANDRA	2323	2	12.270486	9	50	35.265	+09	07	25.44	-	.0	0
15	54 ALEXANDRA	2323	2	12.275347	9	50	34.970	+09	07	25.60	-	.0	0
16	54 ALEXANDRA	2335	2	13.266666	9	49	38.638	+09	09	18.59	-	.0	0
17	54 ALEXANDRA	2335	2	13.271180	9	49	38.371	+09	09	19.07	-	.0	0
18	54 ALEXANDRA	2335	2	13.275694	9	49	38.142	+09	09	19.29	-	.0	0
19	54 ALEXANDRA	2345	2	14.252083	9	48	42.494	+09	11	12.28	-	.0	0
20	54 ALEXANDRA	2345	2	14.256250	9	48	42.274	+09	11	12.70	-	.0	0
21	54 ALEXANDRA	2355	2	15.268055	9	47	44.471	+09	13	11.92	-	.0	0
22	54 ALEXANDRA	2355	2	15.272222	9	47	44.221	+09	13	12.42	-	.0	0
23	54 ALEXANDRA	2367	2	16.321527	9	46	44.236	+09	15	17.17	-	.0	0
24	54 ALEXANDRA	2367	2	16.325694	9	46	43.989	+09	15	18.00	-	.0	0
25	54 ALEXANDRA	2380	2	17.303472	9	45	48.201	+09	17	15.00	-	.0	0
26	54 ALEXANDRA	2380	2	17.307639	9	45	47.946	+09	17	15.23	-	.0	0
27	673 EDDA	9263	2	6.094791	9	24	30.929	+10	33	19.48	+	.0	0
28	673 EDDA	9263	2	6.099653	9	24	30.713	+10	33	20.77	+	.0	0
29	673 EDDA	9263	2	6.104514	9	24	30.416	+10	33	22.08	+	.0	0
30	673 EDDA	9284	2	8.280902	9	22	36.415	+10	42	18.54	-	.0	0
31	673 EDDA	9284	2	8.285764	9	22	36.170	+10	42	19.93	-	.0	0
32	673 EDDA	9284	2	8.290625	9	22	35.918	+10	42	21.13	-	.0	0
33	673 EDDA	9290	2	9.140625	9	21	51.713	+10	45	54.00	-	.0	0
34	673 EDDA	9290	2	9.145486	9	21	51.447	+10	45	55.06	-	.0	0
35	673 EDDA	9290	2	9.150347	9	21	51.186	+10	45	56.43	-	.0	0
36	673 EDDA	9301	2	10.220486	9	20	55.058	+10	50	25.30	-	.0	0
37	673 EDDA	9301	2	10.225347	9	20	54.771	+10	50	26.64	-	.0	0
38	673 EDDA	9301	2	10.230208	9	20	54.518	+10	50	28.00	-	.0	0
39	673 EDDA	9317	2	12.095486	9	19	17.530	+10	58	22.74	-	.1	0
40	673 EDDA	9317	2	12.100347	9	19	17.272	+10	58	24.06	-	.1	0
41	673 EDDA	9317	2	12.105208	9	19	17.005	+10	58	25.44	-	.1	0
42	673 EDDA	9323	2	12.248264	9	19	9.327	+10	59	02.50	-	.1	0
43	673 EDDA	9323	2	12.253125	9	19	9.080	+10	59	03.61	-	.1	0
44	673 EDDA	9323	2	12.257986	9	19	8.839	+10	59	04.56	-	.1	0
45	673 EDDA	9335	2	13.250000	9	18	17.374	+11	03	19.04	-	.1	0
46	673 EDDA	9335	2	13.254167	9	18	17.156	+11	03	20.22	-	.1	0
47	673 EDDA	9335	2	13.259027	9	18	16.941	+11	03	21.40	-	.1	0
48	809 LUNDIA	9263	2	6.094791	9	29	39.065	+11	43	20.10	+	.1	0
49	809 LUNDIA	9263	2	6.099653	9	29	38.736	+11	43	22.28	+	.1	0
50	809 LUNDIA	9263	2	6.104514	9	29	38.460	+11	43	24.40	+	.1	0

TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1986		ALPHA 1950			DELTA 1950			RESIDUALS		
			MON.	DAY	H	M	S	O	'	''	M	'	
51	809 LUNDIA	9269	2	8.280982	9	27	27.189	+11	59	28.01	+	.0	0
52	809 LUNDIA	9284	2	8.285764	9	27	26.895	+11	59	29.85	+	.0	0
53	809 LUNDIA	9289	2	8.290625	9	27	26.815	+11	59	31.28	+	.0	0
54	809 LUNDIA	9290	2	9.140625	9	26	35.557	+12	05	50.00	+	.0	0
55	809 LUNDIA	9290	2	9.148486	9	26	35.241	+12	05	51.84	+	.0	0
56	809 LUNDIA	9290	2	9.150347	9	26	34.933	+12	05	54.22	+	.0	0
57	809 LUNDIA	9301	2	10.228988	9	25	30.364	+12	13	50.32	+	.0	0
58	809 LUNDIA	9301	2	10.225347	9	25	30.085	+12	13	52.31	+	.0	0
59	809 LUNDIA	9301	2	10.230208	9	25	29.794	+12	13	54.55	+	.0	0
60	809 LUNDIA	9317	2	12.095486	9	23	37.868	+12	27	44.62	-	.0	0
61	809 LUNDIA	9317	2	12.100347	9	23	37.568	+12	27	47.07	-	.0	0
62	809 LUNDIA	9317	2	12.105208	9	23	37.299	+12	27	49.03	-	.0	0
63	809 LUNDIA	9323	2	12.248264	9	23	28.503	+12	28	52.43	-	.0	0
64	809 LUNDIA	9323	2	12.253125	9	23	28.189	+12	28	54.50	-	.0	0
65	809 LUNDIA	9323	2	12.257986	9	23	27.880	+12	28	56.64	-	.0	0
66	809 LUNDIA	9335	2	13.250000	9	22	28.621	+12	36	16.14	-	.1	0
67	809 LUNDIA	9335	2	13.254167	9	22	28.375	+12	36	17.94	-	.1	0
68	809 LUNDIA	9335	2	13.259027	9	22	28.092	+12	36	20.19	-	.1	0
69	809 LUNDIA	9345	2	14.238194	9	21	29.949	+12	43	34.31	-	.1	0
70	809 LUNDIA	9345	2	14.242361	9	21	29.697	+12	43	35.75	-	.1	0
71	809 LUNDIA	9345	2	14.246528	9	21	29.435	+12	43	37.72	-	.1	0
72	809 LUNDIA	9355	2	15.253472	9	20	29.944	+12	51	01.00	-	.1	0
73	809 LUNDIA	9355	2	15.257638	9	20	29.703	+12	51	03.25	-	.1	0
74	809 LUNDIA	9355	2	15.261806	9	20	29.450	+12	51	05.57	-	.1	0
75	809 LUNDIA	9380	2	17.287847	9	18	31.294	+13	05	51.64	-	.1	0
76	809 LUNDIA	9380	2	17.292708	9	18	30.970	+13	05	53.88	-	.1	0
77	809 LUNDIA	9380	2	17.297569	9	18	30.690	+13	05	55.85	-	.1	0
78	883 MATTERANIA	2263	2	6.110764	9	52	57.837	+07	58	16.92	+	.1	- 1
79	883 MATTERANIA	2263	2	6.115625	9	52	57.548	+07	58	17.91	+	.1	- 1
80	883 MATTERANIA	2263	2	6.120486	9	52	57.266	+07	58	18.86	+	.1	- 1
81	883 MATTERANIA	2290	2	9.170486	9	49	47.529	+08	09	58.66	-	.0	0
82	883 MATTERANIA	2290	2	9.175347	9	49	47.236	+08	09	59.90	-	.0	0
83	883 MATTERANIA	2290	2	9.180208	9	49	46.920	+08	10	01.42	-	.0	0
84	883 MATTERANIA	2301	2	10.240625	9	48	40.023	+08	14	14.50	-	.0	0
85	883 MATTERANIA	2301	2	10.245486	9	48	39.731	+08	14	16.00	-	.0	0
86	883 MATTERANIA	2301	2	10.250347	9	48	39.400	+08	14	17.38	-	.0	0
87	883 MATTERANIA	2309	2	11.234375	9	47	37.176	+08	18	12.81	-	.0	0
88	883 MATTERANIA	2309	2	11.239236	9	47	36.861	+08	18	14.00	-	.0	0
89	883 MATTERANIA	2309	2	11.244097	9	47	36.549	+08	18	15.45	-	.0	0
90	883 MATTERANIA	2323	2	12.265625	9	46	31.466	+08	22	27.53	-	.0	0
91	883 MATTERANIA	2323	2	12.270486	9	46	31.155	+08	22	28.72	-	.0	0
92	883 MATTERANIA	2323	2	12.275347	9	46	30.816	+08	22	29.81	-	.0	0
93	883 MATTERANIA	2335	2	13.266666	9	45	27.737	+08	26	36.38	-	.0	0
94	883 MATTERANIA	2335	2	13.271180	9	45	27.469	+08	26	37.53	-	.0	0
95	883 MATTERANIA	2335	2	13.275694	9	45	27.147	+08	26	38.69	-	.0	0
96	1352 WAWEL	2263	2	6.110764	9	58	18.337	+08	21	03.10	+	.2	- 1
97	1352 WAWEL	2263	2	6.115625	9	58	18.110	+08	21	04.44	+	.2	- 1
98	1352 WAWEL	2263	2	6.120486	9	58	17.886	+08	21	05.69	+	.2	- 1
99	1352 WAWEL	2290	2	9.170486	9	55	48.186	+08	36	38.38	+	.0	0
100	1352 WAWEL	2290	2	9.175347	9	55	47.953	+08	36	40.00	+	.0	0

