

## PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF ESO - LA SILLA IN 1988

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**SUMMARY:** During the mission in September 1988 at La Silla 396 precise astrometric positions of 36 minor planets were obtained. The objects were observed with The Grand Prism Objective (GPO) of La Silla Observatory by H. Debehogne. 25 new minor planets were discovered during this mission. 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.

### INTRODUCTION

The results of photographic observations of 36 minor planets are presented. These objects were observed in September mission 1988 with GPO by H. Debehogne at the European Southern Observatory, La Silla, Chile. 396 precise positions are obtained. 25 new minor planets were discovered.

### OBSERVATIONS, MEASUREMENTS AND REDUCTIONS

Minor planet observations at La Silla were performed using the Kodak II-O plates. Three exposures on each plate were taken. Five reference stars from SAO catalogue were selected per plate. All the plates were measured with Ascorecord Zeiss measuring machine of the Observatoire Royal de Belgique

by H. Debehogne. The method of dependances was applied to obtain the precise positions. In deriving the residuals of star positions the least square method was used. Reduction was carried out in the Uccle Computing Centre using UNIVAC 9200 and the model of computation defined by H. Debehogne.

### RESULTS

The results are presented in Tables 1 and 2. The first one contains derived topocentric coordinates of minor planets ( $\alpha$ ) and ( $\delta$ ) for the Equinox 1950.0. In the Table 2 the dependences are also presented.

*Acknowledgments* – We express our gratitude to the La Silla Optical Service for their care of sensitizing plates.



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	0	'	''	
1	45 Eugenia	12528	9	19.318054	23	6	16.174	-	9	41	21.77
2	45 Eugenia	12528	9	19.323608	23	6	15.907	-	9	41	23.86
3	45 Eugenia	12528	9	19.329163	23	6	15.671	-	9	41	25.87
4	78 Diana	12420	9	10.350342	23	7	50.325	-	2	6	20.71
5	78 Diana	12420	9	10.356598	23	7	49.976	-	2	6	21.93
6	78 Diana	12420	9	10.362854	23	7	49.627	-	2	6	23.17
7	78 Diana	12471	9	14.299652	23	4	11.217	-	2	19	17.83
8	78 Diana	12471	9	14.305908	23	4	10.867	-	2	19	19.04
9	78 Diana	12471	9	14.312164	23	4	10.516	-	2	19	20.23
10	78 Diana	12515	9	18.267365	23	0	34.302	-	2	32	26.24
11	78 Diana	12515	9	18.272919	23	0	33.986	-	2	32	27.31
12	78 Diana	12515	9	18.278473	23	0	33.669	-	2	32	28.26
13	78 Diana	12538	9	20.270477	22	58	46.951	-	2	39	0.41
14	78 Diana	12538	9	20.275360	22	58	46.695	-	2	39	1.34
15	78 Diana	12538	9	20.280212	22	58	46.452	-	2	39	2.42
16	1536 Pielinen	12404	9	9.370483	23	14	59.737	-	3	3	10.46
17	1536 Pielinen	12404	9	9.376740	23	14	59.442	-	3	3	13.26
18	1536 Pielinen	12404	9	9.382980	23	14	59.147	-	3	3	15.69
19	1536 Pielinen	12436	9	11.371872	23	13	24.078	-	3	16	22.03
20	1536 Pielinen	12436	9	11.378128	23	13	23.784	-	3	16	24.81
21	1536 Pielinen	12436	9	11.384369	23	13	23.488	-	3	16	27.22
22	1536 Pielinen	12526	9	19.281586	23	7	15.446	-	4	8	40.44
23	1536 Pielinen	12526	9	19.286469	23	7	15.242	-	4	8	42.28
24	1536 Pielinen	12526	9	19.291321	23	7	15.022	-	4	8	44.13
25	1536 Pielinen	12540	9	20.306610	23	6	30.463	-	4	15	13.86
26	1536 Pielinen	12540	9	20.311462	23	6	30.227	-	4	15	15.74
27	1536 Pielinen	12540	9	20.316315	23	6	29.991	-	4	15	17.86
28	1907 Rudneva	12307	9	3.256592	23	20	25.510	-	5	36	21.88
29	1907 Rudneva	12307	9	3.262848	23	20	25.215	-	5	36	24.32
30	1907 Rudneva	12307	9	3.269104	23	20	24.920	-	5	36	26.77
31	1907 Rudneva	12351	9	6.387848	23	17	49.909	-	5	57	3.73
32	1907 Rudneva	12351	9	6.394104	23	17	49.606	-	5	57	6.35
33	1907 Rudneva	12351	9	6.400345	23	17	49.270	-	5	57	8.80
34	1907 Rudneva	12386	9	8.351044	23	16	11.216	-	6	10	6.49
35	1907 Rudneva	12386	9	8.357285	23	16	10.905	-	6	10	8.89
36	1907 Rudneva	12386	9	8.363541	23	16	10.595	-	6	10	11.20
37	1907 Rudneva	12421	9	10.371872	23	14	28.963	-	6	23	29.47
38	1907 Rudneva	12421	9	10.378128	23	14	28.654	-	6	23	31.85
39	1907 Rudneva	12421	9	10.384369	23	14	28.342	-	6	23	34.24
40	1907 Rudneva	12445	9	12.350342	23	12	49.020	-	6	36	29.47
41	1907 Rudneva	12445	9	12.356598	23	12	48.707	-	6	36	32.11
42	1907 Rudneva	12445	9	12.362854	23	12	48.394	-	6	36	34.54
43	1907 Rudneva	12527	9	19.300690	23	7	5.212	-	7	20	33.47
44	1907 Rudneva	12527	9	19.306244	23	7	4.954	-	7	20	35.71
45	1907 Rudneva	12527	9	19.311798	23	7	4.692	-	7	20	37.68
46	1907 Rudneva	12530	9	20.034729	23	6	30.587	-	7	24	59.85
47	1907 Rudneva	12530	9	20.040283	23	6	30.324	-	7	25	1.80
48	1907 Rudneva	12530	9	20.045837	23	6	30.058	-	7	25	3.82
49	2057 Rosemary	12307	9	3.256592	23	21	31.662	-	5	25	23.27
50	2057 Rosemary	12307	9	3.262848	23	21	31.399	-	5	25	24.76



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	O	'	"	
51	2057 Rosemary	12307	9	3.269104	23	21	31.136	-	5	25	26.29
52	2057 Rosemary	12351	9	6.387848	23	19	10.910	-	5	38	34.63
53	2057 Rosemary	12351	9	6.394104	23	19	10.617	-	5	38	36.19
54	2057 Rosemary	12351	9	6.400345	23	19	10.331	-	5	38	37.65
55	2057 Rosemary	12386	9	8.351044	23	17	40.828	-	5	46	57.78
56	2057 Rosemary	12386	9	8.357285	23	17	40.532	-	5	46	59.39
57	2057 Rosemary	12386	9	8.363541	23	17	40.217	-	5	47	1.17
58	2057 Rosemary	12421	9	10.371872	23	16	6.808	-	5	55	39.52
59	2057 Rosemary	12421	9	10.378128	23	16	6.520	-	5	55	41.04
60	2057 Rosemary	12421	9	10.384369	23	16	6.227	-	5	55	42.38
61	2057 Rosemary	12445	9	12.350342	23	14	34.338	-	6	4	7.90
62	2057 Rosemary	12445	9	12.356598	23	14	34.043	-	6	4	9.48
63	2057 Rosemary	12445	9	12.362854	23	14	33.749	-	6	4	11.08
64	2057 Rosemary	12504	9	17.334381	23	10	42.215	-	6	25	2.37
65	2057 Rosemary	12504	9	17.340637	23	10	41.941	-	6	25	3.78
66	2057 Rosemary	12504	9	17.346863	23	10	41.638	-	6	25	5.16
67	2057 Rosemary	12508	9	18.078461	23	10	8.577	-	6	28	4.20
68	2057 Rosemary	12508	9	18.084015	23	10	8.314	-	6	28	5.43
69	2057 Rosemary	12508	9	18.089569	23	10	8.072	-	6	28	6.90
70	2057 Rosemary	12531	9	20.054871	23	8	38.948	-	6	35	57.38
71	2057 Rosemary	12531	9	20.060425	23	8	38.706	-	6	35	58.67
72	2057 Rosemary	12531	9	20.065979	23	8	38.457	-	6	35	59.91
73	2428 Kamenyar	12494	9	16.342712	23	16	37.488	-	9	57	39.88
74	2428 Kamenyar	12494	9	16.348969	23	16	37.200	-	9	57	40.00
75	2428 Kamenyar	12494	9	16.355194	23	16	36.910	-	9	57	40.17
76	2428 Kamenyar	12503	9	17.310760	23	15	49.928	-	9	59	21.56
77	2428 Kamenyar	12503	9	17.317017	23	15	49.653	-	9	59	22.08
78	2428 Kamenyar	12503	9	17.323273	23	15	49.362	-	9	59	22.70
79	2428 Kamenyar	12507	9	18.055206	23	15	14.033	-	10	0	37.06
80	2428 Kamenyar	12507	9	18.061096	23	15	13.770	-	10	0	37.48
81	2428 Kamenyar	12507	9	18.067017	23	15	13.474	-	10	0	38.32
82	2472 1973 DG	12307	9	3.256592	23	17	47.137	-	4	23	7.76
83	2472 1973 DG	12307	9	3.262848	23	17	46.773	-	4	23	9.57
84	2472 1973 DG	12307	9	3.269104	23	17	46.410	-	4	23	11.03
85	2845 Franklinken	12494	9	16.342712	23	14	37.585	-	10	12	40.15
86	2845 Franklinken	12494	9	16.348969	23	14	37.294	-	10	12	43.00
87	2845 Franklinken	12494	9	16.355194	23	14	37.003	-	10	12	45.48
88	2845 Franklinken	12503	9	17.310760	23	13	48.968	-	10	20	47.86
89	2845 Franklinken	12503	9	17.317017	23	13	48.674	-	10	20	50.68
90	2845 Franklinken	12503	9	17.323273	23	13	48.382	-	10	20	53.46
91	2845 Franklinken	12507	9	18.055206	23	13	12.733	-	10	26	56.34
92	2845 Franklinken	12507	9	18.061096	23	13	12.479	-	10	26	58.86
93	2845 Franklinken	12507	9	18.067017	23	13	12.204	-	10	27	1.43
94	2845 Franklinken	12528	9	19.318054	23	12	10.046	-	10	37	4.39
95	2845 Franklinken	12528	9	19.323608	23	12	9.790	-	10	37	6.89
96	2845 Franklinken	12528	9	19.329163	23	12	9.532	-	10	37	9.37
97	2984 Chaucer	12494	9	16.342712	23	16	56.270	-	9	53	34.25
98	2984 Chaucer	12494	9	16.348969	23	16	55.948	-	9	53	36.13
99	2984 Chaucer	12494	9	16.355194	23	16	55.610	-	9	53	38.00
100	2984 Chaucer	12507	9	18.055206	23	15	25.037	-	10	2	42.65



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950				
			MON.	DAY	H	M	S	O	'	"		
101	2984	Chaucer	12507	9	18.061096	23	15	24.749	-10	2	44	52
102	2984	Chaucer	12507	9	18.067017	23	15	24.439	-10	2	46	23
103	3161	Beadell	12351	9	6.387848	23	23	14.746	-6	1	44	49
104	3161	Beadell	12351	9	6.394104	23	23	14.343	-6	1	44	75
105	3161	Beadell	12351	9	6.400345	23	23	13.939	-6	1	45	00
106	3161	Beadell	12386	9	8.351044	23	21	6.414	-6	2	41	79
107	3161	Beadell	12386	9	8.357285	23	21	5.986	-6	2	42	00
108	3161	Beadell	12386	9	8.363541	23	21	5.563	-6	2	42	03
109	3161	Beadell	12421	9	10.371872	23	18	53.951	-6	3	37	76
110	3161	Beadell	12421	9	10.378128	23	18	53.551	-6	3	37	91
111	3161	Beadell	12421	9	10.384369	23	18	53.124	-6	3	38	40
112	3161	Beadell	12445	9	12.350342	23	16	44.748	-6	4	28	24
113	3161	Beadell	12445	9	12.356598	23	16	44.343	-6	4	28	23
114	3161	Beadell	12445	9	12.362854	23	16	43.952	-6	4	28	40
115	3161	Beadell	12508	9	18.078461	23	10	38.339	-6	6	7	87
116	3161	Beadell	12508	9	18.084015	23	10	38.007	-6	6	7	92
117	3161	Beadell	12508	9	18.089569	23	10	37.676	-6	6	8	00
118	3161	Beadell	12531	9	20.054871	23	8	36.104	-6	6	22	00
119	3161	Beadell	12531	9	20.060425	23	8	35.775	-6	6	22	00
120	3161	Beadell	12531	9	20.065979	23	8	35.462	-6	6	21	94
121	3364	1984 GF	12494	9	16.342712	23	13	2.736	-9	26	24	69
122	3364	1984 GF	12494	9	16.348969	23	13	2.423	-9	26	27	44
123	3364	1984 GF	12494	9	16.355194	23	13	2.119	-9	26	30	26
124	3364	1984 GF	12503	9	17.310760	23	12	11.149	-9	34	20	57
125	3364	1984 GF	12503	9	17.317017	23	12	10.826	-9	34	23	32
126	3364	1984 GF	12503	9	17.323273	23	12	10.516	-9	34	26	14
127	3364	1984 GF	12507	9	18.055206	23	11	32.349	-9	40	21	35
128	3364	1984 GF	12507	9	18.061096	23	11	32.050	-9	40	24	04
129	3364	1984 GF	12507	9	18.067017	23	11	31.746	-9	40	26	66
130	3364	1984 GF	12528	9	19.318054	23	10	25.692	-9	50	22	73
131	3364	1984 GF	12528	9	19.323608	23	10	25.420	-9	50	25	25
132	3364	1984 GF	12528	9	19.329163	23	10	25.142	-9	50	28	14
133		1988 RL6	12351	9	6.387848	23	22	11.795	-5	56	4	22
134		1988 RL6	12351	9	6.394104	23	22	11.523	-5	56	2	83
135		1988 RL6	12351	9	6.400345	23	22	11.253	-5	56	12	76
136		1988 RL6	12386	9	8.351044	23	20	45.549	-6	16	54	04
137		1988 RL6	12386	9	8.357285	23	20	45.272	-6	16	58	02
138		1988 RL6	12386	9	8.363541	23	20	45.011	-6	17	2	10
139		1988 RL6	12445	9	12.350342	23	17	47.591	-6	59	3	87
140		1988 RL6	12445	9	12.356598	23	17	47.300	-6	59	7	91
141		1988 RL6	12445	9	12.362854	23	17	47.025	-6	59	12	03
142		1988 RL6	12527	9	19.300690	23	12	45.163	-8	9	26	43
143		1988 RL6	12527	9	19.306244	23	12	44.912	-8	9	29	22
144		1988 RL6	12527	9	19.311798	23	12	44.670	-8	9	32	23
145		1988 RL6	12530	9	20.034729	23	12	15.323	-8	16	32	12
146		1988 RL6	12530	9	20.040283	23	12	15.094	-8	16	35	22
147		1988 RL6	12530	9	20.045837	23	12	14.846	-8	16	38	42
148		1988 RU4	12420	9	10.350342	23	8	53.620	-2	32	13	42
149		1988 RU4	12420	9	10.356598	23	8	53.280	-2	32	15	74
150		1988 RU4	12420	9	10.362854	23	8	52.940	-2	32	18	07