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NO	OBJECT	PLATE	DATE UT 1986		ALPHA 1950			DELTA 1950			RESIDUALS	
			MON.	DAY	H	M	S	O	'	"	M	'
101	1352 WAWEL	2290	2	9.180208	9	55	47.714	+08	36	41.39	+0.0	0
102	1352 WAWEL	2301	2	10.240625	9	54	54.734	+08	42	13.87	+0.1	0
103	1352 WAWEL	2301	2	10.245486	9	54	54.477	+08	42	15.45	+0.1	0
104	1352 WAWEL	2301	2	10.250347	9	54	54.217	+08	42	16.81	+0.1	0
105	1352 WAWEL	2309	2	11.234375	9	54	4.884	+08	47	30.70	+0.1	-1
106	1352 WAWEL	2309	2	11.239236	9	54	4.620	+08	47	32.13	+0.1	-1
107	1352 WAWEL	2309	2	11.244097	9	54	4.346	+08	47	33.47	+0.1	-1
108	1352 WAWEL	2323	2	12.265625	9	53	12.796	+08	53	01.35	+0.1	-1
109	1352 WAWEL	2323	2	12.270486	9	53	12.539	+08	53	03.09	+0.1	-1
110	1352 WAWEL	2323	2	12.275347	9	53	12.297	+08	53	04.40	+0.1	-1
111	1352 WAWEL	2335	2	13.266666	9	52	22.081	+08	58	24.31	+0.1	-1
112	1352 WAWEL	2335	2	13.271180	9	52	21.859	+08	58	25.77	+0.1	-1
113	1352 WAWEL	2335	2	13.275694	9	52	21.632	+08	58	27.15	+0.1	-1
114	1352 WAWEL	2345	2	14.252083	9	51	32.110	+09	03	46.08	+0.0	-1
115	1352 WAWEL	2345	2	14.256250	9	51	31.860	+09	03	47.28	+0.0	-1
116	1352 WAWEL	2355	2	15.268055	9	50	40.585	+09	09	16.90	+0.0	-1
117	1352 WAWEL	2355	2	15.272222	9	50	40.364	+09	09	18.20	+0.0	-1
118	1352 WAWEL	2367	2	16.321527	9	49	46.991	+09	15	04.03	+0.0	0
119	1352 WAWEL	2367	2	16.325694	9	49	46.767	+09	15	05.07	+0.0	0
120	1352 WAWEL	2380	2	17.303472	9	48	57.225	+09	20	30.00	+0.0	0
121	1352 WAWEL	2380	2	17.307639	9	48	57.008	+09	20	30.55	+0.0	0
122	1986CT1	2263	2	6.110764	9	58	42.639	+08	15	33.50		
123	1986CT1	2263	2	6.115625	9	58	42.387	+08	15	35.42		
124	1986CT1	2263	2	6.120486	9	58	42.139	+08	15	37.30		
125	1986CT1	2290	2	9.170486	9	56	4.919	+08	33	56.00		
126	1986CT1	2290	2	9.175347	9	56	4.683	+08	33	57.71		
127	1986CT1	2290	2	9.180208	9	56	4.417	+08	33	59.46		
128	1986CT1	2301	2	10.240625	9	55	8.444	+08	40	31.51		
129	1986CT1	2301	2	10.245486	9	55	8.190	+08	40	33.48		
130	1986CT1	2301	2	10.250347	9	55	7.922	+08	40	35.56		
131	1986CT1	2309	2	11.234375	9	54	15.712	+08	46	46.43		
132	1986CT1	2309	2	11.239236	9	54	15.455	+08	46	48.28		
133	1986CT1	2309	2	11.244097	9	54	15.204	+08	46	50.14		
134	1986CT1	2323	2	12.265625	9	53	20.482	+08	53	17.37		
135	1986CT1	2323	2	12.270486	9	53	20.221	+08	53	19.21		
136	1986CT1	2323	2	12.275347	9	53	19.959	+08	53	21.06		
137	1986CT1	2335	2	13.266666	9	52	26.564	+08	59	41.01		
138	1986CT1	2335	2	13.271180	9	52	26.321	+08	59	42.73		
139	1986CT1	2335	2	13.275694	9	52	26.079	+08	59	44.43		
140	1986CT1	2345	2	14.252083	9	51	33.200	+09	06	01.75		
141	1986CT1	2345	2	14.256250	9	51	32.983	+09	06	03.18		
142	1986CT1	2355	2	15.268055	9	50	38.112	+09	12	35.20		
143	1986CT1	2355	2	15.272222	9	50	37.865	+09	12	36.85		
144	1986CT1	2367	2	16.321527	9	49	40.574	+09	19	28.77		
145	1986CT1	2367	2	16.325694	9	49	40.344	+09	19	30.44		
146	1986CT1	2380	2	17.303472	9	48	47.039	+09	25	56.74		
147	1986CT1	2380	2	17.307639	9	48	46.814	+09	25	58.31		
148	1986CS1	9263	2	6.094791	9	28	1.153	+11	54	20.66		
149	1986CS1	9263	2	6.099653	9	28	0.933	+11	54	22.40		
150	1986CS1	9263	2	6.104514	9	28	0.654	+11	54	24.22		

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NO	OBJECT	PLATE	DATE UT 1986		ALPHA 1950			DELTA 1950			RESIDUALS	
			MON.	DAY	H	M	S	O	'	''	M	'
151	1986CS1	9284	2	8.280902	9	25	57.054	+12	08	02.65		
152	1986CS1	9284	2	8.285764	9	25	56.778	+12	08	04.48		
153	1986CS1	9284	2	8.290625	9	25	56.496	+12	08	06.32		
154	1986CS1	9290	2	9.140625	9	25	8.635	+12	13	28.11		
155	1986CS1	9290	2	9.145486	9	25	8.363	+12	13	30.04		
156	1986CS1	9290	2	9.150347	9	25	8.089	+12	13	32.03		
157	1986CS1	9301	2	10.220486	9	24	7.279	+12	20	18.76		
158	1986CS1	9301	2	10.225347	9	24	7.007	+12	20	20.49		
159	1986CS1	9301	2	10.230208	9	24	6.734	+12	20	22.36		
160	1986CS1	9317	2	12.095486	9	22	22.007	+12	32	10.38		
161	1986CS1	9317	2	12.100347	9	22	21.732	+12	32	12.26		
162	1986CS1	9317	2	12.105208	9	22	21.436	+12	32	14.10		
163	1986CS1	9323	2	12.248264	9	22	13.159	+12	33	08.72		
164	1986CS1	9323	2	12.253125	9	22	12.885	+12	33	10.54		
165	1986CS1	9323	2	12.257986	9	22	12.614	+12	33	12.44		
166	1986CS1	9335	2	13.250000	9	21	17.228	+12	39	27.77		
167	1986CS1	9335	2	13.254167	9	21	16.991	+12	39	29.48		
168	1986CS1	9335	2	13.259027	9	21	16.713	+12	39	31.32		
169	1986CS1	9345	2	14.238194	9	20	22.585	+12	45	42.53		
170	1986CS1	9345	2	14.242361	9	20	22.355	+12	45	43.92		
171	1986CS1	9345	2	14.246528	9	20	22.125	+12	45	45.29		
172	1986CS1	9355	2	15.253472	9	19	27.013	+12	52	03.74		
173	1986CS1	9355	2	15.257638	9	19	26.777	+12	52	05.31		
174	1986CS1	9355	2	15.261806	9	19	26.564	+12	52	06.90		
175	1986CS1	9380	2	17.287847	9	17	37.629	+13	04	42.23		
176	1986CS1	9380	2	17.292708	9	17	37.360	+13	04	44.29		
177	1986CS1	9380	2	17.297569	9	17	37.109	+13	04	46.09		
178	1986CZ1	9317	2	12.095486	9	17	51.405	+10	56	00.29		
179	1986CZ1	9317	2	12.100347	9	17	51.072	+10	56	01.20		
180	1986CZ1	9317	2	12.105208	9	17	50.738	+10	56	02.07		
181	E3678	9318	2	12.113542	9	28	16.361	+11	33	52.48		
182	E3678	9318	2	12.118402	9	28	16.024	+11	33	54.08		
183	E3678	9318	2	12.123264	9	28	15.685	+11	33	55.54		

1	2	3	118006	+49.450	57.35	-0.009	+0.17	-0.014	+0.10	-0.009	+0.009	-0.080409	-0.081043	-0.081705
			118007	+17.724	31.19	+0.012	-0.28	+0.010	-0.24	+0.009	-0.26	+0.058423	+0.058649	+0.058855
			118008	+46.372	76.34	+0.007	+0.10	+0.020	+0.07	+0.010	+0.39	+0.254217	+0.254380	+0.254603
			118009	+47.960	43.09	-0.008	+0.10	-0.018	+0.11	-0.011	-0.06	+0.411460	+0.412275	+0.413063
			118010	+21.578	26.36	+0.004	-0.11	+0.001	-0.10	+0.002	-0.15	+0.356308	+0.355736	+0.355165
4	5	6	118036	+48.332	26.34	-0.019	+0.03	+0.001	-0.04	-0.009	-0.32	-0.117728	-0.116756	-0.119711
			118074	+32.631	22.32	+0.032	-0.00	+0.023	-0.04	+0.031	-0.02	+0.153165	+0.152897	+0.152609
			118023	+28.757	11.67	-0.002	-0.04	-0.024	+0.10	-0.010	+0.51	-0.021991	-0.022268	-0.022529
			118001	+46.772	15.49	-0.008	+0.00	-0.006	+0.01	-0.009	+0.01	+0.805963	+0.806792	+0.807571
			117991	+55.565	22.31	-0.003	+0.01	+0.005	-0.03	+0.002	-0.17	+0.180590	+0.181334	+0.182059
7	8	9	118012	+45.015	44.61	-0.010	-0.15	-0.013	-0.14	-0.004	-0.10	+0.193549	+0.193274	+0.193025
			118001	+46.772	15.49	+0.005	-0.07	+0.015	-0.08	+0.002	+0.05	+0.262950	+0.262983	+0.263072
			118024	+32.631	22.32	+0.023	+0.68	+0.009	+0.67	+0.011	+0.22	+0.030326	+0.029919	+0.029483
			118023	+28.757	11.67	-0.018	-0.51	-0.008	-0.51	-0.008	-0.17	+0.004276	+0.003889	+0.003531
			117974	+46.804	47.82	+0.000	+0.06	-0.003	+0.06	+0.000	-0.00	+0.508899	+0.509935	+0.510888
10	11	12	118013	+47.960	43.09	-0.011	+0.40	-0.027	+0.48	+0.011	+0.20	-0.040111	-0.040956	-0.041950
			118001	+46.772	15.49	-0.012	-0.34	+0.030	-0.34	+0.013	-0.09	+0.418442	+0.418266	+0.418228
			117991	+55.565	22.31	+0.003	-0.29	+0.005	-0.53	+0.001	-0.32	-0.162333	-0.162811	-0.163120
			117979	+27.850	40.13	+0.004	+0.09	+0.010	+0.31	+0.006	+0.25	+0.063313	+0.063639	+0.063938
			117974	+46.804	47.82	-0.007	+0.15	-0.019	+0.07	-0.009	-0.03	+0.720689	+0.721862	+0.722904
13	14	15	118001	+46.772	15.49	-0.008	+0.18	-0.004	+0.16	-0.005	+0.29	+0.307562	+0.306839	+0.306014
			117991	+55.565	22.31	+0.025	+0.58	+0.010	-0.47	+0.015	-0.96	-0.015332	-0.015641	-0.015962
			117975	+27.849	40.13	-0.025	+0.57	-0.010	+0.47	-0.015	+0.94	+0.004054	+0.004122	+0.004358
			117974	+46.804	47.82	+0.003	-0.04	+0.003	-0.06	+0.002	-0.05	+0.271943	+0.272099	+0.272243
			117943	+16.733	25.58	+0.005	-0.13	+0.001	-0.09	+0.003	-0.22	+0.431773	+0.432581	+0.433346
16	17	18	118001	+46.772	15.49	-0.010	+0.08	-0.006	+0.06	-0.011	+0.16	+0.163395	+0.162699	+0.162085
			117991	+55.565	22.31	+0.031	+0.15	+0.019	-0.10	+0.037	-0.33	-0.078234	-0.078502	-0.078766
			117979	+27.849	40.13	-0.031	+0.18	-0.019	+0.13	-0.036	+0.37	+0.022870	+0.022949	+0.023117
			117974	+46.804	47.82	+0.002	-0.12	+0.002	-0.10	+0.002	-0.21	+0.302740	+0.302885	+0.302988
			117943	+16.733	25.58	+0.007	+0.01	+0.004	+0.02	+0.008	+0.01	+0.589229	+0.589968	+0.590576
19	20		117974	+46.804	47.82	+0.006	-0.09	+0.003	-0.11			+0.140508	+0.140378	
			117948	+48.208	08.43	+0.022	+0.56	-0.022	+0.76			+0.368496	+0.369022	
			117943	+16.733	25.58	+0.021	-0.57	+0.022	-0.77			+0.427839	+0.428389	
			117968	+31.114	29.33	-0.009	+0.21	-0.008	+0.28			+0.169280	+0.168959	
			117991	+55.565	22.31	+0.003	-0.17	+0.005	-0.16			-0.106123	-0.106748	
21	22		117974	+46.804	47.82	-0.033	-0.16	-0.024	+0.04			-0.002313	-0.003034	
			117948	+48.208	08.43	+0.028	+0.20	+0.018	+0.05			+0.153338	+0.153182	
			117924	+13.531	27.85	-0.026	-0.06	-0.021	+0.12			+0.449876	+0.450758	
			117943	+16.733	25.58	+0.024	-0.05	+0.024	-0.25			+0.259823	+0.260027	
			117968	+31.114	29.33	+0.007	+0.08	+0.004	+0.05			+0.139276	+0.139067	
23	24		117974	+46.804	47.82	-0.032	-0.03	-0.027	+0.01			-0.156926	-0.157863	
			117948	+48.208	08.43	+0.021	+0.26	+0.014	+0.29			+0.230027	+0.230075	
			117943	+16.733	25.58	+0.042	-0.37	+0.042	-0.50			+0.207661	+0.207688	
			117924	+13.531	27.85	-0.034	-0.03	-0.029	+0.02			+0.555439	+0.556315	
			117932	+29.421	50.20	+0.003	+0.16	-0.000	+0.18			+0.163800	+0.163724	
25	26		117943	+16.733	25.58	+0.001	+0.08	+0.023	-0.02			+0.254146	+0.253574	
			117974	+46.804	47.82	-0.004	-0.05	-0.024	+0.01			+0.468659	+0.468902	
			117920	+45.758	21.58	+0.005	-0.06	+0.003	+0.02			+0.389061	+0.389773	
			117932	+29.421	50.20	-0.004	+0.10	+0.012	-0.03			+0.094159	+0.094525	
			117968	+31.114	29.32	+0.001	-0.08	-0.014	+0.02			-0.206025	-0.206774	