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	O	'	"	
151	1988 RU4	12471	9	14.299652	23	5	22.622	-	2	56	28.09
152	1988 RU4	12471	9	14.305908	23	5	22.282	-	2	56	30.12
153	1988 RU4	12471	9	14.312164	23	5	21.942	-	2	56	32.15
154	1988 RU4	12515	9	18.267365	23	1	59.070	-	3	20	23.12
155	1988 RU4	12515	9	18.272919	23	1	58.779	-	3	20	25.00
156	1988 RU4	12515	9	18.278473	23	1	58.486	-	3	20	27.02
157	1988 RU4	12538	9	20.270477	23	0	20.835	-	3	32	8.51
158	1988 RU4	12538	9	20.275360	23	0	20.594	-	3	32	10.25
159	1988 RU4	12538	9	20.280212	23	0	20.334	-	3	32	12.00
160	1988 RV4	12404	9	9.370483	23	15	48.399	-	2	27	0.69
161	1988 RV4	12404	9	9.376740	23	15	48.091	-	2	27	2.26
162	1988 RV4	12404	9	9.382980	23	15	47.795	-	2	27	3.92
163	1988 RV4	12436	9	11.371872	23	14	8.897	-	2	36	4.07
164	1988 RV4	12436	9	11.378128	23	14	8.582	-	2	36	5.72
165	1988 RV4	12436	9	11.384369	23	14	8.317	-	2	36	8.17
166	1988 RV4	13471	9	14.321533	23	11	43.396	-	2	49	33.34
167	1988 RV4	13471	9	14.328461	23	11	43.045	-	2	49	35.21
168	1988 RV4	13471	9	14.335419	23	11	42.704	-	2	49	37.14
169	1988 RV4	12516	9	18.287506	23	8	32.805	-	3	7	31.94
170	1988 RV4	12516	9	18.293060	23	8	32.539	-	3	7	33.45
171	1988 RV4	12516	9	18.298615	23	8	32.249	-	3	7	35.00
172	1988 RV4	12526	9	19.281586	23	7	46.450	-	3	11	57.42
173	1988 RV4	12526	9	19.286469	23	7	46.223	-	3	11	58.84
174	1988 RV4	12526	9	19.291321	23	7	46.000	-	3	12	0.13
175	1988 RV4	12540	9	20.306610	23	6	59.342	-	3	16	28.66
176	1988 RV4	12540	9	20.311462	23	6	59.119	-	3	16	30.00
177	1988 RV4	12540	9	20.316315	23	6	58.896	-	3	16	31.28
178	1988 RW4	12404	9	9.370483	23	16	7.285	-	3	25	12.44
179	1988 RW4	12404	9	9.376740	23	16	6.863	-	3	25	13.48
180	1988 RW4	12404	9	9.382980	23	16	6.429	-	3	25	14.69
181	1988 RB6	12307	9	3.256592	23	21	49.168	-	5	17	36.04
182	1988 RB6	12307	9	3.262848	23	21	48.961	-	5	17	41.74
183	1988 RB6	12307	9	3.269104	23	21	48.756	-	5	17	47.44
184	1988 RB6	12351	9	6.387848	23	20	5.094	-	6	5	17.82
185	1988 RB6	12351	9	6.394104	23	20	4.887	-	6	5	23.50
186	1988 RB6	12351	9	6.400345	23	20	4.680	-	6	5	29.13
187	1988 RB6	12386	9	8.351044	23	18	58.393	-	6	35	9.10
188	1988 RB6	12386	9	8.357285	23	18	58.199	-	6	35	14.88
189	1988 RB6	12386	9	8.363541	23	18	57.986	-	6	35	20.59
190	1988 RB6	12421	9	10.371872	23	17	49.022	-	7	5	41.07
191	1988 RB6	12421	9	10.378128	23	17	48.813	-	7	5	46.72
192	1988 RB6	12421	9	10.384369	23	17	48.601	-	7	5	52.28
193	1988 RB6	12494	9	16.342712	23	14	27.000	-	8	33	20.01
194	1988 RB6	12494	9	16.348969	23	14	26.786	-	8	33	25.27
195	1988 RB6	12494	9	16.355194	23	14	26.574	-	8	33	30.81
196	1988 RB6	12503	9	17.310760	23	13	55.480	-	8	47	1.72
197	1988 RB6	12503	9	17.317017	23	13	55.278	-	8	47	6.85
198	1988 RB6	12503	9	17.323273	23	13	55.070	-	8	47	12.10
199	1988 RB6	12507	9	18.055206	23	13	32.302	-	8	57	25.69
200	1988 RB6	12507	9	18.061096	23	13	32.100	-	8	57	30.63



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	O	'	"	
201	1988 RB6	12507	9	18.067017	23	13	31.896	-	8	57	35.55
202	1988 RB6	12527	9	19.300690	23	12	52.318	-	9	14	35.15
203	1988 RB6	12527	9	19.306244	23	12	52.138	-	9	14	39.87
204	1988 RB6	12527	9	19.311798	23	12	51.958	-	9	14	44.52
205	1988 RB6	12528	9	19.318054	23	12	51.746	-	9	14	49.48
206	1988 RB6	12528	9	19.323608	23	12	51.565	-	9	14	54.07
207	1988 RB6	12528	9	19.329163	23	12	51.389	-	9	14	58.72
208	1988 RR9	12386	9	8.351044	23	17	13.580	-	5	41	36.54
209	1988 RR9	12386	9	8.357285	23	17	13.291	-	5	41	38.30
210	1988 RR9	12386	9	8.363541	23	17	13.000	-	5	41	40.10
211	1988 RR9	12421	9	10.371872	23	15	40.938	-	5	51	19.05
212	1988 RR9	12421	9	10.378128	23	15	40.656	-	5	51	20.81
213	1988 RR9	12421	9	10.384369	23	15	40.364	-	5	51	22.55
214	1988 RR9	12445	9	12.350342	23	14	9.832	-	6	0	47.09
215	1988 RR9	12445	9	12.356598	23	14	9.554	-	6	0	48.72
216	1988 RR9	12445	9	12.362854	23	14	9.269	-	6	0	50.49
217	1988 RR9	12508	9	18.078461	23	9	47.612	-	6	27	50.70
218	1988 RR9	12508	9	18.084015	23	9	47.364	-	6	27	52.24
219	1988 RR9	12508	9	18.089569	23	9	47.114	-	6	27	54.12
220	1988 RJ6	12420	9	10.350342	23	6	9.164	-	2	22	20.53
221	1988 RJ6	12420	9	10.356598	23	6	8.808	-	2	22	21.41
222	1988 RJ6	12420	9	10.362854	23	6	8.447	-	2	22	22.25
223	1988 RJ6	12471	9	14.299652	23	2	22.141	-	2	31	34.16
224	1988 RJ6	12471	9	14.305908	23	2	21.788	-	2	31	35.06
225	1988 RJ6	12471	9	14.312164	23	2	21.436	-	2	31	36.00
226	1988 RJ6	12515	9	18.267365	22	58	39.128	-	2	41	4.58
227	1988 RJ6	12515	9	18.272919	22	58	38.818	-	2	41	5.43
228	1988 RJ6	12515	9	18.278473	22	58	38.504	-	2	41	6.31
229	1988 RJ6	12538	9	20.270477	22	56	50.384	-	2	45	49.04
230	1988 RJ6	12538	9	20.275360	22	56	50.119	-	2	45	49.71
231	1988 RJ6	12538	9	20.280212	22	56	49.866	-	2	45	50.62
232	1988 RR6	12404	9	9.370483	23	15	55.879	-	2	14	16.49
233	1988 RR6	12404	9	9.376740	23	15	55.588	-	2	14	20.75
234	1988 RR6	12404	9	9.382980	23	15	55.297	-	2	14	24.77
235	1988 RR6	12436	9	11.371872	23	14	23.441	-	2	35	46.16
236	1988 RR6	12436	9	11.378128	23	14	23.149	-	2	35	50.14
237	1988 RR6	12436	9	11.384369	23	14	22.857	-	2	35	54.14
238	1988 RR6	13471	9	14.321533	23	12	8.246	-	3	7	33.51
239	1988 RR6	13471	9	14.328461	23	12	7.928	-	3	7	38.01
240	1988 RR6	13471	9	14.335419	23	12	7.612	-	3	7	42.13
241	1988 RR6	12526	9	19.281586	23	8	29.406	-	4	0	13.30
242	1988 RR6	12526	9	19.286469	23	8	29.167	-	4	0	16.36
243	1988 RR6	12526	9	19.291321	23	8	28.963	-	4	0	19.46
244	1988 RR6	12540	9	20.306610	23	7	46.245	-	4	10	52.09
245	1988 RR6	12540	9	20.311462	23	7	46.035	-	4	10	54.87
146 246	1988 RR6	12540	9	20.316315	23	7	45.830	-	4	10	58.21
247	1988 RK6	12420	9	10.350342	23	7	35.155	-	2	21	5.20
248	1988 RK6	12420	9	10.356598	23	7	34.871	-	2	21	9.19
249	1988 RK6	12420	9	10.362854	23	7	34.585	-	2	21	13.17
250	1988 RK6	12471	9	14.299652	23	4	36.654	-	3	3	5.74



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	O	'	"	
251	1988 RK6	12471	9	14.305908	23	4	36.368	-	3	3	9.73
252	1988 RK6	12471	9	14.312164	23	4	36.084	-	3	3	13.68
253	1988 RK6	12515	9	18.267365	23	1	44.332	-	3	45	0.94
254	1988 RK6	12515	9	18.272919	23	1	44.093	-	3	45	4.62
255	1988 RK6	12515	9	18.278473	23	1	43.854	-	3	45	8.41
256	1988 RK6	12538	9	20.270477	23	0	21.708	-	4	5	48.06
257	1988 RK6	12538	9	20.275360	23	0	21.509	-	4	5	51.06
258	1988 RK6	12538	9	20.280212	23	0	21.309	-	4	5	54.33
259	1988 R09	12307	9	3.256592	23	15	32.068	-	4	51	14.38
260	1988 R09	12307	9	3.262848	23	15	31.725	-	4	51	16.84
261	1988 R09	12307	9	3.269104	23	15	31.389	-	4	51	19.23
262	1988 RC7	12420	9	10.350342	23	10	28.730	-	1	24	46.48
263	1988 RC7	12420	9	10.356598	23	10	28.489	-	1	24	51.82
264	1988 RC7	12420	9	10.362854	23	10	28.250	-	1	24	57.14
265	1988 RC7	12471	9	14.299652	23	7	56.278	-	2	20	34.29
266	1988 RC7	12471	9	14.305908	23	7	56.028	-	2	20	39.61
267	1988 RC7	12471	9	14.312164	23	7	55.794	-	2	20	44.89
268	1988 RC7	12526	9	19.281586	23	4	50.671	-	3	31	34.10
269	1988 RC7	12526	9	19.286469	23	4	50.489	-	3	31	38.00
270	1988 RC7	12526	9	19.291321	23	4	50.311	-	3	31	42.00
271	1988 RC7	12540	9	20.306610	23	4	14.205	-	3	46	4.56
272	1988 RC7	12540	9	20.311462	23	4	14.019	-	3	46	8.53
273	1988 RC7	12540	9	20.316315	23	4	13.846	-	3	46	12.78
274	E4155	12386	9	8.351044	23	21	3.402	-	6	45	52.19
275	E4155	12386	9	8.357285	23	21	3.054	-	6	45	52.00
276	E4155	12386	9	8.363541	23	21	2.702	-	6	45	51.73
277	E4155	12421	9	10.371872	23	19	9.342	-	6	44	41.70
278	E4155	12421	9	10.378128	23	19	9.000	-	6	44	41.45
279	E4155	12421	9	10.384369	23	19	8.653	-	6	44	41.24
280	E4155	12445	9	12.350342	23	17	17.624	-	6	43	27.34
281	E4155	12445	9	12.356598	23	17	17.244	-	6	43	27.19
282	E4155	12445	9	12.362854	23	17	16.888	-	6	43	27.00
283	E4155	12504	9	17.334381	23	12	38.827	-	6	39	45.04
284	E4155	12504	9	17.340637	23	12	38.472	-	6	39	44.72
285	E4155	12504	9	17.346863	23	12	38.116	-	6	39	44.40
286	E4155	12508	9	18.078461	23	11	58.326	-	6	39	7.68
287	E4155	12508	9	18.084015	23	11	58.023	-	6	39	7.37
288	E4155	12508	9	18.089569	23	11	57.701	-	6	39	7.02
289	E4155	12531	9	20.054871	23	10	10.840	-	6	37	17.30
290	E4155	12531	9	20.060425	23	10	10.522	-	6	37	17.09
291	E4155	12531	9	20.065979	23	10	10.197	-	6	37	16.75
292	9522 P-L	12527	9	19.300690	23	8	8.070	-	8	32	46.14
293	9522 P-L	12527	9	19.306244	23	8	7.780	-	8	32	46.71
294	9522 P-L	12527	9	19.311798	23	8	7.471	-	8	32	47.34
295	9522 P-L	12530	9	20.034729	23	7	30.585	-	8	34	9.03
296	9522 P-L	12530	9	20.040283	23	7	30.304	-	8	34	10.00
297	9522 P-L	12530	9	20.045837	23	7	30.004	-	8	34	10.59
298	1988 RZ6	12404	9	9.370483	23	16	25.170	-	1	48	29.52
299	1988 RZ6	12404	9	9.376740	23	16	24.830	-	1	48	32.69
300	1988 RZ6	12404	9	9.382980	23	16	24.489	-	1	48	36.00



TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	O	'	"	
301	1988 RZ6	12436	9	11.371872	23	14	37.748	-	2	5	41.35
302	1988 RZ6	12436	9	11.378128	23	14	37.410	-	2	5	44.56
303	1988 RZ6	12436	9	11.384369	23	14	37.072	-	2	5	47.71
304	1988 RZ6	13471	9	14.321533	23	12	1.483	-	2	31	2.29
305	1988 RZ6	13471	9	14.328461	23	12	1.114	-	2	31	6.18
306	1988 RZ6	13471	9	14.335419	23	12	0.749	-	2	31	9.76
307	1988 RZ6	12516	9	18.287506	23	8	38.757	-	3	4	34.49
308	1988 RZ6	12516	9	18.293060	23	8	38.475	-	3	4	37.35
309	1988 RZ6	12516	9	18.298615	23	8	38.192	-	3	4	40.16
310	1988 RZ6	12526	9	19.281586	23	7	49.824	-	3	12	48.56
311	1988 RZ6	12526	9	19.286469	23	7	49.585	-	3	12	51.00
312	1988 RZ6	12526	9	19.291321	23	7	49.336	-	3	12	53.40
313	1988 RZ6	12540	9	20.306610	23	7	0.236	-	3	21	11.49
314	1988 RZ6	12540	9	20.311462	23	7	0.002	-	3	21	13.88
315	1988 RZ6	12540	9	20.316315	23	6	59.769	-	3	21	16.20
316	1988 SJ1	12539	9	20.287842	23	6	26.819	-	0	51	51.00
317	1988 SJ1	12539	9	20.292694	23	6	26.578	-	0	51	52.73
318	1988 SJ1	12539	9	20.297577	23	6	26.341	-	0	51	54.48
319	1988 SK1	12539	9	20.287842	23	7	15.108	-	0	27	4.87
320	1988 SK1	12539	9	20.292694	23	7	14.826	-	0	27	6.67
321	1988 SK1	12539	9	20.297577	23	7	14.561	-	0	27	8.48
322	1988 SH1	12539	9	20.287842	23	0	18.153	-	1	18	19.35
323	1988 SH1	12539	9	20.292694	23	0	17.916	-	1	18	21.83
324	1988 SH1	12539	9	20.297577	23	0	17.680	-	1	18	24.42
325	1988 RB7	12420	9	10.350342	23	7	56.339	-	1	24	54.47
326	1988 RB7	12420	9	10.356598	23	7	56.092	-	1	24	58.27
327	1988 RB7	12420	9	10.362854	23	7	55.847	-	1	25	2.01
328	1988 RB7	12515	9	18.267365	23	2	42.873	-	2	44	54.74
329	1988 RB7	12515	9	18.272919	23	2	42.654	-	2	44	58.06
330	1988 RB7	12515	9	18.278473	23	2	42.436	-	2	45	1.43
331	1988 RQ9	12404	9	9.370483	23	20	23.990	-	3	20	39.10
332	1988 RQ9	12404	9	9.376740	23	20	23.668	-	3	20	39.80
333	1988 RQ9	12404	9	9.382980	23	20	23.339	-	3	20	40.52
334	1988 RQ9	12436	9	11.371872	23	18	39.965	-	3	24	1.00
335	1988 RQ9	12436	9	11.378128	23	18	39.637	-	3	24	1.55
336	1988 RQ9	12436	9	11.384369	23	18	39.324	-	3	24	2.48
337	1988 RQ9	13471	9	14.321533	23	16	6.831	-	3	29	0.85
338	1988 RQ9	13471	9	14.328461	23	16	6.466	-	3	29	1.67
339	1988 RQ9	13471	9	14.335419	23	16	6.104	-	3	29	2.52
340	1988 RQ9	12516	9	18.287506	23	12	43.547	-	3	35	40.22
341	1988 RQ9	12516	9	18.293060	23	12	43.275	-	3	35	40.68
342	1988 RQ9	12516	9	18.298615	23	12	42.989	-	3	35	41.31
343	1988 RQ9	12526	9	19.281586	23	11	53.506	-	3	37	17.35
344	1988 RQ9	12526	9	19.286469	23	11	53.262	-	3	37	17.79
345	1988 RQ9	12526	9	19.291321	23	11	53.017	-	3	37	18.21
346	1988 RY9	12436	9	11.371872	23	19	40.012	-	1	34	44.30
347	1988 RY9	12436	9	11.378128	23	19	39.681	-	1	34	47.00
348	1988 RY9	12436	9	11.384369	23	19	39.353	-	1	34	49.65
349	1988 RY9	13471	9	14.321533	23	17	6.074	-	1	55	51.15
350	1988 RY9	13471	9	14.328461	23	17	5.708	-	1	55	54.10



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 1. POSITIONS.

NO	OBJECT	PLATE	DATE UT 1988		ALPHA 1950			DELTA 1950			
			MON.	DAY	H	M	S	0	'	''	
351	1988 RY9	13471	9	14.335419	23	17	5.340	-	1	55	57.06
352	1988 RY9	12516	9	18.287506	23	13	46.211	-	2	22	14.84
353	1988 RY9	12516	9	18.293060	23	13	45.934	-	2	22	17.02
354	1988 RY9	12516	9	18.298615	23	13	45.656	-	2	22	19.03
355	1988 RH8	12516	9	18.287506	23	15	32.578	-	2	35	34.53
356	1988 RH8	12516	9	18.293060	23	15	32.225	-	2	35	35.55
357	1988 RH8	12516	9	18.298615	23	15	31.873	-	2	35	36.69
358	4016 P-L	12436	9	11.371872	23	21	13.382	-	2	45	17.12
359	4016 P-L	12436	9	11.378128	23	21	13.058	-	2	45	18.37
360	4016 P-L	12436	9	11.384369	23	21	12.738	-	2	45	19.69
361	4016 P-L	13471	9	14.321533	23	18	42.623	-	2	55	47.74
362	4016 P-L	13471	9	14.328461	23	18	42.274	-	2	55	49.25
363	4016 P-L	13471	9	14.335419	23	18	41.917	-	2	55	50.67
364	4016 P-L	12516	9	18.287506	23	15	21.905	-	3	9	57.77
365	4016 P-L	12516	9	18.293060	23	15	21.625	-	3	9	59.01
366	4016 P-L	12516	9	18.298615	23	15	21.345	-	3	10	0.39
367	1988 SG1	12516	9	18.287506	23	8	15.988	-	3	39	6.10
368	1988 SG1	12516	9	18.293060	23	8	15.568	-	3	39	11.35
369	1988 SG1	12516	9	18.298615	23	8	15.158	-	3	39	16.61
370	1981 JA	12307	9	3.256592	23	22	53.306	-	5	0	30.58
371	1981 JA	12307	9	3.262848	23	22	53.052	-	5	0	32.31
372	1981 JA	12307	9	3.269104	23	22	52.799	-	5	0	34.14
373	1981 JA	12351	9	6.387848	23	20	40.585	-	5	15	45.67
374	1981 JA	12351	9	6.394104	23	20	40.319	-	5	15	47.51
375	1981 JA	12351	9	6.400345	23	20	40.052	-	5	15	49.31
376	1981 JA	12386	9	8.351044	23	19	16.448	-	5	25	22.60
377	1981 JA	12386	9	8.357285	23	19	16.179	-	5	25	24.47
378	1981 JA	12386	9	8.363541	23	19	15.914	-	5	25	26.30
379	1981 JA	12421	9	10.371872	23	17	49.345	-	5	35	17.30
380	1981 JA	12421	9	10.378128	23	17	49.082	-	5	35	19.07
381	1981 JA	12421	9	10.384369	23	17	48.813	-	5	35	20.88
382	1981 JA	12445	9	12.350342	23	16	24.039	-	5	44	55.85
383	1981 JA	12445	9	12.356598	23	16	23.765	-	5	44	58.00
384	1981 JA	12445	9	12.362854	23	16	23.498	-	5	44	59.78
385	1981 JA	12508	9	18.078461	23	12	19.982	-	6	12	18.55
386	1981 JA	12508	9	18.084015	23	12	19.744	-	6	12	20.11
387	1981 JA	12508	9	18.089569	23	12	19.504	-	6	12	21.80
388	1981 JA	12531	9	20.054871	23	10	57.700	-	6	21	26.63
389	1981 JA	12531	9	20.060425	23	10	57.468	-	6	21	28.06
390	1981 JA	12531	9	20.065979	23	10	57.237	-	6	21	29.53
391	1988 SE1	12494	9	16.342712	23	14	58.000	-	9	22	0.73
392	1988 SE1	12494	9	16.348969	23	14	56.953	-	9	21	56.22
393	1988 SE1	12494	9	16.355194	23	14	55.910	-	9	21	51.77
394	1988 SE1	12507	9	18.055206	23	10	15.803	-	9	3	13.44
395	1988 SE1	12507	9	18.061096	23	10	14.899	-	9	3	7.30
396	1988 SE1	12507	9	18.067017	23	10	13.924	-	9	3	3.70



TABLE 5. DIAM RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO SAO	POSITIONS USED	STAR RESIDUALS			DEPENDENCES					
			S	'	''	S	'	''			
1	146536	+42.538	+0.012	-0.41	+0.000	-0.33	+0.013	-0.31	+0.376181	+0.376348	+0.376442
2	146518	+5.592	-0.006	+0.35	+0.003	+0.29	-0.008	+0.27	+0.481371	+0.482143	+0.482864
3	146556	+18.768	-0.011	-0.02	-0.008	-0.06	-0.007	-0.02	+0.140435	+0.139835	+0.139288
4	165545	+52.243	-0.001	-0.22	-0.005	-0.20	+0.002	-0.16	+0.023608	+0.023867	+0.024109
5	146563	+22.370	+0.005	+0.30	+0.010	+0.29	+0.000	+0.23	-0.021595	-0.022194	-0.022704
6	146552	+7.360	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.257742	+0.257720	+0.257695
7	146553	+7.967	+0.011	-0.07	+0.011	-0.07	+0.011	-0.07	+0.197634	+0.197418	+0.197202
8	146572	+59.684	-0.030	+0.26	-0.030	+0.26	-0.030	+0.26	+0.112596	+0.111705	+0.110819
9	146531	+29.370	+0.044	-0.39	+0.044	-0.39	+0.044	-0.39	+0.172583	+0.172858	+0.173135
10	146519	+6.237	-0.043	+0.38	-0.043	+0.38	-0.043	+0.38	+0.259445	+0.260298	+0.261149
11	146531	+29.370	-0.001	+0.11	-0.001	+0.11	-0.001	+0.11	+0.032800	+0.032645	+0.032484
12	146533	+35.810	+0.001	-0.10	+0.001	-0.10	+0.001	-0.10	+0.238219	+0.237647	+0.237073
13	146519	+6.237	+0.001	-0.03	+0.001	-0.03	+0.001	-0.03	+0.329804	+0.329364	+0.328926
14	146487	+44.103	-0.001	+0.06	-0.001	+0.06	-0.001	+0.06	+0.435659	+0.435712	+0.435771
15	146478	+59.523	+0.001	-0.05	+0.001	-0.05	+0.001	-0.05	-0.036482	-0.035368	-0.034254
16	146452	+58.978	+0.003	-0.03	+0.016	-0.04	+0.003	-0.04	+0.267108	+0.267455	+0.267815
17	146487	+44.103	+0.011	-0.10	+0.006	-0.06	+0.015	-0.04	+0.259369	+0.259113	+0.258864
18	146507	+24.857	-0.013	+0.11	-0.016	+0.08	-0.016	+0.06	+0.064792	+0.064567	+0.064324
19	146493	+4.040	+0.005	-0.05	+0.009	-0.04	+0.006	-0.03	+0.219675	+0.219066	+0.218460
20	146435	+24.225	-0.007	+0.06	-0.015	+0.05	-0.007	+0.05	+0.064792	+0.064567	+0.064324
21	146452	+58.978	+0.044	-0.48	+0.037	-0.45	+0.041	-0.24	+0.189056	+0.189799	+0.190537
22	146425	+40.537	-0.045	+0.50	-0.038	+0.46	-0.042	+0.26	+0.317590	+0.317231	+0.316852
23	146478	+59.523	-0.034	+0.70	-0.039	+0.71	-0.026	+0.61	+0.233400	+0.233897	+0.234324
24	146458	+20.766	+0.015	-0.72	+0.030	-0.77	+0.005	-0.79	+0.215613	+0.214865	+0.214160
25	146429	+54.507	+0.020	+0.00	+0.010	+0.04	+0.022	+0.17	+0.159634	+0.159488	+0.159369
26	146617	+3.299	+0.012	-0.55	+0.012	-0.55	+0.012	-0.55	+0.073762	+0.074518	+0.075295
27	146609	+9.758	+0.004	+0.51	+0.004	+0.51	+0.004	+0.51	+0.025988	+0.026138	+0.026322
28	146641	+10.236	-0.028	+0.10	-0.028	+0.10	-0.028	+0.10	+0.224138	+0.224626	+0.225129
29	146665	+29.994	+0.014	+0.06	+0.014	+0.06	+0.014	+0.06	-0.036759	-0.037130	-0.037477
30	146623	+21.933	-0.003	-0.12	-0.003	-0.12	-0.003	-0.12	-0.006187	-0.007062	-0.007940
31	146609	+9.758	-0.013	+0.14	-0.013	+0.14	-0.013	+0.14	+0.792820	+0.793428	+0.793966
32	146644	+29.123	+0.014	-0.09	+0.014	-0.09	+0.014	-0.09	+0.544989	+0.545614	+0.546248
33	146661	+50.211	-0.004	-0.02	-0.004	-0.02	-0.004	-0.02	+0.098922	+0.098901	+0.098908
34	146623	+21.933	-0.001	+0.05	-0.001	+0.05	-0.001	+0.05	-0.546173	-0.547236	-0.548265
35	146514	+6.865	+0.003	-0.08	+0.003	-0.08	+0.003	-0.08	-0.034182	-0.034728	-0.035302
36	146559	+39.295	-0.002	+0.03	-0.007	+0.02	-0.007	+0.03	+0.936444	+0.937449	+0.938411
37	146544	+13.713	+0.007	+0.23	-0.008	+0.17	-0.007	+0.07	+0.374069	+0.374755	+0.375483
38	146551	+2.596	+0.018	-0.38	+0.037	-0.27	+0.035	-0.19	+0.314637	+0.314392	+0.314117
39	146531	+29.371	-0.005	+0.00	-0.022	-0.01	-0.022	+0.06	+0.213202	+0.213089	+0.212967
40	146493	+4.040	-0.003	+0.12	+0.000	+0.09	+0.001	+0.03	+0.115269	+0.114954	+0.114614
41	146531	+29.371	+0.006	+0.01	-0.002	+0.00	+0.001	-0.02	-0.017177	-0.017190	-0.017181
42	146531	+29.371	-0.006	-0.02	+0.005	-0.01	+0.001	-0.02	+0.224263	+0.224875	+0.225498
43	146551	+2.596	-0.003	+0.07	-0.023	+0.05	-0.015	-0.01	-0.279503	-0.279792	-0.280140
44	146544	+13.713	+0.021	-0.09	+0.030	-0.07	+0.025	-0.05	+0.112233	+0.111833	+0.111440
45	146535	+40.299	-0.017	+0.02	-0.011	+0.03	-0.012	+0.06	+0.354326	+0.354186	+0.354059
46	146702	+13.205	+0.008	-0.05	+0.008	-0.05	+0.008	-0.05	+0.588681	+0.588996	+0.589144
47	146696	+24.906	-0.011	-0.07	-0.011	-0.07	-0.011	-0.07	+0.051838	+0.050875	+0.049914
48	146676	+14.749	+0.004	+0.25	+0.004	+0.25	+0.004	+0.25	+0.397035	+0.397133	+0.397233
49	146655	+10.145	+0.001	-0.17	+0.001	-0.17	+0.001	-0.17	+0.565379	+0.566454	+0.567528
50	146655	+10.145	+0.001	-0.17	+0.001	-0.17	+0.001	-0.17	+0.502507	+0.503876	+0.505245



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO SAO	POSITIONS USED	STAR RESIDUALS			DEPENDENCES					
		S	S	S							
31	32	33	-0.031	-0.65	-0.031	-0.65	-0.031	-0.65	+0.33505	+0.33604	+0.336646
			+0.002	-0.12	+0.002	-0.12	+0.002	-0.12	+0.195354	+0.195181	+0.194948
			-0.020	-0.28	-0.020	-0.28	-0.020	-0.28	-0.087344	-0.089217	-0.089143
			+0.034	+0.65	+0.034	+0.65	+0.034	+0.65	-0.009193	-0.009644	-0.010064
			+0.015	+0.39	+0.015	+0.39	+0.015	+0.39	+0.565678	+0.565639	+0.567613
34	35	35	-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	+0.105186	+0.105262	+0.105328
			+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	-0.248544	-0.249806	-0.251055
			+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.268442	+0.268250	+0.268070
			-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	+0.475238	+0.475831	+0.476423
			+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	+0.399678	+0.400463	+0.401233
37	38	39	+0.022	-0.38	+0.022	-0.38	+0.022	-0.38	+0.406543	+0.407409	+0.408282
			-0.039	+0.28	-0.039	+0.28	-0.039	+0.28	-0.059555	-0.059878	-0.060207
			+0.047	-0.13	+0.047	-0.13	+0.047	-0.13	-0.108988	-0.109934	-0.110890
			-0.029	-0.08	-0.029	-0.08	-0.029	-0.08	+0.191894	+0.191427	+0.190957
			-0.001	+0.30	-0.001	+0.30	-0.001	+0.30	+0.570106	+0.570977	+0.571858
40	41	42	+0.030	+0.59	+0.030	+0.59	+0.030	+0.59	+0.001271	+0.000794	+0.000344
			-0.027	-0.77	-0.027	-0.77	-0.027	-0.77	+0.319397	+0.319682	+0.319983
			-0.015	-0.35	-0.015	-0.35	-0.015	-0.35	-0.123277	-0.124049	-0.124834
			-0.002	+0.31	-0.002	+0.31	-0.002	+0.31	+0.279784	+0.279975	+0.280169
			+0.014	+0.22	+0.014	+0.22	+0.014	+0.22	+0.522824	+0.523599	+0.524338
43	44	45	-0.018	-0.11	-0.018	-0.11	-0.018	-0.11	+0.588832	+0.588505	+0.588213
			+0.014	-0.03	+0.014	-0.03	+0.014	-0.03	+0.442376	+0.442490	+0.442670
			-0.001	-0.07	-0.001	-0.07	-0.001	-0.07	+0.006604	+0.005677	+0.004756
			+0.014	+0.35	-0.002	+0.21	+0.012	-0.01	+0.158631	+0.158718	+0.158766
			-0.010	-0.13	-0.010	-0.13	-0.010	-0.13	-0.196443	-0.195389	-0.194406
45	47	48	+0.030	+0.60	+0.030	+0.60	+0.030	+0.60	-0.179623	-0.180063	-0.180491
			-0.021	-0.66	-0.021	-0.66	-0.021	-0.66	-0.197542	-0.197663	-0.197762
			-0.006	+0.20	-0.006	+0.20	-0.006	+0.20	+0.274837	+0.275593	+0.276322
			+0.013	-0.07	+0.013	-0.07	+0.013	-0.07	+0.713942	+0.714230	+0.714562
			-0.016	-0.07	-0.016	-0.07	-0.016	-0.07	+0.388387	+0.387904	+0.387369
49	50	51	+0.008	-0.05	+0.008	-0.05	+0.008	-0.05	+0.272169	+0.271337	+0.270503
			-0.011	-0.07	-0.011	-0.07	-0.011	-0.07	+0.359512	+0.359503	+0.359499
			+0.004	+0.25	+0.004	+0.25	+0.004	+0.25	+0.302985	+0.303810	+0.304643
			+0.001	-0.17	+0.001	-0.17	+0.001	-0.17	+0.181523	+0.182659	+0.183800
			-0.002	+0.04	-0.002	+0.04	-0.002	+0.04	-0.116188	-0.117310	-0.118444
			+0.045	-0.42	+0.045	-0.42	+0.045	-0.42	+0.054378	+0.054230	+0.054076
			-0.034	+0.59	-0.034	+0.59	-0.034	+0.59	+0.033204	+0.032586	+0.031987
			-0.016	-0.22	-0.016	-0.22	-0.016	-0.22	+0.131820	+0.131533	+0.131255
			+0.038	-0.32	+0.038	-0.32	+0.038	-0.32	+0.373307	+0.373530	+0.373756
			-0.033	+0.37	-0.033	+0.37	-0.033	+0.37	+0.407291	+0.408122	+0.408926
			-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	+0.006362	+0.006359	+0.006362
			+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.199459	+0.198337	+0.197134
			+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.417267	+0.417176	+0.417070
			-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	+0.302516	+0.303080	+0.303683
			+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	+0.074397	+0.075048	+0.075751
			+0.022	-0.38	+0.022	-0.38	+0.022	-0.38	-0.013978	-0.013283	-0.012606
			-0.039	+0.28	-0.039	+0.28	-0.039	+0.28	-0.026802	-0.027158	-0.027537
			+0.047	-0.13	+0.047	-0.13	+0.047	-0.13	+0.293455	+0.292652	+0.291855
			-0.029	-0.08	-0.029	-0.08	-0.029	-0.08	+0.489466	+0.483145	+0.488851
			+0.009	+0.70	+0.009	+0.70	+0.009	+0.70	+0.057050	+0.056644	+0.056477



TABLE C. DIAM RESIDUALS. REFERENCED.