183 PHOTOGRAPHIC POSITIONS OF NINE MINOR PLANETS OBTAINED AT ESO-LA SILLA IN FEBRUARY 1986

			S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"	S	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
27	28	29	98577	+37.291	07.42	-0.014	+0.05	-0.006	+0.04	-0.005	+0.08	+1.072064	+1.072653	+1.073566	98587	+58.798	12.49	+0.032	-0.25	+0.014	-0.23	+0.006	-0.25	+0.744831	+0.245297	+0.245843	98597	+48.928	12.97	-0.027	+0.19	-0.011	+0.20	+0.000	+0.27	-0.263377	-0.263397	-0.263418	98617	+49.047	12.98	+0.000	-0.07	+0.001	-0.14	-0.005	-0.06	-0.431635	-0.432104	-0.432835	98623	+34.429	56.04	+0.004	-0.03	+0.001	+0.05	+0.004	+0.00	+0.378118	+0.377551	+0.378444	98580	+53.379	06.08	-0.002	-0.27	+0.007	-0.38	-0.008	-0.46	-0.265563	-0.264959	-0.264389	98597	+48.928	12.97	-0.013	+0.50	-0.015	+0.44	-0.010	+0.49	+0.173592	+0.172842	+0.172074	98583	+58.798	12.49	+0.020	-0.11	+0.009	-0.02	+0.025	+0.02	+0.242847	+0.242252	+0.241684	98586	+20.659	53.24	-0.005	-0.38	+0.006	-0.41	-0.012	-0.50	+0.624991	+0.624651	+0.624317	98542	+59.000	38.88	+0.000	+0.36	-0.006	+0.37	+0.006	+0.44	+0.224134	+0.225213	+0.226314	98597	+47.758	05.76	+0.028	+0.22	+0.013	+0.29	+0.013	+0.30	-0.168124	-0.168473	-0.168710	98593	+48.928	12.97	-0.019	+0.11	-0.019	+0.01	-0.025	+0.14	+0.074193	+0.073728	+0.073246	98583	+58.798	12.49	-0.010	-0.39	+0.007	-0.36	+0.015	-0.53	+0.229095	+0.228738	+0.228410	98550	+36.979	07.00	-0.008	-0.07	-0.004	-0.09	-0.004	-0.09	-0.000119	+0.000701	+0.001549	98549	+27.657	43.98	+0.010	+0.14	+0.002	+0.15	+0.001	+0.19	+0.864954	+0.865256	+0.865505	98580	+53.379	06.08	-0.014	-0.38	-0.010	-0.23	-0.026	-0.24	-0.320659	-0.320797	-0.320842	98593	+48.928	12.97	+0.001	+0.25	-0.005	+0.47	-0.002	+0.56	+0.076751	+0.076132	+0.075525	98583	+58.798	12.49	+0.010	+0.02	+0.014	-0.36	+0.024	-0.46	+0.300599	+0.300198	+0.299777	98550	+36.979	07.00	+0.010	+0.24	+0.007	+0.12	+0.019	+0.17	-0.066689	-0.065924	-0.065284	98540	+38.377	56.32	-0.007	-0.13	-0.006	+0.01	-0.014	+0.02	+1.009977	+1.010390	+1.010764	98498	+55.808	31.10	-0.016	-0.02	+0.022	+0.14	-0.018	-0.08	+0.405741	+0.406033	+0.406391	98508	+47.500	55.95	+0.026	-0.07	+0.033	-0.28	+0.031	+0.06	+0.279368	+0.279616	+0.279780	98508	+45.440	10.03	-0.010	+0.25	-0.003	+0.22	-0.014	+0.13	-0.072177	-0.071841	-0.071468	98542	+59.000	38.87	+0.006	-0.47	-0.009	-0.27	+0.012	-0.26	+0.081086	+0.080837	+0.080579	98564	+58.935	14.66	-0.007	+0.25	+0.002	+0.19	-0.010	+0.15	+0.305981	+0.305355	+0.304718	98580	+53.379	06.08	+0.016	-0.24	-0.014	+0.12	+0.005	-0.37	-0.159873	-0.159977	-0.160095	98583	+58.797	12.49	+0.039	+0.29	+0.041	+0.09	+0.028	+0.39	+0.107275	+0.106740	+0.106203	98550	+36.979	07.00	-0.027	+0.14	-0.000	+0.09	-0.004	+0.23	-0.004713	-0.004266	-0.003832	98509	+47.500	55.95	+0.040	+0.03	+0.019	-0.03	+0.016	-0.00	+0.646987	+0.647473	+0.647928	98555	+02.172	24.91	-0.068	-0.21	-0.046	-0.02	-0.035	-0.24	+0.410323	+0.410029	+0.409795	98550	+36.979	07.00	-0.014	+0.16	-0.018	+0.14	-0.019	+0.31	-0.255490	-0.255755	-0.256038	98527	+29.634	27.29	-0.003	+0.31	+0.005	+0.20	-0.013	-0.17	+0.021137	+0.021364	+0.021624	98515	+13.842	17.80	+0.027	-0.66	+0.036	-0.48	+0.047	-0.27	+0.252535	+0.252962	+0.253377	98509	+47.500	55.95	-0.021	+0.39	-0.027	+0.30	-0.033	+0.31	+0.670049	+0.670413	+0.670760	98555	+02.172	24.91	+0.011	-0.19	+0.014	-0.15	+0.017	-0.18	+0.311769	+0.311016	+0.310278	98583	+58.798	12.49	-0.007	-0.33	-0.016	-0.41	-0.015	-0.40	-0.116028	-0.115332	-0.114749	98593	+48.928	12.97	+0.003	+0.14	+0.010	+0.15	+0.014	+0.22	-0.144275	-0.143132	-0.142150	98612	+49.047	12.98	+0.006	+0.23	+0.011	+0.33	+0.006	+0.28	+0.583262	+0.581579	+0.580038	98622	+22.601	44.34	+0.008	+0.27	+0.011	+0.46	+0.001	+0.31	+0.140949	+0.141521	+0.142118	98631	+56.396	22.27	-0.009	-0.35	-0.015	-0.53	-0.007	-0.41	+0.536092	+0.535364	+0.534743	98672	+22.601	44.34	-0.000	-0.18	-0.002	-0.16	-0.001	-0.15	+0.644661	+0.643185	+0.641784	98592	+47.758	05.76	+0.007	+0.37	+0.005	+0.33	+0.009	+0.27	+0.122009	+0.122299	+0.122551	98580	+53.379	06.08	-0.004	-0.29	-0.003	-0.26	-0.005	-0.22	-0.073806	-0.072840	-0.071994	98593	+48.928	12.97	-0.006	+0.34	+0.001	+0.29	-0.005	+0.31	+0.212988	+0.212935	+0.212882	98583	+58.798	12.49	+0.003	-0.24	-0.001	-0.21	+0.002	-0.22	+0.094148	+0.094420	+0.094777	98580	+53.379	06.08	-0.029	-0.52	-0.021	-0.35	-0.022	-0.53	+0.338435	+0.338168	+0.337952	98592	+47.758	05.76	+0.031	+0.34	+0.026	+0.26	+0.030	+0.35	+0.473655	+0.472955	+0.472397	98593	+48.928	12.97	-0.011	+0.24	-0.014	+0.12	-0.021	+0.29	+0.346905	+0.346460	+0.345983	98587	+58.798	12.49	+0.003	-0.24	+0.006	-0.13	+0.010	-0.28	+0.129163	+0.129262	+0.129250	98550	+36.979	07.00	+0.006	+0.16	+0.003	+0.10	+0.003	+0.17	-0.288162	-0.288865	-0.289582