OBSERVATIONS	NO SAO	POSITIONS USED	S	STAR RESIDUALS	S	DEPENDENCES
61	62	63	146630	+47.658	19.80	+0.030 +0.59 +0.030 +0.59 +0.030 +0.59 +0.303747 +0.303419 +0.303089
			146595	+5.849	13.30	-0.027 -0.77 -0.027 -0.77 -0.027 -0.77 -0.314064 +0.314411 +0.314753
			146658	+40.356	0.02	-0.015 -0.35 -0.015 -0.35 -0.015 -0.35 -0.073716 +0.072932 +0.072154
			146607	+3.406	49.69	-0.002 +0.31 -0.002 +0.31 -0.002 +0.31 -0.235132 +0.235329 +0.235524
64	65	66	146599	+21.350	37.47	+0.014 +0.22 +0.014 +0.22 +0.014 +0.22 -0.073341 +0.073911 +0.074480
			146571	+55.008	53.35	+0.003 -0.23 +0.003 -0.23 +0.003 -0.23 -0.491115 +0.491673 +0.492582
			146586	+0.280	24.00	+0.046 +0.24 +0.046 +0.24 +0.046 +0.24 -0.381883 +0.381810 +0.381570
			146591	+37.648	38.98	-0.049 -0.06 -0.049 -0.06 -0.049 -0.06 -0.245892 +0.245149 +0.244323
			146599	+21.350	37.47	+0.011 -0.04 +0.011 -0.04 +0.011 -0.04 -0.368092 -0.369092 -0.370170
			146562	+18.029	24.36	-0.011 +0.10 -0.011 +0.10 -0.011 +0.10 -0.249201 +0.250461 +0.251695
67	68	69	146595	+5.849	13.30	+0.008 -0.11 +0.008 -0.11 +0.008 -0.11 -0.154563 +0.154306 +0.154065
			146607	+3.406	49.69	-0.015 -0.19 -0.015 -0.19 -0.015 -0.19 -0.267406 -0.268451 -0.269410
			146569	+49.548	30.93	+0.001 +0.22 +0.001 +0.22 +0.001 +0.22 -0.747523 +0.748453 +0.749221
			146583	+38.839	54.61	+0.025 +0.67 +0.025 +0.67 +0.025 +0.67 -0.015839 +0.015662 +0.015550
			146562	+18.089	24.36	-0.019 -0.59 -0.019 -0.59 -0.019 -0.59 -0.349481 +0.350029 +0.350574
70	71	72	146569	+49.549	30.93	-0.023 +0.10 -0.023 +0.10 -0.023 +0.10 -0.064569 +0.064077 +0.063624
			146586	+0.280	24.00	+0.015 -0.14 -0.015 -0.14 -0.015 -0.14 -0.145023 -0.145825 -0.146757
			146583	+38.839	54.61	+0.009 +0.14 +0.009 +0.14 +0.009 +0.14 -0.048690 +0.048383 +0.048231
			146562	+18.089	24.36	-0.013 -0.09 -0.013 -0.09 -0.013 -0.09 -0.357880 +0.358595 +0.359168
			146543	+4.221	55.34	+0.012 +0.00 +0.012 +0.00 +0.012 +0.00 -0.673684 +0.674780 +0.675734
73	74	75	146640	+3.143	0.84	+0.002 -0.73 +0.002 -0.73 +0.002 -0.73 -0.492852 +0.492360 +0.491869
			165597	+51.805	4.05	+0.021 +0.48 +0.021 +0.48 +0.021 +0.48 -0.286153 +0.286134 +0.286126
			165565	+53.351	6.86	-0.026 -0.15 -0.026 -0.15 -0.026 -0.15 -0.021179 -0.020715 -0.020243
			146581	+35.920	39.40	+0.019 -0.18 +0.019 -0.18 +0.019 -0.18 -0.104264 -0.103857 -0.103458
			146637	+25.668	0.32	-0.016 +0.57 -0.016 +0.57 -0.016 +0.57 -0.346438 +0.346077 +0.345707
			146587	+5.738	39.13	-0.001 -0.08 -0.001 -0.08 -0.001 -0.08 -0.071558 +0.071992 +0.072472
76	77	78	165597	+51.805	4.05	-0.004 +0.18 +0.004 +0.18 +0.004 +0.18 -0.320900 +0.321081 +0.321278
			146635	+21.764	3.55	+0.010 -0.29 -0.010 -0.29 -0.010 -0.29 -0.412700 +0.412192 +0.411647
			146637	+25.668	0.32	-0.008 +0.21 +0.008 +0.21 +0.008 +0.21 -0.311143 +0.310564 +0.309958
			146581	+35.920	39.40	+0.003 -0.02 -0.003 -0.02 -0.003 -0.02 -0.116300 -0.115829 -0.115354
79	80	81	165565	+53.351	6.86	-0.023 +0.08 -0.023 +0.08 -0.023 +0.08 -0.102738 +0.103206 +0.103744
			165597	+51.805	4.05	+0.029 +0.27 +0.029 +0.27 +0.029 +0.27 -0.332307 +0.332307 +0.332379
			146635	+21.764	3.55	-0.021 -0.74 -0.021 -0.74 -0.021 -0.74 -0.360499 +0.360053 +0.359559
			146637	+25.668	0.32	+0.004 +0.61 +0.004 +0.61 +0.004 +0.61 -0.051466 -0.051091 -0.050718
			146581	+35.920	39.40	+0.011 -0.23 +0.011 -0.23 +0.011 -0.23 -0.193420 +0.194832 +0.196210
82	83	84	146621	+18.092	44.05	+0.004 +0.42 +0.004 +0.42 +0.004 +0.42 -0.540006 +0.539487 +0.539051
			146645	+41.053	32.70	+0.037 -0.18 +0.037 -0.18 +0.037 -0.18 -0.090853 -0.090984 -0.091172
			146676	+14.749	39.10	-0.040 -0.43 -0.040 -0.43 -0.040 -0.43 -0.057319 +0.057616 +0.057877
			146655	+30.145	41.54	-0.022 +0.73 -0.022 +0.73 -0.022 +0.73 -0.300106 +0.299046 +0.298035
			146675	+10.065	20.84	+0.002 -0.73 +0.002 -0.73 +0.002 -0.73 -0.322583 +0.322195 +0.321797
85	86	87	146640	+3.143	0.84	+0.021 +0.48 +0.021 +0.48 +0.021 +0.48 -0.406311 +0.406695 +0.407039
			165597	+51.805	4.05	-0.026 -0.15 -0.026 -0.15 -0.026 -0.15 -0.232929 +0.233589 +0.234230
			165565	+53.351	6.86	+0.019 -0.18 +0.019 -0.18 +0.019 -0.18 -0.067752 -0.067759 -0.067720
			146581	+35.920	39.40	-0.016 +0.57 -0.016 +0.57 -0.016 +0.57 -0.105929 +0.105281 +0.104661
			146637	+25.668	0.32	-0.001 -0.08 -0.001 -0.08 -0.001 -0.08 -0.328581 +0.329414 +0.330013
			146597	+5.738	39.13	+0.004 +0.13 +0.004 +0.13 +0.004 +0.13 -0.585445 +0.586045 +0.586708
88	89	90	165597	+51.805	4.05	+0.010 -0.29 -0.010 -0.29 -0.010 -0.29 -0.225967 +0.225574 +0.224939
			146635	+21.764	3.55	-0.003 +0.21 +0.003 +0.21 +0.003 +0.21 -0.072165 -0.073127 -0.073878
			146637	+25.668	0.32	+0.003 -0.02 -0.003 -0.02 -0.003 -0.02 -0.069128 -0.067907 -0.067782
			146581	+35.920	39.40	+0.003 -0.02 -0.003 -0.02 -0.003 -0.02 -0.069128 -0.067907 -0.067782



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS. DEFERENCES.

OBSERVATIONS	NO SAO	POSITIONS USED	STAR RESIDUALS			DEPENDENCES						
			S	S	S							
91	92	93	6.85	-0.023	+0.03	-0.022	+0.22	-0.025	+0.54	+0.415829	+0.416410	+0.417004
			4.65	+0.029	+0.27	+0.031	-0.03	+0.032	-0.64	+0.541534	+0.541890	+0.542296
			3.55	-0.021	-0.74	-0.029	-0.34	-0.024	+0.43	+0.214816	+0.214429	+0.213955
			0.32	+0.004	+0.61	+0.011	+0.38	+0.005	-0.04	-0.070729	-0.071302	-0.071885
94	95	96	39.40	+0.011	-0.23	+0.009	-0.23	+0.012	-0.29	-0.101449	-0.101427	-0.101370
			59.27	+0.018	+0.23	+0.001	+0.08	+0.007	-0.15	+0.526826	+0.526243	+0.525745
			20.02	-0.016	+0.01	-0.007	+0.01	-0.011	+0.02	+0.373745	+0.373838	+0.373879
			51.60	+0.002	-0.19	+0.007	-0.07	+0.006	+0.10	-0.131490	-0.130192	-0.128914
			33.92	+0.005	+0.31	-0.008	+0.11	-0.004	-0.18	-0.095384	-0.095327	-0.095192
			39.13	-0.009	-0.37	+0.009	-0.13	+0.003	+0.22	+0.326302	+0.325438	+0.324492
97	98	99	0.84	+0.002	-0.73	+0.002	-0.73	+0.002	-0.73	+0.515364	+0.514883	+0.514375
			4.05	+0.021	+0.48	+0.021	+0.48	+0.021	+0.48	+0.251722	+0.251963	+0.252195
			6.86	-0.026	-0.15	-0.026	-0.15	-0.026	-0.15	-0.068448	-0.067802	-0.067137
			39.40	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	-0.093799	-0.093615	-0.093402
			0.32	-0.016	+0.57	-0.016	+0.57	-0.016	+0.57	+0.395161	+0.394571	+0.393968
100	101	102	6.86	-0.023	+0.08	-0.022	+0.22	-0.025	+0.54	+0.092635	+0.093244	+0.093860
			4.05	+0.029	+0.27	+0.031	-0.03	+0.032	-0.64	+0.355524	+0.355748	+0.355957
			3.55	-0.021	-0.74	-0.029	-0.34	-0.024	+0.43	+0.382705	+0.382261	+0.381766
			0.32	+0.004	+0.61	+0.011	+0.38	+0.005	-0.04	+0.259544	+0.258971	+0.258384
			39.40	+0.011	-0.23	+0.009	-0.23	+0.012	-0.29	-0.090408	-0.090225	-0.089968
103	104	105	4.22	+0.045	-0.42	+0.045	-0.42	+0.045	-0.42	+0.551280	+0.550813	+0.550335
			28.03	-0.034	+0.59	-0.034	+0.59	-0.034	+0.59	+0.324763	+0.324070	+0.323380
			25.08	-0.016	-0.22	-0.016	-0.22	-0.016	-0.22	+0.229686	+0.229390	+0.229097
			41.54	+0.038	-0.32	+0.038	-0.32	+0.038	-0.32	-0.189599	-0.189027	-0.188443
			54.40	-0.033	+0.37	-0.033	+0.37	-0.033	+0.37	+0.083870	+0.084753	+0.085631
106	107	108	12.34	-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	+0.237141	+0.236897	+0.236644
			7.34	+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.729527	+0.728167	+0.726833
			52.99	+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.203136	+0.203295	+0.203466
			8.43	-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	-0.085439	-0.084628	-0.083825
			30.50	+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	-0.084364	-0.083731	-0.083118
109	110	111	39.10	+0.027	+0.10	+0.027	+0.10	+0.027	+0.10	+0.303165	+0.302428	+0.301609
			23.24	-0.021	-0.54	-0.021	-0.54	-0.021	-0.54	-0.125145	-0.124674	-0.124229
			40.73	-0.021	-0.12	-0.021	-0.12	-0.021	-0.12	+0.682876	+0.682052	+0.681248
			19.80	-0.011	+0.65	-0.011	+0.65	-0.011	+0.65	-0.001343	-0.000900	-0.000450
			49.69	+0.026	-0.10	+0.026	-0.10	+0.026	-0.10	+0.140447	+0.141093	+0.141822
112	113	114	19.80	+0.030	+0.59	+0.030	+0.59	+0.030	+0.59	+0.351922	+0.351765	+0.351590
			13.30	-0.027	-0.77	-0.027	-0.77	-0.027	-0.77	+0.098957	+0.099621	+0.100247
			0.02	-0.015	-0.35	-0.015	-0.35	-0.015	-0.35	+0.463473	+0.462266	+0.461110
			49.69	-0.002	+0.31	-0.002	+0.31	-0.002	+0.31	+0.134756	+0.135066	+0.135363
			37.47	+0.014	+0.22	+0.014	+0.22	+0.014	+0.22	-0.049108	-0.048718	-0.048310
115	116	117	13.30	+0.008	-0.11	+0.008	-0.11	+0.008	-0.11	+0.303187	+0.303004	+0.302844
			49.69	-0.015	-0.19	-0.015	-0.19	-0.015	-0.19	-0.207591	-0.208972	-0.210364
			30.93	+0.001	+0.22	+0.004	+0.21	+0.010	+0.20	+0.875689	+0.877163	+0.878613
			54.81	+0.025	+0.67	+0.025	+0.63	+0.022	+0.47	-0.141589	-0.142037	-0.142492
			24.36	-0.019	-0.59	-0.020	-0.56	-0.020	-0.43	+0.170304	+0.170843	+0.171399
			30.93	-0.023	+0.10	-0.021	-0.08	-0.031	-0.21	+0.323026	+0.322590	+0.322223
			24.00	+0.015	-0.14	-0.005	-0.01	+0.007	+0.08	+0.026897	+0.025966	+0.024988
			54.81	+0.009	+0.14	+0.049	+0.17	+0.042	+0.22	-0.153546	-0.154075	-0.154450
			24.36	-0.015	-0.09	-0.045	-0.15	-0.041	-0.22	+0.037638	+0.038206	+0.038641
			55.34	+0.012	+0.04	+0.021	+0.08	+0.023	+0.14	+0.765986	+0.767714	+0.768598



TABLE 2. STAR RESIDUALS. DEPENDENCES

OBSERVATIONS	NO SAC	POSITIONS USED	STAR RESIDUALS			DEPENDENCES					
		S	S	S							
121	122	123	+0.002	-0.73	+0.002	-0.73	+0.002	-0.73	+0.047007	+0.046578	+0.046168
			+0.021	+0.49	+0.021	+0.49	+0.021	+0.49	-0.020056	-0.019681	-0.019295
			-0.026	-0.15	-0.026	-0.15	-0.026	-0.15	+0.186501	+0.187195	+0.187879
			+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.503305	+0.503337	+0.503345
124	125	126	-0.016	+0.57	-0.016	+0.57	-0.016	+0.57	+0.283243	+0.282571	+0.281904
			-0.001	-0.08	-0.002	+0.43	-0.010	+0.47	+0.342393	+0.343075	+0.343723
			-0.004	+0.18	+0.011	+0.06	+0.005	-0.49	+0.088664	+0.089218	+0.089789
127	128	129	+0.010	-0.29	-0.020	-0.70	+0.002	+0.44	-0.025082	-0.025574	-0.026040
			-0.008	+0.21	+0.015	+0.62	-0.003	-0.26	+0.069590	+0.068631	+0.067688
			+0.003	-0.02	-0.003	-0.40	+0.006	-0.17	+0.524435	+0.524650	+0.524840
			-0.023	+0.08	-0.022	+0.22	-0.025	+0.54	+0.396515	+0.397212	+0.397930
			+0.029	+0.27	+0.031	-0.03	+0.032	-0.64	+0.071456	+0.071766	+0.072048
			-0.021	-0.74	-0.029	-0.34	-0.024	+0.43	-0.043225	-0.043592	-0.043969
			+0.004	+0.61	+0.011	+0.38	+0.005	-0.04	+0.054970	+0.054257	+0.053552
			+0.011	-0.23	+0.009	-0.23	+0.012	-0.29	+0.520284	+0.520356	+0.520439
			+0.012	-0.12	-0.001	-0.16	-0.004	-0.58	+0.526008	+0.527287	+0.528691
			-0.014	+0.05	-0.004	+0.18	-0.001	+0.48	+0.338462	+0.337960	+0.337494
			+0.030	+0.11	+0.023	-0.37	+0.019	-0.44	-0.084062	-0.085199	-0.086489
			-0.023	-0.16	-0.022	+0.28	-0.020	+0.16	-0.105809	-0.106861	-0.107895
			-0.005	+0.11	+0.004	+0.07	+0.006	+0.38	+0.325400	+0.326812	+0.328198
			+0.045	-0.42	+0.045	-0.42	+0.045	-0.42	+0.425583	+0.425799	+0.426008
			-0.034	+0.59	-0.034	+0.59	-0.034	+0.59	+0.247997	+0.247212	+0.246436
			-0.016	-0.22	-0.016	-0.22	-0.016	-0.22	+0.203466	+0.203066	+0.202671
			+0.038	-0.32	+0.038	-0.32	+0.038	-0.32	-0.046896	-0.047047	-0.047192
			-0.033	+0.37	-0.033	+0.37	-0.033	+0.37	+0.169850	+0.170970	+0.172077
			-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	+0.318574	+0.318843	+0.319134
			+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.561284	+0.559933	+0.558625
			+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.097508	+0.097091	+0.096554
			-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	-0.043977	-0.043442	-0.042939
			+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	+0.066613	+0.067575	+0.068526
			-0.006	+0.21	-0.006	+0.21	-0.006	+0.21	+0.173060	+0.173714	+0.174373
			+0.045	-0.15	+0.045	-0.15	+0.045	-0.15	+0.370640	+0.370381	+0.370150
			-0.047	+0.04	-0.047	+0.04	-0.047	+0.04	+0.377456	+0.376528	+0.375619
			+0.039	+0.07	+0.039	+0.07	+0.039	+0.07	+0.066096	+0.065927	+0.065729
			-0.031	-0.18	-0.031	-0.18	-0.031	-0.18	+0.012747	+0.013450	+0.014129
			-0.017	+0.48	-0.019	+0.24	-0.010	+0.71	-0.159553	-0.159927	-0.159217
			+0.014	-0.39	+0.016	-0.24	+0.008	-0.39	+0.326929	+0.327051	+0.327139
			-0.012	+0.33	-0.013	+0.22	-0.007	+0.25	+0.828858	+0.827784	+0.826764
			+0.016	-0.45	+0.018	-0.35	+0.010	-0.18	+0.149958	+0.149824	+0.149653
			-0.001	+0.03	-0.002	+0.12	-0.002	-0.39	-0.146192	-0.145732	-0.145340
			-0.026	+0.01	-0.024	+0.03	-0.030	+0.28	+0.345698	+0.344476	+0.343220
			+0.021	-0.11	+0.019	+0.00	+0.020	-0.37	+0.304383	+0.303841	+0.303198
			-0.030	+0.20	-0.028	-0.01	-0.028	+0.59	+0.113041	+0.113800	+0.114643
			+0.033	+0.09	+0.030	-0.06	+0.042	-0.19	+0.184022	+0.183992	+0.183996
			+0.003	-0.19	+0.003	+0.04	-0.004	-0.31	+0.052855	+0.053892	+0.054944
			+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	-0.119089	-0.119352	-0.119618
			+0.011	-0.07	+0.011	-0.07	+0.011	-0.07	+0.172904	+0.172653	+0.172402
			-0.030	+0.26	-0.030	+0.26	-0.030	+0.26	+0.512032	+0.511317	+0.510605
			+0.044	-0.39	+0.044	-0.39	+0.044	-0.39	+0.400558	+0.401002	+0.401449
			-0.043	+0.78	-0.043	+0.78	-0.043	+0.78	+0.033594	+0.034379	+0.035162



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS. DEPENDENCES

OBSERVATIONS	NO. OF POSITIONS USED	STAR RESIDUALS	DEPENDENCES
151	152	153	14521 18.79 -0.001 +0.11 -0.001 +0.11 -0.001 +0.11 +0.578320 +0.578347 +0.578375
			14623 53.74 +0.001 -0.10 +0.031 -0.10 +0.031 -0.10 +0.23732 +0.238142 +0.237546
			146519 35.76 +0.001 -0.03 +0.031 -0.03 +0.031 -0.03 +0.021725 +0.021160 +0.029595
			146457 11.18 -0.001 +0.06 -0.001 +0.06 -0.001 +0.06 -0.299131 -0.299331 -0.293530
154	155	156	146478 42.09 +0.001 -0.05 +0.001 -0.05 +0.001 -0.05 +0.460342 +0.461681 +0.463014
			146452 24.31 +0.003 -0.03 +0.016 -0.04 +0.003 -0.04 -0.055675 -0.055405 -0.055171
			146487 11.18 +0.011 -0.10 +0.006 -0.06 +0.015 -0.04 +0.061435 +0.061114 +0.069795
			146507 26.99 -0.013 +0.11 -0.016 +0.08 -0.016 +0.06 +0.235011 +0.234408 +0.233797
			146493 4.040 +0.005 -0.05 +0.009 -0.04 +0.006 -0.03 +0.641094 +0.641038 +0.640996
			146435 24.225 +0.007 +0.06 -0.015 +0.05 -0.007 +0.05 +0.118135 +0.118845 +0.119583
157	158	159	146460 10.46 +0.026 +0.11 +0.019 +0.47 +0.022 +0.25 +0.234795 +0.235050 +0.235330
			146473 18.76 -0.025 -0.11 -0.018 -0.46 -0.022 -0.24 +0.314346 +0.314235 +0.314076
			146478 42.09 -0.007 -0.03 -0.016 +0.02 -0.001 -0.01 +0.320113 +0.319156 +0.318179
			146458 17.61 +0.019 +0.09 +0.033 +0.11 +0.008 +0.10 +0.173622 +0.173471 +0.173258
			146429 14.37 -0.013 -0.06 -0.018 -0.15 -0.008 -0.10 -0.042876 -0.041911 -0.040842
160	161	162	146617 40.70 +0.012 -0.55 +0.012 -0.55 +0.012 -0.55 +0.162385 +0.162661 +0.162918
			146609 11.52 +0.004 +0.51 +0.004 +0.51 +0.004 +0.51 +0.219872 +0.220438 +0.220977
			146641 55.29 -0.028 +0.10 -0.028 +0.10 -0.028 +0.10 +0.132265 +0.131957 +0.131658
			146665 0.18 +0.014 +0.06 +0.014 +0.06 +0.014 +0.06 +0.125094 +0.124170 +0.123285
			146623 57.79 -0.003 -0.12 -0.003 -0.12 -0.003 -0.12 +0.360383 +0.360774 +0.361161
163	164	165	146609 11.52 -0.013 +0.14 -0.013 +0.14 -0.013 +0.14 +0.465455 +0.466135 +0.466701
			146617 40.70 +0.014 -0.09 +0.014 -0.09 +0.014 -0.09 +0.242676 +0.242747 +0.242733
			146644 44.51 -0.004 -0.02 -0.004 -0.02 -0.004 -0.02 -0.159446 -0.160435 -0.161388
			146661 17.85 -0.001 +0.05 -0.001 +0.05 -0.001 +0.05 -0.070232 -0.070895 -0.071393
			146623 57.79 +0.003 -0.08 +0.003 -0.08 +0.003 -0.08 +0.521546 +0.522448 +0.523347
166	167	168	146580 26.60 +0.021 -0.06 +0.023 -0.02 -0.009 -0.06 +0.625704 +0.626617 +0.627583
			146601 54.68 -0.023 +0.23 -0.025 +0.16 +0.009 +0.13 +0.340086 +0.340566 +0.340960
			146643 37.45 +0.010 -0.23 +0.011 -0.18 -0.003 -0.11 -0.178089 -0.178711 -0.179264
			146632 4.745 +0.006 +0.37 +0.007 +0.30 -0.004 +0.15 -0.027854 -0.028505 -0.029122
169	170	171	146609 11.52 -0.014 -0.31 -0.015 -0.26 +0.008 -0.11 +0.240152 +0.240033 +0.239844
			146601 54.68 +0.015 +0.05 +0.016 +0.08 +0.033 +0.07 +0.123847 +0.123812 +0.123729
			146623 57.79 +0.001 +0.04 -0.002 +0.00 -0.016 +0.02 -0.164993 -0.165438 -0.165908
			146588 49.30 -0.030 -0.18 -0.025 -0.14 -0.021 -0.18 -0.058691 -0.059181 -0.059679
			146557 30.740 +0.033 +0.20 +0.027 +0.15 +0.026 +0.19 +0.340406 +0.340519 +0.340643
			146551 20.85 -0.019 -0.10 -0.017 -0.09 -0.022 -0.11 +0.759437 +0.760288 +0.761216
172	173	174	146514 16.49 -0.002 +0.03 -0.007 +0.02 -0.007 +0.03 -0.018049 -0.017345 -0.016649
			146559 32.40 -0.007 +0.23 -0.008 +0.17 -0.007 +0.07 +0.046029 +0.045688 +0.045327
			146544 9.36 +0.018 -0.38 +0.037 -0.27 +0.035 -0.19 +0.181128 +0.181010 +0.180887
			146551 20.85 -0.005 +0.00 -0.022 -0.01 -0.022 +0.06 +0.306394 +0.306070 +0.305758
175	176	177	146531 18.79 -0.003 +0.12 +0.000 +0.09 +0.001 +0.03 +0.484498 +0.484577 +0.484678
			146493 4.040 +0.006 +0.01 -0.002 +0.00 +0.001 -0.02 +0.114024 +0.114598 +0.115172
			146531 29.371 +0.006 -0.02 +0.005 -0.01 +0.001 +0.03 +0.418040 +0.417861 +0.417684
			146551 20.85 -0.003 +0.07 -0.023 +0.05 -0.015 -0.01 +0.282946 +0.282583 +0.282221
			146544 13.713 9.36 +0.021 -0.08 +0.030 -0.07 +0.025 -0.05 +0.158985 +0.158826 +0.158664
			146535 34.82 -0.017 +0.02 -0.011 +0.03 -0.012 +0.06 +0.026004 +0.026132 +0.026259
178	179	180	146680 23.54 -0.004 -0.27 -0.004 -0.27 -0.004 -0.27 +0.016635 +0.015651 +0.014643
			146647 42.70 -0.017 +0.38 -0.017 +0.38 -0.017 +0.38 +0.389916 +0.390138 +0.390376
			146641 55.29 -0.026 -0.10 -0.026 -0.10 -0.026 -0.10 +0.102701 +0.102952 +0.103199
			146665 0.18 +0.027 +0.18 +0.027 +0.18 +0.027 +0.18 -0.115225 -0.115067 -0.116540
			146623 57.79 +0.021 -0.18 +0.021 -0.18 +0.021 -0.18 +0.605973 +0.607126 +0.608321



TABLE 2. STAR RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO. SAO	POSITIONS USED	STAR RESIDUALS			DEPENDENCES						
			S	S	S							
181	192	183	+13.205	+0.009	-0.05	+0.008	-0.05	+0.003	-0.05	+0.342181	+0.341345	+0.340518
			+24.906	-0.911	-0.07	-0.011	-0.07	-0.011	-0.07	+0.308533	+0.309150	+0.309729
			+14.749	+0.004	+0.25	+0.004	+0.25	+0.004	+0.25	+0.178657	+0.178186	+0.179707
			+30.145	+0.001	-0.17	+0.001	-0.17	+0.001	-0.17	+0.059827	+0.061299	+0.062740
184	185	186	+10.065	-0.002	+0.04	-0.002	+0.04	-0.002	+0.04	+0.112803	+0.110021	+0.107246
			+59.147	+0.045	-0.42	+0.045	-0.42	+0.045	-0.42	+0.344317	+0.344846	+0.345369
			+13.205	-0.034	+0.59	-0.034	+0.59	-0.034	+0.59	-0.009081	-0.009896	-0.010708
			+51.850	-0.016	-0.22	-0.016	-0.22	-0.016	-0.22	+0.085791	+0.085349	+0.084909
			+30.145	+0.038	-0.32	+0.038	-0.32	+0.038	-0.32	+0.066637	+0.066153	+0.065675
			+5.941	-0.033	+0.37	-0.033	+0.37	-0.033	+0.37	+0.512336	+0.513549	+0.514756
187	188	189	+26.062	+0.031	+0.63	+0.031	+0.63	+0.031	+0.63	+0.373895	+0.374415	+0.374917
			+35.296	+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.093873	+0.092569	+0.091215
			+48.916	+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	-0.004138	-0.004832	-0.005510
			+8.947	-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	+0.161458	+0.161838	+0.162253
190	191	192	+3.293	+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	+0.374912	+0.376011	+0.377126
			+24.272	+0.022	-0.38	+0.022	-0.38	+0.022	-0.38	+0.494917	+0.496146	+0.497367
			+49.896	-0.039	+0.28	-0.039	+0.28	-0.039	+0.28	+0.461708	+0.461797	+0.461874
			+48.389	+0.047	-0.13	+0.047	-0.13	+0.047	-0.13	+0.047929	+0.046837	+0.045748
			+47.658	-0.029	-0.08	-0.029	-0.08	-0.029	-0.08	-0.170107	-0.171082	-0.172043
			+3.406	-0.001	+0.30	-0.001	+0.30	-0.001	+0.30	+0.165554	+0.166301	+0.167054
193	194	195	+9.112	+0.019	-0.23	+0.019	-0.23	+0.019	-0.23	+0.735150	+0.733396	+0.731564
			+32.041	-0.026	+0.28	-0.026	+0.28	-0.026	+0.28	+0.429309	+0.428466	+0.427570
			+6.945	+0.010	+0.04	+0.010	+0.04	+0.010	+0.04	-0.045953	-0.045189	-0.044398
			+35.920	+0.011	-0.27	+0.011	-0.27	+0.011	-0.27	-0.169402	-0.168198	-0.166942
			+25.668	-0.014	+0.18	-0.014	+0.18	-0.014	+0.18	+0.050896	+0.051525	+0.052206
195	197	198	+9.112	+0.024	-0.33	+0.024	-0.33	+0.024	-0.33	+0.440519	+0.439011	+0.437510
			+32.041	-0.015	+0.59	-0.015	+0.59	-0.015	+0.59	+0.309773	+0.309687	+0.309653
			+21.764	+0.015	+0.18	-0.003	-0.05	+0.011	+0.53	-0.032082	-0.031285	-0.030360
			+25.668	-0.033	+0.07	-0.004	+0.27	-0.025	-0.53	+0.193376	+0.193001	+0.192477
			+35.920	+0.008	-0.51	+0.012	-0.24	+0.008	-0.52	+0.088414	+0.089586	+0.090721
199	200	201	+9.112	+0.032	-0.28	+0.021	+0.06	+0.030	-0.18	+0.296763	+0.295232	+0.293696
			+52.080	-0.035	+0.31	-0.024	-0.07	-0.033	+0.21	+0.164080	+0.163379	+0.162691
			+51.560	+0.013	-0.21	+0.025	+0.38	+0.030	+0.02	+0.130219	+0.131217	+0.132188
			+25.668	-0.034	+0.28	-0.020	-0.01	-0.029	+0.21	+0.262160	+0.262490	+0.262818
			+35.920	+0.025	-0.11	-0.002	-0.36	+0.003	-0.26	+0.145777	+0.147681	+0.148607
			+16.779	-0.017	+0.48	-0.019	+0.24	-0.010	+0.71	+0.207706	+0.208424	+0.209058
202	203	204	+35.920	+0.014	-0.39	+0.016	-0.24	+0.008	-0.39	+0.916153	+0.916548	+0.916956
			+14.075	-0.012	+0.33	-0.013	+0.22	-0.007	+0.25	+0.359793	+0.358761	+0.357738
			+17.143	+0.016	-0.45	+0.018	-0.35	+0.010	-0.18	-0.317482	-0.317867	-0.318283
			+31.412	-0.001	+0.03	-0.002	+0.12	-0.002	-0.39	-0.166170	-0.165866	-0.165468
205	206	207	+22.370	+0.012	-0.12	-0.001	-0.16	-0.004	-0.58	-0.283218	-0.281961	-0.280690
			+5.738	-0.014	+0.05	-0.004	+0.18	-0.001	+0.48	+0.443976	+0.444292	+0.444602
			+35.920	+0.030	+0.11	+0.023	-0.37	+0.019	-0.44	+0.698073	+0.696677	+0.695382
			+6.945	-0.023	-0.16	-0.022	+0.28	-0.020	+0.16	+0.565827	+0.564698	+0.563481
			+18.768	-0.005	+0.11	+0.004	+0.07	+0.006	+0.38	-0.424659	-0.423706	-0.422776
			+26.062	-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	-0.045903	-0.045884	-0.045864
			+35.296	+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.152735	+0.151618	+0.150486
			+48.916	+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.471927	+0.471851	+0.471733
208	209	210	+8.947	-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	+0.353568	+0.354119	+0.354677
			+3.293	+0.045	-0.71	+0.045	-0.71	+0.045	-0.71	+0.067632	+0.068295	+0.068968