57	58	59	98592	+47.758	05.76	+0.031	+0.37	+0.049	+0.23	+0.040	+0.12	+0.248370	+0.347846	+0.347294
			98589	+52.379	06.08	-0.021	-0.46	-0.040	-0.45	-0.040	-0.40	+0.292068	+0.291838	+0.291654
			98593	+48.920	12.97	-0.011	+0.11	-0.024	+0.37	-0.020	+0.51	+0.250171	+0.249752	+0.249327
			98587	+50.798	12.49	+0.003	-0.14	+0.010	-0.32	+0.007	-0.40	+0.126980	+0.126988	+0.126944
			98550	+36.979	07.00	+0.000	+0.13	+0.007	+0.16	+0.007	+0.17	-0.017589	-0.016427	-0.015219
60	61	62	98550	+36.979	07.00	-0.024	+0.26	-0.024	+0.31	-0.016	+0.37	+0.242466	+0.242628	+0.242757
			98528	+29.717	48.63	+0.017	-0.11	+0.011	-0.08	+0.010	-0.32	+0.083415	+0.083869	+0.084249
			98527	+29.634	27.29	+0.007	-0.04	+0.004	-0.11	-0.000	+0.10	+0.006361	+0.006725	+0.007089
			98580	+53.379	06.08	+0.011	-0.17	+0.011	-0.16	+0.007	-0.12	+0.468032	+0.467705	+0.467361
			98583	+58.797	12.49	-0.001	+0.07	-0.002	+0.04	-0.000	-0.07	+0.199725	+0.199073	+0.198543
63	64	65	98580	+53.379	06.08	-0.034	-0.52	-0.044	-0.45	-0.041	-0.41	+0.206949	+0.206702	+0.206458
			98583	+58.797	12.49	+0.010	-0.38	+0.009	-0.35	-0.001	-0.25	+0.120933	+0.120980	+0.121014
			98550	+36.979	07.00	+0.005	+0.19	+0.008	+0.17	+0.009	+0.14	+0.487559	+0.488853	+0.490130
			98597	+47.758	05.76	+0.041	+0.26	+0.052	+0.21	+0.041	+0.24	+0.115687	+0.115035	+0.114440
			98592	+48.928	12.97	-0.023	+0.46	-0.024	+0.42	-0.008	+0.29	+0.068872	+0.068430	+0.067958
66	67	68	98550	+36.979	07.00	-0.018	-0.21	-0.022	-0.20	-0.017	-0.07	+0.889118	+0.888383	+0.887605
			98527	+29.634	27.29	-0.010	+0.51	-0.015	+0.32	-0.021	-0.04	+0.299606	+0.299227	+0.298898
			98515	+13.842	17.80	+0.001	-0.24	+0.002	-0.16	+0.005	+0.00	-0.039453	-0.039757	-0.040159
			98501	+03.367	14.36	-0.016	-0.06	-0.020	-0.09	-0.017	-0.06	-0.429814	-0.428608	-0.427137
			98528	+29.717	48.63	+0.043	+0.01	+0.056	+0.13	+0.050	+0.16	+0.280543	+0.280695	+0.280793
69	70	71	98527	+29.634	27.29	+0.033	-0.21	+0.004	-0.16	+0.020	-0.14	+0.109913	+0.109737	+0.109712
			98522	+41.798	10.30	-0.040	+0.00	-0.019	-0.12	-0.036	+0.20	-0.143905	-0.143238	-0.142830
			98528	+29.717	48.63	+0.019	+0.36	+0.029	+0.51	+0.036	-0.14	+0.169685	+0.169801	+0.169849
			98550	+36.979	07.00	-0.014	-0.04	-0.009	-0.10	-0.015	+0.08	+0.882703	+0.881311	+0.879852
			98520	+34.701	29.61	+0.007	-0.11	-0.005	-0.13	-0.004	+0.00	-0.018396	-0.017611	-0.016583
72	73	74	98528	+29.717	48.63	-0.004	+0.07	-0.006	+0.17	-0.004	+0.07	+0.270797	+0.270815	+0.270776
			98527	+29.634	27.29	+0.000	-0.11	+0.013	-0.20	+0.008	-0.09	-0.033576	-0.034049	-0.034513
			98522	+41.796	10.30	+0.001	+0.09	-0.011	+0.13	-0.007	+0.06	-0.105391	-0.105575	-0.105723
			98507	+05.207	03.15	+0.001	-0.04	+0.004	-0.08	+0.003	-0.03	+0.203814	+0.205034	+0.206297
			98550	+36.979	07.00	+0.007	-0.01	+0.000	-0.04	+0.000	-0.01	+0.664357	+0.663774	+0.663163
75	76	77	98528	+29.717	48.63	-0.004	+0.55	+0.003	+0.48	-0.006	+0.38	+0.335203	+0.333820	+0.332567
			98502	+05.207	03.15	+0.003	+0.04	+0.004	-0.18	+0.001	-0.28	+0.132661	+0.132998	+0.133292
			98501	+03.367	14.36	+0.005	-0.82	-0.006	-0.61	+0.008	-0.41	+0.035710	+0.035947	+0.036208
			98485	+56.026	29.01	-0.006	+0.64	+0.003	+0.62	-0.008	+0.53	+0.042518	+0.043750	+0.044765
			98520	+34.701	29.61	+0.003	-0.41	-0.003	-0.31	+0.004	-0.22	+0.453909	+0.453486	+0.453168
78	79	80	118066	+49.450	52.35	-0.014	+0.28	-0.020	+0.18	-0.014	+0.17	-0.098116	-0.098790	-0.099490
			118043	+17.724	31.19	+0.025	-0.36	+0.025	-0.14	+0.020	-0.32	+0.187834	+0.187552	+0.187356
			118036	+48.332	26.34	-0.003	-0.19	+0.014	-0.26	+0.006	+0.06	-0.061177	-0.061142	-0.061124
			118013	+47.960	43.09	-0.002	+0.19	-0.014	+0.21	-0.007	+0.00	+0.079920	+0.080423	+0.080913
			117990	+54.332	57.64	-0.007	+0.08	-0.005	+0.01	-0.005	+0.09	+0.891539	+0.891957	+0.892345
81	82	83	118024	+32.631	22.32	+0.024	+0.13	+0.027	+0.13	+0.030	+0.03	-0.111050	-0.111498	-0.111963
			118023	+28.757	11.67	-0.013	+0.34	-0.021	+0.22	-0.019	+0.48	+0.020799	+0.020062	+0.019153
			118001	+46.772	15.49	-0.009	-0.16	-0.008	-0.12	-0.010	-0.14	-0.166352	-0.165530	-0.164560
			117991	+55.565	22.31	-0.005	-0.67	-0.000	-0.46	-0.008	-0.72	+0.440615	+0.440274	+0.439875
			117957	+72.883	53.11	+0.007	+0.32	+0.003	+0.23	+0.007	+0.35	+0.815988	+0.816741	+0.817495
84	85	86	118001	+46.772	15.49	+0.028	-0.51	+0.032	-0.51	+0.027	-0.19	-0.264440	-0.263960	-0.263567
			118024	+32.631	22.32	+0.028	+0.70	+0.013	+0.65	+0.017	+0.04	-0.006381	-0.006632	-0.007209
			118023	+28.757	11.67	-0.034	-0.45	-0.022	-0.41	-0.024	+0.03	+0.186813	+0.186002	+0.185057
			117974	+46.804	47.87	-0.048	+0.37	-0.045	+0.40	-0.040	+0.23	+0.172568	+0.173212	+0.173940
			117945	+24.018	56.81	+0.024	-0.17	+0.022	-0.14	+0.020	-0.11	+0.911440	+0.911579	+0.911778