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS. DEPENDENCES

OBSERVATIONS	NO. SAC	POSITIONS USED	STAR RESIDUALS			DEPENDENCES								
			S	S	S									
211	212	213	146535	+24.272	24.86	+0.022	-0.38	+0.022	-0.38	+0.022	-0.38	-0.014562	-0.013943	-0.013204
			146539	+43.895	33.29	-0.039	+0.28	-0.039	+0.28	-0.039	+0.28	-0.089166	-0.089493	-0.089541
			146560	+43.389	40.73	+0.047	-0.13	+0.047	-0.13	+0.047	-0.13	+0.265575	+0.264757	+0.263918
			146539	+47.658	19.80	-0.029	-0.08	-0.029	-0.08	-0.029	-0.08	+0.525346	+0.524986	+0.524628
214	215	216	146607	+3.406	49.69	-0.001	+0.30	-0.001	+0.30	-0.001	+0.30	+0.312913	+0.313693	+0.314499
			146630	+47.658	19.80	+0.030	+0.59	+0.030	+0.59	+0.030	+0.59	+0.321166	+0.320838	+0.320487
			146595	+5.849	13.30	-0.027	-0.77	-0.027	-0.77	-0.027	-0.77	+0.371383	+0.371698	+0.372012
			146658	+40.356	0.02	-0.015	-0.35	-0.015	-0.35	-0.015	-0.35	-0.011330	-0.012061	-0.012804
			146607	+3.406	49.69	-0.002	+0.31	-0.002	+0.31	-0.002	+0.31	+0.257644	+0.257827	+0.258013
217	218	219	146599	+21.350	37.47	+0.014	+0.22	+0.014	+0.22	+0.014	+0.22	+0.061137	+0.061697	+0.062292
			146595	+5.849	13.30	+0.008	-0.11	+0.002	-0.12	-0.010	-0.16	+0.142864	+0.142591	+0.142314
			146607	+3.406	49.69	-0.015	-0.19	-0.011	-0.16	-0.002	-0.07	-0.354520	-0.355489	-0.356469
			146569	+49.549	30.93	+0.001	+0.22	+0.004	+0.21	+0.010	+0.20	+0.845084	+0.845879	+0.846597
			146583	+38.839	54.81	+0.025	+0.67	+0.025	+0.63	+0.022	+0.47	-0.014390	-0.014501	-0.014563
			146562	+18.089	24.36	-0.019	-0.59	-0.020	-0.56	-0.020	-0.43	+0.380961	+0.381519	+0.382121
220	221	222	146552	+7.360	24.22	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.121368	+0.121425	+0.121493
			146553	+7.967	52.31	+0.011	-0.07	+0.011	-0.07	+0.011	-0.07	+0.113252	+0.113045	+0.112837
			146572	+59.684	38.13	-0.030	+0.26	-0.030	+0.26	-0.030	+0.26	-0.063917	-0.064875	-0.065851
			146531	+29.370	18.79	+0.044	-0.39	+0.044	-0.39	+0.044	-0.39	+0.347189	+0.347412	+0.347631
			146519	+6.237	35.76	-0.043	+0.38	-0.043	+0.38	-0.043	+0.38	+0.482108	+0.482993	+0.483891
223	224	225	146531	+29.370	18.79	-0.001	+0.11	-0.001	+0.11	-0.001	+0.11	+0.059283	+0.059061	+0.058843
			146533	+35.810	53.74	+0.001	-0.10	+0.001	-0.10	+0.001	-0.10	+0.042780	+0.042217	+0.041656
			146519	+6.237	35.76	-0.001	-0.03	+0.001	-0.03	+0.001	-0.03	+0.134659	+0.134266	+0.133872
			146487	+44.103	11.18	-0.001	+0.06	-0.001	+0.06	-0.001	+0.06	+0.346776	+0.346921	+0.347063
			146478	+59.523	42.09	+0.001	-0.05	+0.001	-0.05	+0.001	-0.05	+0.416502	+0.417535	+0.418566
226	227	228	146452	+58.978	24.31	+0.003	-0.03	+0.016	-0.04	+0.003	-0.04	+0.384790	+0.385127	+0.385506
			146487	+44.103	11.18	+0.011	-0.10	+0.006	-0.06	+0.015	-0.04	+0.154495	+0.154266	+0.154012
			146507	+24.857	26.99	-0.013	+0.11	-0.016	+0.08	-0.016	+0.06	-0.008097	-0.008679	-0.009276
			146493	+4.040	52.09	+0.005	-0.05	+0.009	-0.04	+0.006	-0.03	+0.004261	+0.004002	+0.003756
			146435	+24.225	31.57	-0.007	+0.06	-0.015	+0.05	-0.007	+0.05	+0.464551	+0.465283	+0.466002
229	230	231	146452	+58.978	24.31	+0.044	-0.48	+0.037	-0.45	+0.041	-0.24	+0.158128	+0.157854	+0.157495
			146425	+40.537	21.82	-0.045	+0.50	-0.038	+0.46	-0.042	+0.26	+0.462506	+0.463050	+0.463552
			146478	+59.523	42.09	-0.034	+0.70	-0.039	+0.71	-0.026	+0.61	-0.125557	-0.126337	-0.127107
			146458	+20.766	17.61	+0.015	-0.72	+0.030	-0.77	+0.005	-0.79	+0.091719	+0.091497	+0.091409
			146429	+54.507	14.37	+0.020	+0.00	+0.010	+0.04	+0.022	+0.17	+0.413205	+0.413936	+0.414651
232	233	234	146617	+3.299	40.70	+0.012	-0.55	+0.012	-0.55	+0.012	-0.55	+0.223937	+0.223944	+0.223972
			146609	+9.758	11.52	+0.004	+0.51	+0.004	+0.51	+0.004	+0.51	+0.238378	+0.238793	+0.239216
			146641	+10.236	55.29	-0.028	+0.10	-0.028	+0.10	-0.028	+0.10	+0.185458	+0.184998	+0.184553
			146665	+29.994	0.18	+0.014	+0.06	+0.014	+0.06	+0.014	+0.06	+0.142043	+0.141192	+0.140340
			146623	+21.933	57.79	-0.003	-0.12	-0.003	-0.12	-0.003	-0.12	+0.210183	+0.211073	+0.211919
235	236	237	146609	+9.758	11.52	-0.013	+0.14	-0.013	+0.14	-0.013	+0.14	+0.435322	+0.434144	+0.434756
			146617	+3.299	40.70	+0.014	-0.09	+0.014	-0.09	+0.014	-0.09	+0.235276	+0.235170	+0.235062
			146644	+29.123	44.51	-0.004	-0.02	-0.004	-0.02	-0.004	-0.02	-0.120262	-0.121456	-0.122653
			146661	+50.211	17.85	-0.001	+0.05	-0.001	+0.05	-0.001	+0.05	-0.036039	-0.036509	-0.036978
			146623	+21.933	57.79	+0.003	-0.08	+0.003	-0.08	+0.003	-0.08	+0.487493	+0.488652	+0.489813
238	239	240	146580	+31.938	26.60	+0.021	-0.06	+0.023	-0.02	+0.009	-0.06	+0.584956	+0.585837	+0.586774
			146601	+37.910	54.68	-0.023	+0.23	-0.025	+0.16	+0.009	+0.13	+0.440803	+0.441551	+0.442181
			146643	+18.464	37.45	+0.010	-0.23	+0.011	-0.18	-0.003	-0.11	-0.012092	-0.012374	-0.012659
			146632	+4.745	57.73	+0.004	+0.37	+0.007	+0.30	-0.004	+0.15	-0.111768	-0.112654	-0.113469
			146609	+9.758	11.52	-0.016	-0.71	-0.015	-0.62	-0.004	-0.11	-0.000000	-0.000000	-0.000000



TABLE 2. STAR RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO	SAD	POSITIONS USED	STAR RESIDUALS					DEPENDENCES					
				S	S	S	S	S						
241	242	243	146514	+ 6.365	16.49	-0.002	+0.03	-0.007	+0.02	-0.007	+0.03	+0.14022	+0.141164	+0.141564
			146559	+38.295	32.40	-0.007	+0.23	-0.038	+0.17	-0.007	+0.07	+0.429227	+0.420027	+0.419911
			146544	+13.713	9.36	+0.018	-0.33	+0.037	-0.27	+0.035	-0.19	+0.253914	+0.253918	+0.253725
			146551	+ 2.596	20.85	-0.005	+0.00	-0.022	-0.01	-0.022	+0.06	+0.222680	+0.222252	+0.221874
244	245	246	146531	+29.371	18.79	-0.003	+0.12	+0.000	+0.09	+0.001	+0.03	-0.037104	-0.037261	-0.037475
			146551	+ 2.596	20.85	-0.002	-0.13	-0.020	+0.20	-0.011	-0.02	-0.032440	-0.033404	-0.034371
			146559	+38.295	32.40	-0.013	+0.26	-0.001	-0.01	-0.006	+0.11	+0.276097	+0.275701	+0.275329
			146531	+29.371	18.79	-0.007	+0.16	+0.002	-0.03	-0.002	+0.06	-0.028880	-0.028877	-0.028956
			146544	+13.713	9.36	+0.027	-0.29	+0.032	-0.29	+0.029	-0.18	+0.225832	+0.225810	+0.225795
			146535	+40.299	34.82	-0.005	-0.01	-0.013	+0.13	-0.009	+0.02	+0.559391	+0.560769	+0.562204
247	248	249	146552	+ 7.360	24.22	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.078366	+0.077705	+0.077048
			146553	+ 7.967	52.31	+0.011	-0.07	+0.011	-0.07	+0.011	-0.07	+0.158323	+0.158040	+0.157755
			146572	+59.694	38.13	-0.030	+0.26	-0.030	+0.26	-0.030	+0.26	+0.185515	+0.185194	+0.184864
			146531	+29.370	18.79	+0.044	-0.39	+0.044	-0.39	+0.044	-0.39	+0.314727	+0.315421	+0.316112
			146519	+ 6.237	35.76	-0.043	+0.38	-0.043	+0.38	-0.043	+0.38	+0.263069	+0.263642	+0.264221
250	251	252	146531	+29.370	18.79	+0.005	+0.12	+0.005	+0.12	+0.005	+0.12	+0.607572	+0.608068	+0.608558
			146533	+35.810	53.74	-0.009	-0.02	-0.009	-0.02	-0.009	-0.02	+0.152275	+0.151666	+0.151062
			146519	+ 6.237	35.76	+0.005	-0.16	+0.005	-0.16	+0.005	-0.16	-0.074443	-0.075295	-0.076119
			146487	+44.103	11.18	+0.000	+0.12	+0.000	+0.12	+0.000	+0.12	-0.362100	-0.362935	-0.363760
			146478	+59.523	42.09	-0.002	-0.06	-0.002	-0.06	-0.002	-0.06	+0.676697	+0.678485	+0.680259
253	254	255	146452	+58.978	24.31	+0.003	-0.03	+0.016	-0.04	+0.003	-0.04	-0.142925	-0.142855	-0.142820
			146487	+44.103	11.18	+0.011	-0.10	+0.006	-0.06	+0.015	-0.04	-0.071149	-0.071595	-0.072036
			146507	+24.857	26.99	-0.013	+0.11	-0.016	+0.08	-0.016	+0.06	+0.139910	+0.139317	+0.138721
			146493	+ 4.040	52.09	+0.005	-0.05	+0.009	-0.04	+0.006	-0.03	+0.863687	+0.863989	+0.864302
			146435	+24.225	31.57	-0.007	+0.06	-0.015	+0.05	-0.007	+0.05	+0.210475	+0.211145	+0.211834
256	257	259	146460	+30.935	10.46	+0.026	+0.11	+0.019	+0.47	+0.022	+0.25	+0.483226	+0.483592	+0.484067
			146473	+23.703	18.76	-0.025	-0.11	-0.018	-0.46	-0.022	-0.24	+0.536903	+0.537016	+0.537084
			146478	+59.523	42.09	-0.007	-0.03	-0.016	+0.02	-0.001	-0.01	+0.076612	+0.075622	+0.074643
			146458	+20.766	17.61	+0.019	+0.09	+0.033	+0.11	+0.008	+0.10	+0.003419	+0.003159	+0.002832
259	260	261	146429	+54.507	14.37	-0.013	-0.06	-0.018	-0.15	-0.008	-0.10	-0.100159	-0.099389	-0.098626
			146621	+18.892	44.05	+0.004	+0.42	+0.004	+0.42	+0.004	+0.42	+0.806992	+0.808379	+0.809745
			146645	+41.053	32.70	+0.021	-0.54	+0.021	-0.54	+0.021	-0.54	+0.106127	+0.105458	+0.104806
			146676	+14.749	39.10	+0.037	-0.19	+0.037	-0.19	+0.037	-0.19	+0.031915	+0.031919	+0.031922
			146655	+30.145	41.54	-0.040	-0.43	-0.040	-0.43	-0.040	-0.43	+0.273578	+0.273937	+0.274287
			146675	+10.065	20.84	-0.022	+0.73	-0.022	+0.73	-0.022	+0.73	-0.218602	-0.219693	-0.220760
262	263	264	146552	+ 7.360	24.22	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.683837	+0.682858	+0.681881
			146553	+ 7.967	52.31	+0.011	-0.07	+0.011	-0.07	+0.011	-0.07	+0.365483	+0.365172	+0.364863
			146572	+59.684	38.13	-0.030	+0.26	-0.030	+0.26	-0.030	+0.26	+0.256346	+0.256332	+0.256324
			146531	+29.370	18.79	+0.044	-0.39	+0.044	-0.39	+0.044	-0.39	-0.255997	-0.255103	-0.254214
			146519	+ 6.237	35.76	-0.043	+0.38	-0.043	+0.38	-0.043	+0.38	-0.049668	-0.049258	-0.048855
265	266	267	146551	+ 2.596	20.85	-0.015	-0.13	-0.015	-0.13	-0.015	-0.13	+0.153191	+0.153928	+0.154674
			146533	+35.810	53.74	+0.022	+0.18	+0.022	+0.18	+0.022	+0.18	+0.600821	+0.599808	+0.598820
			146519	+ 6.237	35.76	+0.005	+0.05	+0.005	+0.05	+0.005	+0.05	+0.529179	+0.528190	+0.527220
			146487	+44.103	11.18	-0.026	-0.22	-0.026	-0.22	-0.026	-0.22	+0.229646	+0.229151	+0.228650
			146478	+59.523	42.09	+0.015	+0.12	+0.015	+0.12	+0.015	+0.12	-0.512837	-0.511078	-0.509363
268	269	270	146514	+ 6.865	16.49	-0.002	+0.03	-0.007	+0.02	-0.007	+0.03	+0.535350	+0.536180	+0.536997
			146559	+38.295	32.40	-0.007	+0.23	-0.008	+0.17	-0.007	+0.07	-0.207878	-0.207879	-0.207874
			146544	+13.713	9.36	+0.013	-0.38	+0.037	-0.27	+0.035	-0.19	+0.083864	+0.083764	+0.083718
			146551	+ 2.596	20.85	-0.005	+0.00	-0.022	-0.01	-0.022	+0.06	+0.052839	+0.051893	+0.051513
			146531	+29.371	18.79	-0.003	+0.12	+0.000	+0.09	+0.001	+0.03	+0.536424	+0.536042	+0.535646