183 PHOTOGRAPHIC POSITIONS OF NINE MINOR PLANETS OBTAINED AT ESO-LA SILLA IN FEBRUARY 1986

			S	"	S	"	S	"	S	"	S	"	S	"
87	82	89	118001	+46.772	15.49	+0.011	-0.03	+0.020	-0.49	+0.017	-0.36	-0.296556	-0.296743	-0.296820
			117991	+55.565	22.31	-0.002	+0.14	-0.007	+0.12	-0.002	+0.08	-0.106751	-0.107747	-0.108834
			117979	+27.849	40.13	-0.004	+0.10	-0.002	+0.11	-0.007	+0.09	+0.200075	+0.199606	+0.199116
			117974	+46.804	47.82	-0.016	+0.74	-0.029	+0.72	-0.025	+0.53	+0.334376	+0.335137	+0.335692
			117947	+16.733	25.58	+0.010	-0.40	+0.017	-0.45	+0.017	-0.33	+0.868856	+0.869746	+0.870652
90	91	92	117991	+55.565	22.31	+0.023	-0.31	+0.013	-0.26	+0.017	-0.34	-0.015257	-0.015796	-0.016369
			117979	+27.849	40.13	-0.020	+0.19	-0.011	+0.14	-0.013	+0.22	+0.273542	+0.273239	+0.272933
			117974	+46.804	47.82	-0.016	+0.35	-0.009	+0.32	-0.013	+0.35	-0.214789	-0.214938	-0.215120
			117943	+16.733	25.58	+0.010	-0.24	+0.006	-0.22	+0.009	-0.24	-0.027437	-0.027104	-0.026803
			117923	+13.596	06.66	+0.003	+0.01	+0.001	+0.02	+0.001	+0.00	+0.983942	+0.984600	+0.985360
93	94	95	117979	+27.849	40.13	+0.006	+0.25	+0.007	+0.28	+0.002	+0.25	-0.155635	-0.156395	-0.157244
			117974	+46.804	47.82	+0.000	-0.35	+0.001	-0.43	-0.003	-0.26	-0.273376	-0.273677	-0.274086
			117943	+16.733	25.58	-0.002	+0.25	-0.003	+0.33	+0.002	+0.17	+0.130497	+0.130916	+0.131366
			117923	+13.596	06.66	+0.007	-0.04	+0.011	-0.09	-0.001	+0.05	+0.826319	+0.826948	+0.827753
			117945	+24.018	56.81	-0.011	-0.17	-0.015	-0.08	+0.000	-0.20	+0.472195	+0.472208	+0.472209
96	97	98	118066	+49.450	52.35	-0.009	+0.17	-0.014	+0.16	-0.009	+0.08	+0.418675	+0.418001	+0.417355
			118043	+17.724	31.19	+0.012	-0.26	+0.010	-0.24	+0.009	-0.26	+0.300707	+0.300712	+0.300731
			118036	+48.332	26.34	+0.000	+0.10	+0.020	+0.07	+0.010	+0.39	+0.156661	+0.156845	+0.156981
			118013	+47.960	43.09	-0.008	+0.10	-0.018	-0.11	-0.011	-0.06	+0.029301	+0.030007	+0.030726
			118051	+21.578	26.36	+0.004	-0.11	+0.001	-0.10	+0.002	-0.15	+0.094655	+0.094435	+0.094207
99	100	101	118036	+48.332	26.34	-0.019	+0.03	+0.001	-0.04	-0.009	-0.32	+0.389184	+0.388395	+0.387558
			118024	+32.631	22.32	+0.032	-0.00	+0.023	-0.04	+0.031	-0.02	+0.246721	+0.246514	+0.246319
			118023	+28.757	11.67	-0.002	-0.04	-0.024	+0.10	-0.016	+0.51	+0.292468	+0.292000	+0.291570
			118001	+46.772	15.49	-0.008	+0.00	-0.006	-0.01	-0.008	+0.01	-0.029390	-0.028321	-0.027296
			117991	+55.565	22.31	-0.003	+0.01	+0.005	+0.03	+0.002	-0.17	+0.101017	+0.101413	+0.101850
102	103	104	118012	+45.015	44.61	-0.010	-0.15	-0.013	-0.14	-0.004	-0.10	+0.004134	+0.004250	+0.004290
			118001	+46.772	15.49	+0.005	-0.07	+0.015	-0.08	+0.002	+0.05	+0.057160	+0.057414	+0.057593
			118024	+32.631	22.32	+0.023	+0.64	+0.009	+0.67	+0.011	+0.22	+0.358059	+0.357543	+0.357127
			118023	+28.757	11.67	-0.018	-0.51	-0.008	-0.51	-0.008	-0.17	+0.476276	+0.475626	+0.474975
			117974	+46.804	47.82	-0.000	+0.06	-0.003	+0.06	+0.000	-0.00	+0.104372	+0.105167	+0.106015
105	106	107	118013	+47.960	43.09	-0.011	+0.40	-0.027	+0.48	-0.011	+0.20	+0.453020	+0.452128	+0.451272
			118001	+46.772	15.49	+0.012	-0.34	+0.030	-0.34	+0.013	-0.09	+0.310764	+0.310898	+0.310928
			117991	+55.565	22.31	+0.003	-0.29	+0.005	-0.53	+0.001	-0.32	+0.238262	+0.237665	+0.237056
			117979	+27.850	40.13	+0.004	+0.09	+0.010	+0.31	+0.006	+0.25	+0.054953	+0.055057	+0.055170
			117974	+46.804	47.82	-0.007	+0.15	-0.019	+0.07	-0.009	-0.03	-0.056998	-0.055747	-0.054427
106	109	110	118001	+46.772	15.49	-0.008	+0.18	-0.004	+0.16	-0.005	+0.29	+0.588514	+0.588129	+0.587700
			117991	+55.565	22.31	+0.025	-0.58	+0.010	-0.47	+0.015	-0.96	+0.237229	+0.236749	+0.236332
			117979	+27.849	40.13	-0.025	+0.57	-0.010	+0.47	-0.015	+0.94	+0.057415	+0.057286	+0.057239
			117974	+46.804	47.82	+0.003	-0.04	+0.003	-0.06	+0.002	-0.05	+0.164907	+0.165094	+0.165257
			117943	+16.733	25.58	+0.005	-0.13	+0.001	-0.09	+0.003	-0.22	-0.048065	-0.047258	-0.046528
111	112	113	118001	+46.772	15.49	-0.010	+0.08	-0.006	+0.06	-0.011	+0.18	+0.507277	+0.506937	+0.506563
			117991	+55.565	22.31	+0.031	-0.15	+0.019	-0.10	+0.037	-0.33	+0.149461	+0.149060	+0.148674
			117979	+27.849	40.13	-0.031	+0.18	-0.019	+0.13	-0.036	+0.37	+0.031680	+0.031566	+0.031467
			117974	+46.804	47.82	+0.002	-0.12	+0.002	-0.10	+0.002	-0.21	+0.201197	+0.201359	+0.201508
			117943	+16.733	25.58	+0.007	+0.01	+0.004	+0.02	+0.008	+0.01	+0.110385	+0.111078	+0.111788
114	115		117974	+46.804	47.82	+0.006	-0.09	+0.003	-0.11			+0.245468	+0.245303	
			117948	+46.208	08.43	-0.022	+0.56	-0.027	+0.76			-0.021451	-0.020927	
			117943	+16.733	25.58	+0.021	-0.57	+0.022	-0.77			+0.004266	+0.004877	
			117946	+31.114	29.33	-0.009	+0.21	-0.008	+0.24			+0.388229	+0.388030	
			117991	+55.565	22.31	+0.003	-0.12	+0.005	-0.16			+0.383488	+0.382716	

116	117	117074	+46.804	47.82	-0.033	-0.16	-0.024	+0.04			+0.425895	+0.465158		
		117942	+48.208	08.43	+0.028	+0.20	+0.018	+0.05			+0.248978	+0.248660		
		117024	+13.531	27.85	-0.026	-0.06	-0.021	+0.12			-0.165494	-0.164661		
		117943	+16.733	25.58	+0.024	-0.05	+0.024	-0.25			+0.112614	+0.112822		
		117968	+31.114	29.33	+0.007	+0.08	+0.004	+0.05			+0.318007	+0.318071		
118	119	117974	+46.804	47.82	-0.032	-0.03	-0.027	+0.01			+0.542360	+0.541549		
		117942	+48.208	08.43	+0.021	+0.20	+0.014	+0.29			+0.099354	+0.099310		
		117943	+16.733	25.58	+0.042	-0.37	+0.042	-0.50			+0.190996	+0.190996		
		117924	+13.531	27.85	-0.034	-0.03	-0.029	+0.02			-0.178450	-0.177656		
		117932	+29.421	50.70	+0.003	+0.16	-0.000	+0.18			+0.345741	+0.345801		
120	121	117943	+16.733	25.58	+0.001	+0.08	+0.023	-0.02			+0.552851	+0.552357		
		117924	+13.531	27.85	-0.004	-0.05	-0.024	+0.01			+0.249289	+0.249347		
		117920	+45.758	21.58	+0.005	-0.06	+0.003	+0.02			-0.097665	-0.097033		
		117932	+29.421	50.70	-0.004	+0.10	+0.012	-0.03			-0.092717	-0.092230		
		117968	+31.114	29.33	+0.001	-0.08	-0.014	+0.02			+0.388242	+0.387558		
122	123	124	118066	+49.450	52.35	-0.009	+0.17	-0.014	+0.16	-0.009	+0.08	+0.509679	+0.508804	+0.508121
			118043	+17.724	31.19	+0.012	-0.26	+0.010	-0.24	+0.009	-0.26	+0.331952	+0.331882	+0.331818
			118036	+48.332	26.34	+0.000	+0.10	+0.020	+0.07	+0.010	+0.39	+0.137463	+0.137676	+0.137822
			118013	+47.960	43.09	-0.008	+0.10	-0.018	+0.11	-0.011	-0.06	-0.048106	-0.047322	-0.046519
			118051	+21.578	26.36	+0.004	-0.11	+0.001	-0.10	+0.002	-0.15	+0.069013	+0.068879	+0.068757
125	126	127	118036	+48.332	26.34	-0.019	+0.03	+0.001	-0.04	-0.009	-0.32	+0.450042	+0.449254	+0.448319
			118024	+32.631	22.32	+0.032	-0.00	+0.023	-0.04	+0.031	-0.02	+0.258858	+0.258650	+0.258439
			118023	+28.757	11.67	-0.002	-0.04	-0.024	+0.10	-0.016	+0.51	+0.328312	+0.327812	+0.327307
			118001	+46.772	15.49	-0.008	+0.00	-0.006	+0.01	-0.008	+0.01	-0.123365	-0.122244	-0.121050
			117991	+55.565	22.31	-0.003	+0.01	+0.005	-0.03	+0.002	-0.17	+0.086152	+0.086529	+0.085985
128	129	130	118012	+45.015	44.61	-0.010	-0.15	-0.013	-0.14	-0.004	-0.10	-0.007710	-0.007473	-0.007218
			118001	+46.772	15.49	+0.005	-0.07	+0.015	-0.08	+0.002	+0.05	+0.040980	+0.041301	+0.041597
			118024	+32.631	22.32	+0.023	+0.68	+0.009	+0.67	+0.011	+0.22	+0.387112	+0.386557	+0.386064
			118023	+28.757	11.67	-0.018	-0.51	-0.008	-0.51	-0.008	-0.17	+0.515815	+0.515049	+0.514215
			117974	+46.804	47.82	+0.000	+0.06	-0.003	+0.06	+0.000	-0.00	+0.063803	+0.064546	+0.065343
131	132	133	118013	+47.960	43.09	-0.011	+0.40	-0.027	+0.48	-0.011	+0.20	+0.488117	+0.487235	+0.486458
			118001	+46.772	15.49	+0.012	-0.34	+0.030	-0.34	+0.013	-0.09	+0.309737	+0.309967	+0.310112
			117991	+55.565	22.31	+0.003	-0.29	+0.005	-0.53	+0.001	-0.32	+0.260085	+0.259412	+0.258715
			117979	+27.850	40.13	+0.004	+0.09	+0.010	+0.31	+0.006	+0.25	+0.048730	+0.048754	+0.048748
			117974	+46.804	47.82	-0.007	+0.15	-0.019	+0.07	-0.009	-0.03	-0.106670	-0.105367	-0.104033
134	135	136	118001	+46.772	15.49	-0.008	+0.18	-0.004	+0.16	-0.005	+0.29	+0.614806	+0.614431	+0.614061
			117991	+55.565	22.31	+0.025	-0.52	+0.010	-0.47	+0.015	-0.96	+0.241179	+0.240680	+0.240168
			117979	+27.850	40.13	-0.025	+0.57	-0.010	+0.47	-0.015	+0.94	+0.048758	+0.048614	+0.048478
			117974	+46.804	47.82	+0.003	-0.04	+0.003	-0.06	+0.002	-0.05	+0.162015	+0.162207	+0.162401
			117943	+16.733	25.58	+0.005	-0.13	+0.001	-0.09	+0.003	-0.22	-0.066757	-0.065932	-0.065108
137	138	139	118001	+46.772	15.49	-0.010	+0.08	-0.006	+0.06	-0.011	+0.16	+0.537093	+0.536743	+0.536394
			117991	+55.565	22.31	+0.031	-0.15	+0.019	-0.10	+0.037	-0.33	+0.142077	+0.141622	+0.141178
			117979	+27.850	40.13	-0.031	+0.18	-0.019	+0.13	-0.036	+0.37	+0.013628	+0.013482	+0.013332
			117974	+46.804	47.82	+0.002	-0.12	+0.002	-0.10	+0.002	-0.21	+0.202211	+0.202393	+0.202560
			117943	+16.733	25.58	+0.007	+0.01	+0.004	+0.02	+0.008	+0.01	+0.104992	+0.105760	+0.106535
140	141		117974	+46.804	47.82	+0.006	-0.09	+0.003	-0.11			+0.245518	+0.245368	
			117942	+48.208	08.43	-0.027	+0.56	-0.022	+0.76			-0.039828	-0.039398	
			117943	+16.733	25.58	+0.021	-0.57	+0.022	-0.77			-0.000176	+0.000362	
			117968	+31.114	29.33	-0.009	+0.21	-0.008	+0.28			+0.420672	+0.420578	
			117991	+55.565	22.31	+0.003	-0.12	+0.005	-0.16			+0.373814	+0.373090	

183 PHOTOGRAPHIC POSITIONS OF NINE MINOR PLANETS OBTAINED AT ESO-LA SILLA IN FEBRUARY 1986

ID1	ID2	ID3	RA	DEC	S	B	S	B	S	B	S	B	S	B	S	B	S	B	S	B
142	143		117974	+46.864	47.82	-0.032	-0.16	-0.024	+0.04									+0.452782	+0.451937	
			117974	+46.864	47.82	-0.032	-0.16	-0.024	+0.04									+0.212305	+0.211915	
			117974	+12.531	27.65	-0.024	-0.06	-0.021	+0.12									-0.145001	-0.144858	
			117943	+16.733	25.58	+0.024	-0.05	+0.024	-0.25									+0.117529	+0.117758	
			117948	+31.114	29.33	+0.007	+0.00	+0.004	+0.05									+0.363185	+0.363249	
144	145		117974	+46.864	47.82	-0.032	-0.03	-0.027	+0.01									+0.524955	+0.524140	
			117948	+48.208	08.43	+0.021	+0.26	+0.014	+0.29									+0.055652	+0.055498	
			117943	+16.733	25.58	+0.042	-0.37	+0.042	-0.50									+0.190328	+0.190322	
			117924	+12.531	27.65	-0.034	-0.03	-0.029	+0.02									-0.184703	-0.183960	
			117932	+29.421	50.20	+0.003	+0.16	-0.000	+0.18									+0.413769	+0.413999	
146	147		117943	+16.733	25.58	+0.001	+0.08	+0.023	-0.02									+0.442930	+0.442127	
			117924	+12.531	27.65	-0.004	-0.05	-0.024	+0.01									+0.204063	+0.203975	
			117920	+45.758	21.58	+0.005	-0.06	+0.003	+0.02									-0.031791	-0.031014	
			117932	+29.421	50.20	-0.004	+0.10	+0.012	-0.03									+0.005441	+0.006180	
			117968	+31.114	29.32	+0.001	-0.00	-0.014	+0.02									+0.379357	+0.378731	
148	149	150	98583	+58.798	12.49	-0.007	-0.33	-0.016	-0.41	-0.015	-0.40							+0.093095	+0.093641	+0.094239
			98593	+48.928	12.97	+0.003	+0.18	+0.010	+0.15	+0.014	+0.22							+0.189257	+0.190140	+0.191088
			98617	+49.047	12.98	+0.006	+0.23	+0.011	+0.33	+0.006	+0.28							+0.079928	+0.078611	+0.077198
			98622	+22.601	44.34	+0.008	+0.27	+0.011	+0.46	+0.001	+0.31							+0.324684	+0.325127	+0.325675
			98631	+56.396	22.27	-0.009	-0.35	-0.015	-0.53	-0.007	-0.41							+0.313035	+0.312420	+0.311799
151	152	153	98622	+22.601	44.34	-0.000	-0.18	-0.002	-0.16	-0.001	-0.15							+0.193896	+0.192519	+0.191124
			98592	+47.758	05.76	+0.007	+0.37	+0.005	+0.33	+0.009	+0.27							+0.206066	+0.206356	+0.206647
			98580	+53.379	06.08	-0.004	-0.29	-0.003	-0.26	-0.005	-0.22							+0.211887	+0.212814	+0.213753
			98593	+48.928	12.97	-0.006	+0.34	+0.001	+0.29	-0.005	+0.31							+0.195226	+0.195141	+0.195058
			98583	+58.798	12.49	+0.003	-0.24	-0.001	-0.21	+0.002	-0.22							+0.192925	+0.193171	+0.193428
154	155	156	98580	+53.379	06.08	-0.029	-0.52	-0.021	-0.35	-0.022	-0.53							+0.244811	+0.244618	+0.244412
			98592	+47.758	05.76	+0.031	+0.36	+0.026	+0.26	+0.030	+0.35							+0.279423	+0.278944	+0.278418
			98593	+48.928	12.97	-0.011	+0.24	-0.014	+0.12	-0.021	+0.29							+0.234695	+0.234291	+0.233886
			98583	+58.798	12.49	+0.003	-0.24	+0.006	-0.13	+0.010	-0.28							+0.170059	+0.170072	+0.170071
			98550	+36.979	07.00	+0.006	+0.16	+0.003	+0.10	+0.003	+0.17							+0.070951	+0.072075	+0.073213
157	158	159	98592	+47.758	05.76	+0.031	+0.37	+0.049	+0.23	+0.046	+0.12							+0.155759	+0.155185	+0.154642
			98580	+53.379	06.08	-0.028	-0.46	-0.042	-0.45	-0.040	-0.40							+0.194270	+0.194040	+0.193821
			98593	+48.928	12.97	-0.011	+0.11	-0.024	+0.37	-0.020	+0.51							+0.147404	+0.147035	+0.146641
			98583	+58.798	12.49	+0.003	-0.18	+0.010	-0.32	+0.007	-0.40							+0.177574	+0.177623	+0.177649
			98550	+36.979	07.00	+0.006	+0.13	+0.007	+0.16	+0.007	+0.17							+0.324992	+0.326117	+0.327247
160	161	162	98550	+36.979	07.00	-0.024	+0.26	-0.024	+0.31	-0.016	+0.37							+0.242016	+0.242122	+0.242218
			98528	+29.717	48.63	+0.012	-0.11	+0.011	-0.08	+0.010	-0.32							+0.188106	+0.188513	+0.188931
			98527	+29.634	27.29	+0.002	-0.04	+0.004	-0.11	-0.000	+0.10							+0.135010	+0.135380	+0.135809
			98580	+53.379	06.08	+0.011	-0.12	+0.011	-0.16	+0.007	-0.13							+0.311394	+0.311017	+0.310576
			98583	+58.797	12.49	-0.001	+0.02	-0.002	+0.04	-0.000	-0.02							+0.123474	+0.122968	+0.122466
163	164	165	98580	+53.379	06.08	-0.034	-0.52	-0.044	-0.45	-0.041	-0.41							+0.102064	+0.101875	+0.101656
			98582	+58.797	12.49	+0.010	-0.30	+0.009	-0.35	-0.001	-0.25							+0.189253	+0.189288	+0.189331
			98550	+36.979	07.00	+0.005	+0.19	+0.008	+0.17	+0.009	+0.14							+0.797002	+0.798127	+0.799245
			98592	+47.758	05.76	+0.041	+0.26	+0.052	+0.21	+0.041	+0.24							-0.072718	-0.073306	-0.073799
			98597	+48.928	12.97	-0.023	+0.46	-0.024	+0.42	-0.008	+0.29							-0.015601	-0.015984	-0.016432
166	167	168	98550	+36.979	07.00	-0.018	-0.21	-0.022	-0.20	-0.017	-0.07							+0.654914	+0.654210	+0.653414
			98527	+29.634	27.29	-0.010	+0.51	-0.015	+0.32	-0.021	-0.04							+0.246212	+0.245905	+0.245556
			98515	+12.842	17.80	+0.001	-0.24	+0.002	-0.16	+0.005	+0.00							-0.012811	-0.013093	-0.013359
			98501	+03.367	14.36	-0.016	-0.06	-0.020	-0.09	-0.017	-0.06							-0.158917	-0.157754	-0.156410
			98528	+29.717	48.63	+0.043	+0.01	+0.056	+0.13	+0.050	+0.16							+0.270603	+0.270732	+0.270799