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS DEPENDENCES

OBSERVATIONS	NO SAC	POSITIONS USED	STAR RESIDUALS			DEPENDENCES						
		S	S	S								
271	272	273	+ 4.040	+ 0.005	+ 0.01	- 0.002	+ 0.00	+ 0.001	- 0.02	+ 0.543474	+ 0.548993	+ 0.549470
			+ 29.371	- 0.066	- 0.02	+ 0.005	- 0.01	+ 0.001	+ 0.03	+ 0.122015	+ 0.121269	+ 0.123483
			+ 2.596	- 0.003	+ 0.07	- 0.023	+ 0.05	- 0.015	- 0.01	- 0.012121	- 0.012501	- 0.012906
			+ 13.713	+ 0.021	- 0.08	+ 0.030	- 0.07	+ 0.025	- 0.05	+ 0.091041	+ 0.091080	+ 0.091170
274	275	276	+ 40.299	- 0.017	+ 0.02	- 0.011	+ 0.03	- 0.012	+ 0.06	+ 0.250591	+ 0.251158	+ 0.251783
			+ 26.062	- 0.031	+ 0.63	- 0.031	+ 0.63	- 0.031	+ 0.63	+ 0.521934	+ 0.521595	+ 0.521352
			+ 35.296	+ 0.008	- 0.24	+ 0.008	- 0.24	+ 0.008	- 0.24	+ 0.407168	+ 0.406108	+ 0.405034
			+ 48.916	+ 0.012	- 0.01	+ 0.012	- 0.01	+ 0.012	- 0.01	- 0.143648	- 0.143469	- 0.143288
			+ 8.947	- 0.031	+ 0.34	- 0.031	+ 0.34	- 0.031	+ 0.34	- 0.073935	- 0.073276	- 0.072609
			+ 3.293	+ 0.043	- 0.71	+ 0.043	- 0.71	+ 0.043	- 0.71	+ 0.288581	+ 0.289043	+ 0.289510
277	278	279	+ 24.272	+ 0.022	- 0.39	+ 0.022	- 0.39	+ 0.022	- 0.39	+ 0.167748	+ 0.168250	+ 0.168756
			+ 49.896	- 0.039	+ 0.28	- 0.039	+ 0.28	- 0.039	+ 0.28	+ 0.497276	+ 0.496690	+ 0.496110
			+ 48.389	+ 0.047	- 0.13	+ 0.047	- 0.13	+ 0.047	- 0.13	+ 0.365645	+ 0.364914	+ 0.364183
			+ 47.658	- 0.029	- 0.08	- 0.029	- 0.08	- 0.029	- 0.08	+ 0.055688	+ 0.055642	+ 0.055590
			+ 3.406	- 0.001	+ 0.30	- 0.001	+ 0.30	- 0.001	+ 0.30	- 0.086357	- 0.085496	- 0.084640
			+ 46.669	- 0.006	+ 0.21	- 0.006	+ 0.21	- 0.006	+ 0.21	+ 0.051166	+ 0.051261	+ 0.051340
			+ 39.391	+ 0.045	- 0.15	+ 0.045	- 0.15	+ 0.045	- 0.15	+ 0.268410	+ 0.267767	+ 0.267162
			+ 40.356	- 0.047	+ 0.04	- 0.047	+ 0.04	- 0.047	+ 0.04	+ 0.419482	+ 0.418822	+ 0.418209
			+ 3.406	+ 0.039	+ 0.07	+ 0.039	+ 0.07	+ 0.039	+ 0.07	+ 0.230314	+ 0.230822	+ 0.231307
			+ 21.350	- 0.031	- 0.18	- 0.031	- 0.18	- 0.031	- 0.18	+ 0.030628	+ 0.031328	+ 0.031982
283	284	285	+ 55.008	+ 0.003	- 0.23	+ 0.003	- 0.23	- 0.028	- 0.23	+ 0.094459	+ 0.095530	+ 0.096408
			+ 0.280	+ 0.046	+ 0.24	+ 0.000	+ 0.08	+ 0.015	+ 0.21	+ 0.248922	+ 0.248871	+ 0.248956
			+ 37.648	- 0.049	- 0.06	- 0.025	- 0.03	+ 0.007	- 0.04	+ 0.327588	+ 0.327069	+ 0.326565
			+ 21.350	+ 0.011	- 0.04	+ 0.013	- 0.01	- 0.008	- 0.04	+ 0.360826	+ 0.359095	+ 0.357313
			+ 18.089	- 0.011	+ 0.10	- 0.020	+ 0.02	+ 0.014	+ 0.10	- 0.031796	- 0.030565	- 0.029242
			+ 5.849	+ 0.008	- 0.11	+ 0.002	- 0.12	- 0.010	- 0.16	+ 0.157090	+ 0.156931	+ 0.156762
			+ 3.406	- 0.015	- 0.19	- 0.011	- 0.16	- 0.002	- 0.07	+ 0.216835	+ 0.215572	+ 0.214227
			+ 49.548	+ 0.001	+ 0.22	+ 0.004	+ 0.21	+ 0.010	+ 0.20	+ 0.118444	+ 0.119878	+ 0.121410
			+ 38.839	+ 0.025	+ 0.67	+ 0.025	+ 0.63	+ 0.022	+ 0.47	+ 0.263092	+ 0.262638	+ 0.262156
			+ 18.089	- 0.019	- 0.59	- 0.020	- 0.56	- 0.020	- 0.43	+ 0.244540	+ 0.244981	+ 0.245445
289	290	291	+ 49.549	- 0.023	+ 0.10	- 0.021	- 0.08	- 0.031	- 0.21	+ 0.167039	+ 0.166674	+ 0.166331
			+ 0.280	+ 0.015	- 0.14	- 0.005	- 0.01	+ 0.007	+ 0.08	+ 0.126311	+ 0.125378	+ 0.124415
			+ 38.839	+ 0.009	+ 0.14	+ 0.049	+ 0.17	+ 0.042	+ 0.22	+ 0.173551	+ 0.173096	+ 0.172651
			+ 18.089	- 0.013	- 0.09	- 0.045	- 0.15	- 0.041	- 0.22	+ 0.239825	+ 0.239274	+ 0.239682
			+ 4.221	+ 0.012	+ 0.00	+ 0.021	+ 0.08	+ 0.023	+ 0.14	+ 0.294275	+ 0.295577	+ 0.296920
			+ 16.779	- 0.017	+ 0.48	- 0.019	+ 0.24	- 0.010	+ 0.71	+ 0.334102	+ 0.334541	+ 0.334981
			+ 35.920	+ 0.014	- 0.39	+ 0.016	- 0.24	+ 0.008	- 0.39	+ 0.095419	+ 0.095042	+ 0.094660
			+ 14.075	- 0.012	+ 0.33	- 0.013	+ 0.22	- 0.007	+ 0.25	- 0.048342	- 0.049145	- 0.050017
			+ 17.143	+ 0.016	- 0.45	+ 0.018	- 0.35	+ 0.010	- 0.18	+ 0.259954	+ 0.260167	+ 0.260405
			+ 31.412	- 0.001	+ 0.03	- 0.002	+ 0.12	- 0.002	- 0.39	+ 0.358866	+ 0.359395	+ 0.359971
			+ 17.143	+ 0.009	- 0.17	+ 0.009	- 0.11	+ 0.010	- 0.16	+ 0.042043	+ 0.041853	+ 0.041709
295	296	297	+ 46.235	+ 0.015	+ 0.60	+ 0.011	+ 0.47	+ 0.022	+ 0.54	+ 0.048173	+ 0.047460	+ 0.046653
			+ 52.080	- 0.023	- 0.64	- 0.018	- 0.52	- 0.031	- 0.57	+ 0.289964	+ 0.289695	+ 0.289417
			+ 6.640	+ 0.008	+ 0.26	+ 0.006	+ 0.21	+ 0.012	+ 0.23	+ 0.633413	+ 0.634450	+ 0.635444
			+ 35.734	- 0.010	- 0.05	- 0.009	- 0.05	- 0.012	- 0.04	- 0.013594	- 0.013458	- 0.013223
			+ 3.299	+ 0.012	- 0.55	+ 0.012	- 0.55	+ 0.012	- 0.55	+ 0.328709	+ 0.328885	+ 0.329053
			+ 9.758	+ 0.006	+ 0.51	+ 0.004	+ 0.51	+ 0.004	+ 0.51	+ 0.246474	+ 0.247037	+ 0.247597
			+ 10.236	- 0.008	+ 0.10	- 0.028	+ 0.10	- 0.028	+ 0.10	+ 0.302414	+ 0.302021	+ 0.301589
			+ 29.994	+ 0.016	+ 0.06	+ 0.014	+ 0.06	+ 0.014	+ 0.06	+ 0.219315	+ 0.218338	+ 0.217327
			+ 21.933	- 0.003	- 0.12	- 0.003	- 0.12	- 0.003	- 0.12	- 0.096971	- 0.096281	- 0.095565



TABLE 2. STAR RESIDUALS, DEPENDENCES

OBSERVATIONS	NO. STAR	POSITIONS USED	STAR RESIDUALS			DEPENDENCES						
			$\delta$	$\alpha$	$\mu$	$\delta$	$\alpha$	$\mu$				
301	302	303	146549	+ 2.751	11.52	-0.013	+0.14	-0.013	+0.14	+0.416322	+0.417641	+0.417762
			146517	+ 3.229	40.70	+0.014	-0.09	+0.014	-0.09	+0.353939	+0.353914	+0.353994
			146544	+29.123	44.51	-0.004	-0.004	-0.004	-0.004	+0.119490	+0.118255	+0.117047
			146561	+50.211	17.85	-0.001	-0.001	+0.001	+0.001	-0.109299	-0.109916	-0.110546
			146523	+21.933	57.79	+0.003	-0.003	-0.003	-0.003	+0.219537	+0.220694	+0.221245
304	305	306	146559	+31.938	26.60	+0.021	-0.05	+0.023	-0.09	+0.559300	+0.559299	+0.560349
			146501	+37.910	54.69	-0.023	-0.025	-0.025	-0.009	+0.203281	+0.203993	+0.204595
			146643	+18.464	37.45	+0.010	-0.23	+0.011	-0.18	-0.248599	-0.249053	-0.249497
			146532	+ 4.745	57.73	+0.006	+0.37	+0.007	+0.30	+0.114410	+0.113516	+0.112679
			146609	+ 9.758	11.52	-0.014	-0.31	-0.015	-0.26	+0.372607	+0.372245	+0.371873
307	308	309	146601	+37.910	54.69	+0.015	+0.016	+0.016	+0.016	+0.111686	+0.111762	+0.111800
			146623	+21.933	57.79	+0.001	+0.04	-0.002	+0.00	-0.158662	-0.159102	-0.159524
			146598	+ 8.022	49.30	-0.030	-0.18	-0.025	-0.14	-0.023457	-0.024191	-0.024905
			146557	+30.740	10.88	+0.033	+0.20	+0.027	+0.15	+0.353203	+0.353195	+0.353176
			146551	+ 2.596	20.85	-0.019	-0.10	-0.017	-0.09	+0.717230	+0.718336	+0.719453
310	311	312	146514	+ 6.865	16.49	-0.002	+0.03	-0.007	+0.02	-0.021873	-0.021050	-0.020193
			146559	+38.295	32.40	-0.007	+0.23	-0.008	+0.17	+0.058137	+0.057866	+0.057573
			146544	+13.713	9.36	+0.018	-0.39	+0.037	-0.27	+0.184131	+0.184021	+0.183902
			146551	+ 2.596	20.85	-0.005	+0.00	-0.022	-0.01	+0.307895	+0.307513	+0.307122
			146531	+29.371	18.79	-0.003	+0.12	+0.000	+0.09	+0.471710	+0.471651	+0.471595
313	314	315	146493	+ 4.040	52.09	+0.006	+0.01	-0.002	+0.00	+0.114793	+0.115406	+0.116015
			146531	+29.371	18.79	-0.006	-0.02	+0.005	-0.01	+0.360891	+0.360500	+0.360121
			146551	+ 2.596	20.85	-0.003	+0.07	-0.023	+0.05	+0.273704	+0.273286	+0.272875
			146544	+13.713	9.36	+0.021	-0.08	+0.030	-0.07	+0.178205	+0.178102	+0.177995
			146535	+40.299	34.82	-0.017	+0.02	-0.011	+0.03	+0.072407	+0.072705	+0.072994
316	317	318	146526	+52.089	13.65	+0.011	+0.22	-0.020	+0.54	+0.768986	+0.768271	+0.767770
			146513	+58.882	59.18	-0.004	-0.15	+0.036	-0.60	+0.371703	+0.371375	+0.370799
			146479	+ 3.671	53.87	-0.022	-0.27	-0.033	-0.06	-0.151205	-0.151137	-0.151033
			146470	+11.426	12.22	+0.027	+0.39	+0.015	+0.44	-0.257881	-0.257445	-0.256900
			146497	+28.414	11.68	-0.012	-0.19	+0.003	-0.32	+0.268397	+0.268936	+0.269364
319	320	321	146525	+52.089	13.65	+0.011	+0.22	-0.020	+0.54	+0.889379	+0.887600	+0.887049
			146513	+58.882	59.18	-0.004	-0.15	+0.036	-0.60	+0.630309	+0.629879	+0.629230
			146479	+ 3.671	53.87	-0.022	-0.27	-0.033	-0.06	-0.018413	-0.018258	-0.018075
			146470	+11.426	12.22	+0.027	+0.39	+0.015	+0.44	-0.344475	-0.343951	-0.343332
			146497	+28.414	11.68	-0.012	-0.19	+0.003	-0.32	-0.155800	-0.155269	-0.154822
322	323	324	146526	+52.089	13.65	+0.011	+0.22	-0.020	+0.54	+0.163591	+0.164197	+0.164851
			146513	+58.882	59.18	-0.004	-0.15	+0.036	-0.60	-0.184248	-0.184798	-0.185291
			146479	+ 3.671	53.87	-0.022	-0.27	-0.033	-0.06	+0.169744	+0.169727	+0.169658
			146470	+11.426	12.22	+0.027	+0.39	+0.015	+0.44	+0.480894	+0.481368	+0.481838
325	326	327	146497	+28.414	11.68	-0.012	-0.19	+0.003	-0.32	+0.697200	+0.697899	+0.698646
			146552	+ 7.360	24.22	+0.019	-0.18	+0.019	-0.18	+0.787226	+0.786581	+0.785947
			146553	+ 7.967	52.31	+0.011	-0.07	+0.011	-0.07	+0.290107	+0.289849	+0.289593
			146572	+59.684	38.13	-0.030	+0.26	-0.030	+0.26	-0.202952	-0.203190	-0.203427
			146531	+29.370	18.79	+0.044	-0.39	+0.044	-0.39	-0.218228	-0.217573	-0.216929
			146519	+ 6.237	35.76	-0.043	+0.38	-0.043	+0.38	+0.343846	+0.344334	+0.344815
328	329	330	146452	+58.978	24.31	+0.003	-0.03	+0.016	-0.04	+0.039494	+0.039567	+0.039598
			146487	+44.103	11.18	+0.011	-0.10	+0.006	-0.06	+0.264333	+0.263930	+0.263542
			146507	+24.857	26.99	-0.013	+0.11	-0.016	+0.08	+0.411883	+0.411336	+0.410793
			146493	+ 4.040	52.09	+0.005	-0.05	+0.009	-0.04	+0.349056	+0.349327	+0.349598
			146475	+24.225	71.57	-0.007	+0.06	-0.015	+0.05	-0.064766	-0.064766	-0.064766



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE ON...