TABLE 2. STAR RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO	SAC	POSITIONS USED		STAR RESIDUALS								DEPENDENCES		
			S	"	S	"	S	"	S	"	S	"	"		
169	170	171	98527	+29.634	27.29	+0.033	-0.21	+0.004	-0.16	+0.020	-0.14	+0.158210	+0.158111	+0.158122	
			98522	+41.798	10.30	-0.040	+0.00	-0.019	-0.12	-0.036	+0.20	+0.052944	+0.053478	+0.053945	
			98526	+29.717	48.63	+0.019	+0.36	+0.029	+0.51	+0.036	-0.14	+0.187107	+0.187180	+0.187225	
			98550	+36.979	07.00	-0.014	-0.04	-0.009	-0.10	-0.015	+0.08	+0.485543	+0.484271	+0.482970	
172	173	174	98520	+34.701	29.61	+0.002	-0.11	-0.005	-0.13	-0.004	+0.00	+0.116196	+0.116959	+0.117738	
			98528	+29.717	48.63	-0.004	+0.07	-0.006	+0.17	-0.004	+0.07	+0.235310	+0.235281	+0.235228	
			98527	+29.634	27.29	+0.000	-0.11	+0.013	-0.20	+0.008	-0.09	+0.025015	+0.024765	+0.024501	
			98522	+41.798	10.30	+0.001	+0.09	-0.011	+0.13	-0.007	+0.06	+0.025520	+0.025572	+0.025561	
175	176	177	98502	+05.207	03.15	+0.001	-0.04	+0.004	-0.08	+0.003	-0.03	+0.340140	+0.341106	+0.342047	
			98550	+36.979	07.00	+0.002	-0.01	+0.000	-0.04	+0.000	-0.01	+0.374015	+0.373275	+0.372663	
			98528	+29.717	48.63	-0.004	+0.55	+0.003	+0.48	-0.006	+0.38	+0.216737	+0.215547	+0.214434	
			98501	+03.367	14.36	+0.005	-0.82	-0.006	-0.61	+0.008	-0.41	+0.223271	+0.223375	+0.223556	
178	179	180	98485	+56.026	29.01	-0.006	+0.64	+0.003	+0.62	-0.008	+0.53	+0.192845	+0.193853	+0.194829	
			98520	+34.701	29.61	+0.003	-0.41	-0.003	-0.31	+0.004	-0.22	+0.165541	+0.165325	+0.164987	
			98498	+55.808	31.10	-0.016	-0.07	-0.022	+0.14	-0.018	-0.08	+0.654066	+0.654660	+0.655326	
			98509	+47.500	55.95	+0.026	-0.07	+0.033	-0.28	+0.031	+0.06	+0.406785	+0.407192	+0.407460	
181	182	183	98508	+45.440	10.03	-0.010	+0.25	-0.003	+0.22	-0.014	+0.13	-0.149961	-0.149825	-0.149616	
			98542	+59.000	38.87	+0.006	-0.42	-0.009	-0.27	+0.012	-0.26	-0.080091	-0.080529	-0.080998	
			98564	+58.935	14.66	-0.007	+0.25	+0.002	+0.19	-0.010	+0.15	+0.169201	+0.168502	+0.167828	
			98622	+22.601	44.34	-0.024	-0.03	-0.028	+0.12	-0.021	+0.12	+0.300853	+0.301522	+0.302156	
181	182	183	98636	+17.153	49.50	+0.021	-0.14	+0.027	-0.25	+0.023	-0.14	+0.092895	+0.092706	+0.092510	
			98653	+22.403	42.55	-0.004	+0.17	-0.008	+0.17	-0.008	+0.05	-0.094165	-0.095340	-0.096524	
			98612	+49.047	12.98	+0.018	+0.22	+0.017	+0.09	+0.011	-0.06	+0.434334	+0.435123	+0.435938	
			98629	+38.776	52.85	-0.011	-0.22	-0.009	-0.13	-0.005	+0.02	+0.266883	+0.265988	+0.265919	

entric coordinates and for the equinox 1950.0 and the residuals.

For the new asteroids only the calculated positions are presented.

In Table II we give also the ordinal number of each position, the star identification-SAD number, the last digit of and of the star (proper motions are included), the residuals of the reference stars, computed for each of the three exposures and the

dependences.

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183 ФОТОГРАФСКА ПОЛОЖАЈА ДЕВЕТ МАЛИХ ПЛАНЕТА
ПОСМАТРАНИХ СА ESO – LA SILLA У ФЕБРУАРУ 1986. ГОДИНЕ

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УДК 523.44
Стручни чланак

У раду су дати прецизни астрометријски положаји малих планета: 54 Aleksandra, 673 Edda, 809 Lundia, 883 Matterania, 1352 Wawel, 1986 CT1, 1986 CS1, 1986 CZ1 и E 3678.

Фотографска посматрања малих планета реализовао је Н. Дебегне у фебруару 1986. године инструментом GPO (40/400 cm) са Европске јужне опсерваторије, La Silla, Чиле.