TABLE 2. STAR RESIDUALS DEPENDENCES

OBSERVATIONS	NO SAO	POSITIONS USED	STAR RESIDUALS			DEPENDENCES								
		S	S	S										
331	332	333	146629	+48.698	23.54	-0.004	-0.27	-0.004	-0.27	-0.004	-0.27	+0.633124	+0.637365	+0.635589
			146647	+49.155	42.70	-0.017	+0.33	-0.017	+0.33	-0.017	+0.33	+0.282533	+0.282700	+0.282866
			146641	+10.236	55.29	-0.026	-0.10	-0.026	-0.10	-0.026	-0.10	-0.087718	-0.087516	-0.087308
			146665	+29.994	0.18	+0.027	+0.13	+0.027	+0.13	+0.027	+0.13	+0.247632	+0.247148	+0.246654
			146623	+21.933	57.79	+0.021	-0.19	+0.021	-0.19	+0.021	-0.19	-0.080575	-0.079697	-0.078809
334	335	336	146609	+9.758	11.52	-0.013	+0.14	-0.013	+0.14	-0.013	+0.14	-0.154590	-0.153872	-0.153189
			146617	+3.299	40.70	+0.014	-0.09	+0.014	-0.09	+0.014	-0.09	-0.121509	-0.121354	-0.121233
			146644	+29.123	44.51	-0.004	-0.02	-0.004	-0.02	-0.004	-0.02	+0.208667	+0.207764	+0.206858
			146661	+50.211	17.85	-0.001	+0.05	-0.001	+0.05	-0.001	+0.05	+0.758688	+0.757927	+0.757223
			146623	+21.933	57.79	+0.003	-0.03	+0.003	-0.03	+0.003	-0.03	+0.308745	+0.309535	+0.310341
337	338	339	146580	+31.938	26.60	-0.021	-0.06	-0.021	-0.06	-0.021	-0.06	+0.013423	+0.014351	+0.015238
			146601	+37.910	54.68	-0.023	+0.23	-0.023	+0.23	-0.023	+0.23	+0.402108	+0.402481	+0.402898
			146643	+18.464	37.45	+0.010	-0.23	+0.011	-0.18	-0.003	-0.11	+0.665419	+0.664659	+0.663887
			146632	+4.745	57.73	+0.006	+0.37	+0.007	+0.30	-0.004	+0.15	+0.055757	+0.055212	+0.054662
			146609	+9.758	11.52	-0.014	-0.31	-0.015	-0.26	+0.008	-0.11	-0.136708	-0.136703	-0.136685
340	341	342	146601	+37.910	54.68	+0.015	+0.05	+0.016	+0.08	+0.033	+0.07	+0.429598	+0.429467	+0.429345
			146623	+21.933	57.79	+0.001	+0.04	-0.002	+0.00	-0.016	+0.02	+0.348734	+0.348245	+0.347727
			146588	+8.022	49.30	-0.030	-0.18	-0.025	-0.14	-0.021	-0.18	-0.147417	-0.147722	-0.148054
			146557	+30.740	10.88	+0.033	+0.20	+0.027	+0.15	+0.026	+0.19	-0.081634	-0.081410	-0.081202
			146551	+2.596	20.85	-0.019	-0.10	-0.017	-0.09	-0.022	-0.11	+0.450719	+0.451420	+0.452185
343	344	345	146580	+31.938	26.60	-0.012	+0.24	+0.001	+0.22	-0.008	+0.26	+0.500684	+0.499938	+0.499138
			146544	+13.713	9.36	-0.034	+0.46	-0.007	+0.43	-0.029	+0.53	+0.053636	+0.054148	+0.054548
			146551	+2.596	20.85	-0.021	-0.54	-0.043	-0.41	-0.044	-0.38	+0.160481	+0.160493	+0.160555
			146531	+29.371	18.79	+0.031	-0.03	+0.025	-0.07	+0.039	-0.15	-0.205787	-0.205315	-0.204787
			146576	+19.420	41.87	+0.036	-0.14	+0.025	-0.16	+0.042	-0.26	+0.490986	+0.490735	+0.490546
346	347	348	146684	+11.735	36.21	+0.004	+0.21	+0.004	+0.21	+0.004	+0.21	+0.562433	+0.561358	+0.560293
			146648	+51.345	31.16	+0.009	-0.14	+0.009	-0.14	+0.009	-0.14	+0.290954	+0.290818	+0.290683
			146617	+3.299	40.70	+0.010	+0.31	+0.010	+0.31	+0.010	+0.31	-0.008805	-0.008022	-0.007246
			146644	+29.123	44.51	-0.026	-0.40	-0.026	-0.40	-0.026	-0.40	+0.180967	+0.181081	+0.181195
			146661	+50.211	17.85	+0.003	+0.02	+0.003	+0.02	+0.003	+0.02	-0.025549	-0.025235	-0.024924
349	350	351	146624	+25.800	9.04	-0.001	-0.27	+0.002	-0.38	-0.006	-0.11	-0.012410	-0.011777	-0.011113
			146662	+57.610	10.85	-0.009	-0.26	-0.008	-0.25	-0.007	-0.16	+0.539981	+0.539554	+0.537131
			146643	+18.464	37.45	-0.003	+0.09	-0.005	+0.18	+0.002	+0.01	-0.065306	-0.065316	-0.065345
			146632	+4.745	57.73	+0.029	+0.68	+0.027	+0.58	+0.020	+0.46	+0.296816	+0.296800	+0.296778
			146609	+9.758	11.52	-0.015	-0.25	-0.016	-0.13	-0.008	-0.20	+0.240918	+0.241738	+0.242548
352	353	354	146609	+9.758	11.52	+0.008	+0.21	-0.006	+0.14	-0.002	+0.24	+0.303961	+0.303770	+0.303587
			146631	+53.403	19.07	-0.008	-0.04	+0.001	+0.20	+0.002	+0.03	+0.205602	+0.204516	+0.203429
			146601	+37.910	54.68	-0.006	+0.21	-0.006	+0.60	+0.002	+0.37	+0.097263	+0.097921	+0.098521
			146623	+21.933	57.79	+0.007	-0.18	+0.005	-0.60	-0.003	-0.35	+0.031437	+0.031086	+0.030753
			146588	+8.022	49.30	-0.001	-0.19	+0.006	-0.34	+0.000	-0.28	+0.361737	+0.362707	+0.363709
355	356	357	146609	+9.758	11.52	+0.008	+0.21	-0.006	+0.14	-0.002	+0.24	+0.222927	+0.222804	+0.222721
			146631	+53.403	19.07	-0.008	-0.04	+0.001	+0.20	+0.002	+0.03	+0.477013	+0.475811	+0.474571
			146601	+37.910	54.68	-0.006	+0.21	-0.006	+0.60	+0.002	+0.37	+0.064589	+0.065181	+0.065797
			146623	+21.933	57.79	+0.007	-0.18	+0.005	-0.60	-0.003	-0.35	+0.330540	+0.329921	+0.329312
			146588	+8.022	49.30	-0.001	-0.19	+0.006	-0.34	+0.000	-0.28	-0.095069	-0.093717	-0.092401
358	359	360	146684	+11.735	36.21	+0.004	+0.21	+0.004	+0.21	+0.004	+0.21	+0.541658	+0.540697	+0.539741
			146648	+51.345	31.16	+0.009	-0.14	+0.009	-0.14	+0.009	-0.14	+0.020461	+0.020413	+0.020361
			146617	+3.299	40.70	+0.010	+0.31	+0.010	+0.31	+0.010	+0.31	-0.321986	-0.321196	-0.320415
			146644	+29.123	44.51	-0.026	-0.40	-0.026	-0.40	-0.026	-0.40	+0.067248	+0.067382	+0.067514
			146661	+50.211	17.85	+0.003	+0.02	+0.003	+0.02	+0.003	+0.02	+0.000000	+0.000000	+0.000000



TABLE 2. STAR RESIDUALS. DEPENDENCES.

OBSERVATIONS	NO. STAR	POSITIONS USED	STAR RESIDUALS					DEPENDENCES						
			S	S	S	S	S							
361	362	363	146624	+25.800	9.04	-0.001	-0.27	+0.002	-0.32	-0.005	-0.11	+0.166356	+0.166882	+0.167346
			146662	+57.610	10.85	-0.009	-0.26	-0.008	-0.25	-0.007	-0.16	+0.478764	+0.477536	+0.476284
			146643	+18.464	37.45	-0.003	+0.09	-0.005	+0.18	+0.002	+0.01	+0.615177	+0.614947	+0.614737
			146632	+4.745	57.73	+0.029	+0.68	+0.027	+0.58	+0.020	+0.46	+0.054299	+0.054370	+0.054436
364	365	366	146609	+9.758	11.52	-0.015	-0.25	-0.016	-0.13	-0.008	-0.20	-0.314597	-0.313736	-0.312803
			146609	+9.758	11.52	+0.008	+0.21	-0.006	+0.14	-0.002	+0.24	+0.024432	+0.024299	+0.024179
			146631	+53.403	19.07	-0.008	-0.04	+0.001	+0.20	+0.002	+0.03	+0.257007	+0.255994	+0.254982
			146601	+37.910	54.68	-0.006	+0.21	-0.006	+0.60	+0.002	+0.37	+0.346325	+0.346812	+0.347386
			146623	+21.933	57.79	+0.007	-0.18	+0.005	-0.60	-0.003	-0.35	+0.525090	+0.524684	+0.524225
			146588	+8.022	49.30	-0.001	-0.19	+0.006	-0.34	+0.000	-0.28	-0.152854	-0.151789	-0.150771
367	368	369	146601	+37.910	54.68	+0.015	+0.05	+0.016	+0.08	+0.033	+0.07	+0.282558	+0.282757	+0.282922
			146623	+21.933	57.79	+0.001	+0.04	-0.002	+0.00	-0.016	+0.02	-0.145282	-0.145906	-0.146491
			146588	+8.022	49.30	-0.030	-0.18	-0.025	-0.14	-0.021	-0.18	-0.397286	-0.398553	-0.399785
			146557	+30.740	10.83	+0.033	+0.20	+0.027	+0.15	+0.026	+0.19	+0.158090	+0.157976	+0.157821
			146551	+2.596	20.85	-0.019	-0.10	-0.017	-0.09	-0.022	-0.11	+1.101921	+1.103725	+1.105534
370	371	372	146702	+13.205	28.03	+0.008	-0.05	+0.008	-0.05	+0.008	-0.05	+0.571406	+0.570590	+0.569774
			146696	+24.906	11.08	-0.011	-0.07	-0.011	-0.07	-0.011	-0.07	+0.218049	+0.218079	+0.218126
			146676	+14.749	39.10	+0.004	+0.25	+0.004	+0.25	+0.004	+0.25	-0.152906	-0.152053	-0.151183
			146655	+30.145	41.54	+0.001	-0.17	+0.001	-0.17	+0.001	-0.17	-0.300066	-0.298932	-0.297790
			146675	+10.065	20.84	-0.002	+0.04	-0.002	+0.04	-0.002	+0.04	+0.663518	+0.662316	+0.661074
373	374	375	146699	+59.147	4.22	+0.045	-0.42	+0.045	-0.42	+0.045	-0.42	-0.023759	-0.023836	-0.023918
			146702	+13.205	28.03	-0.034	+0.59	-0.034	+0.59	-0.034	+0.59	+0.296257	+0.295659	+0.295065
			146689	+51.850	25.08	-0.016	-0.22	-0.016	-0.22	-0.016	-0.22	+0.266414	+0.266131	+0.265850
			146655	+30.145	41.54	+0.038	-0.32	+0.038	-0.32	+0.038	-0.32	+0.430147	+0.430291	+0.430440
			146652	+5.941	54.40	-0.033	+0.37	-0.033	+0.37	-0.033	+0.37	+0.030941	+0.031755	+0.032563
376	377	378	146677	+26.062	12.34	-0.031	+0.63	-0.031	+0.63	-0.031	+0.63	-0.078248	-0.078212	-0.078173
			146687	+35.296	7.34	+0.008	-0.24	+0.008	-0.24	+0.008	-0.24	+0.655322	+0.654263	+0.653211
			146639	+48.916	52.99	+0.012	-0.01	+0.012	-0.01	+0.012	-0.01	+0.550804	+0.550675	+0.550542
			146633	+8.947	8.43	-0.031	+0.34	-0.031	+0.34	-0.031	+0.34	+0.118342	+0.118856	+0.119363
			146654	+3.293	30.50	+0.043	-0.71	+0.043	-0.71	+0.043	-0.71	-0.246221	-0.245581	-0.244943
379	380	381	146676	+14.749	39.10	+0.027	+0.10	+0.027	+0.10	+0.027	+0.10	+0.345804	+0.345162	+0.344506
			146634	+15.909	23.24	-0.021	-0.54	-0.021	-0.54	-0.021	-0.54	+0.254293	+0.254309	+0.254324
			146660	+48.389	40.73	-0.021	-0.12	-0.021	-0.12	-0.021	-0.12	+0.153747	+0.153589	+0.153429
			146630	+47.658	19.80	-0.011	+0.65	-0.011	+0.65	-0.011	+0.65	+0.191715	+0.191888	+0.192065
			146607	+3.406	49.69	+0.026	-0.10	+0.026	-0.10	+0.026	-0.10	+0.054441	+0.055052	+0.055676
			146630	+47.658	19.80	+0.030	+0.59	+0.030	+0.59	+0.030	+0.59	+0.501622	+0.501227	+0.500883
382	383	384	146595	+5.849	13.30	-0.027	-0.77	-0.027	-0.77	-0.027	-0.77	+0.233383	+0.233647	+0.233931
			146658	+40.356	0.02	-0.015	-0.35	-0.015	-0.35	-0.015	-0.35	+0.331702	+0.331014	+0.330326
			146607	+3.406	49.69	-0.002	+0.31	-0.002	+0.31	-0.002	+0.31	+0.172320	+0.172490	+0.172662
385	386	387	146599	+21.350	37.47	+0.014	+0.22	+0.014	+0.22	+0.014	+0.22	-0.239026	-0.238378	-0.237801
			146595	+5.849	13.30	+0.008	-0.11	+0.002	-0.12	-0.010	-0.16	+0.329640	+0.329340	+0.329026
			146607	+3.406	49.69	-0.015	-0.19	-0.011	-0.16	-0.002	-0.07	+0.229556	+0.228646	+0.227738
			146569	+49.548	30.93	+0.001	+0.22	+0.004	+0.21	+0.010	+0.20	+0.341345	+0.342114	+0.342861
			146583	+38.839	54.81	+0.025	+0.67	+0.025	+0.63	+0.022	+0.47	+0.050981	+0.050889	+0.050808
			146562	+18.089	24.36	-0.019	-0.59	-0.020	-0.56	-0.020	-0.43	+0.048478	+0.049011	+0.049568
388	389	390	146569	+49.549	30.93	-0.023	+0.10	-0.021	-0.08	-0.031	-0.21	+0.365623	+0.365110	+0.364586
			146586	+0.280	24.00	+0.015	-0.14	-0.005	-0.01	+0.007	+0.08	+0.365684	+0.364819	+0.363989
			146583	+38.839	54.81	+0.007	+0.14	+0.049	+0.17	+0.042	+0.22	+0.126430	+0.126343	+0.126211
			146562	+18.089	24.36	-0.013	-0.09	-0.045	-0.15	-0.041	-0.22	-0.003654	-0.002495	-0.001895
			146543	+4.221	55.34	+0.012	+0.00	+0.021	+0.08	+0.027	+0.14	+0.145717	+0.145577	+0.145437



PRECISE ASTROMETRIC POSITIONS OF 36 MINOR PLANETS OBTAINED BY GPO TELESCOPE OF...

TABLE 2. STAR RESIDUALS, DEPENDENCIES

OBSERVATIONS	NO. STARS	POSITIONS USED	STAR RESIDUALS			DEPENDENCIES					
			S	''	S						
394	395	396	0.84	+0.002	-0.73	+0.002	+0.002	-0.73	+0.002	+0.233180	+0.231292
			4.05	+0.021	+0.49	+0.021	+0.49	+0.021	+0.48	-0.045882	-0.047472
			6.86	-0.026	-0.15	-0.026	-0.15	-0.026	-0.15	-0.015450	-0.014115
			32.40	+0.019	-0.18	+0.019	-0.18	+0.019	-0.18	+0.374761	+0.376998
			0.72	-0.016	+0.57	-0.016	+0.57	-0.016	+0.57	+0.451410	+0.450620
			24.74	+0.032	-0.28	+0.032	-0.28	+0.032	-0.28	-0.118058	-0.118120
			7.20	-0.035	+0.31	-0.035	+0.31	-0.035	+0.31	+0.321843	+0.324035
			48.27	+0.013	-0.21	+0.025	+0.38	+0.030	+0.02	+0.429759	+0.429941
			0.32	-0.034	+0.28	-0.020	-0.01	-0.029	+0.21	-0.009249	-0.010520
			39.40	+0.025	-0.11	-0.002	-0.36	+0.003	-0.26	+0.374715	+0.374664
											+0.374982



**ПРЕЦИЗНИ АСТРОМЕТРИЈСКИ ПОЛОЖАЈИ 36 МАЛИХ ПЛАНЕТА  
СНИМЉЕНИХ ГРО ТЕЛЕСКОПОМ СА ESO – LA SILLA 1988. ГОДИНЕ**

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УДК 523.44  
*Стручни рад*

У току септембра 1988. године са Европске јужне опсерваторије у Ла Сили (Чиле) Н. Дебе-  
hogne је посматрао 36 малих планета од којих су

25 нови објекти. Рад садржи 396 прецизних астро-  
графских положаја и листу везника.