

# Astrometry of minor planets made at the Skalnaté Pleso Observatory in the year 2001

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**Abstract.** The paper presents the results of position determinations of minor planets carried out at the Skalnaté Pleso Observatory in the year 2001. 158 CCD observations of 9 minor planets are given together with the list of reference stars.

**Key words:** astrometry – asteroids

## 1. Introduction

The presented paper is a continuation of the previous papers which gave the results of positional CCD observations of minor planets obtained at the Skalnaté Pleso Observatory (the last paper of this series: Neslušan, 2002) and contains the observations made in the year 2000.

The reference stars were selected from the USNO-A2.0 Star Catalog (Monet et al., 1998).

The reduction was made using the method of plate constants within computer program *Astrometrica* (Raab, 1993).

A total of 158 accurate positions of 9 minor planets are given. A list of reference stars and a list of collaborators are included, too. The list of collaborators informs about their share in exposing, measuring, and reducing the positions.

## 2. Positions of minor planets

The data have been arranged according to serial numbers of minor planets. The individual columns of the table contain the following:

N – serial number of observation,

MP – number of minor planet (if unnumbered, yet, the preliminary designation is given in parentheses),

Date U.T. – date and time of the middle of the exposure,

$R.A._{2000}$  – right ascension for equinox 2000.0 (in h,m,s),

$Decl._{2000}$  – declination for equinox 2000.0 (in  $^{\circ},',''$ ),

$d\alpha$  – the mean residual in R.A. in arc seconds,

$d\delta$  – the mean residual in Decl. in arc seconds.

N	MP	Date	U.T.	$R.A._{2000}$	$Decl._{2000}$	$d\alpha$	$d\delta$
1	16	2001	Jan.	2.67519	04 33 42.45	+17 36 26.5	0.3 0.2
2	16	2001	Jan.	2.69001	04 33 41.98	+17 36 26.7	0.1 0.1
3	16	2001	Jan.	4.71604	04 32 42.37	+17 37 25.8	0.3 0.3
4	16	2001	Jan.	4.72155	04 32 42.20	+17 37 26.0	0.2 0.2
5	16	2001	Jan.	4.73308	04 32 41.88	+17 37 26.5	0.3 0.3
6	16	2001	Jan.	12.82935	04 29 49.24	+17 44 15.8	0.3 0.3
7	16	2001	Jan.	12.83898	04 29 49.11	+17 44 16.2	0.1 0.2
8	16	2001	Jan.	15.73506	04 29 13.52	+17 47 47.1	0.2 0.3
9	16	2001	Jan.	15.74678	04 29 13.40	+17 47 48.2	0.1 0.2
10	16	2001	Jan.	16.73137	04 29 04.50	+17 49 07.8	0.2 0.2
11	16	2001	Jan.	16.75455	04 29 04.28	+17 49 09.7	0.1 0.2
12	16	2001	Jan.	18.73193	04 28 51.27	+17 52 01.2	0.1 0.2
13	16	2001	Jan.	18.74774	04 28 51.17	+17 52 02.7	0.1 0.2
14	16	2001	Jan.	19.68750	04 28 47.37	+17 53 29.1	0.2 0.2
15	16	2001	Jan.	19.70649	04 28 47.25	+17 53 31.7	0.3 0.2
16	16	2001	Jan.	20.69031	04 28 44.84	+17 55 05.5	0.2 0.2
17	16	2001	Jan.	20.71104	04 28 44.78	+17 55 07.6	0.1 0.3
18	16	2001	Jan.	21.69172	04 28 43.94	+17 56 45.7	0.1 0.3
19	16	2001	Jan.	21.70591	04 28 43.93	+17 56 47.0	0.2 0.3
20	16	2001	Feb.	14.77531	04 36 15.15	+18 52 00.7	0.2 0.2
21	16	2001	Feb.	14.78784	04 36 15.59	+18 52 02.7	0.2 0.2
22	16	2001	Feb.	15.78509	04 36 52.13	+18 54 47.4	0.1 0.2
23	16	2001	Feb.	15.79698	04 36 52.56	+18 54 49.3	0.1 0.2
24	107	2001	Mar.	22.90079	11 07 43.61	+04 59 01.7	0.0 0.1
25	107	2001	Mar.	23.01297	11 07 39.61	+04 59 44.7	0.0 0.1
26	125	2001	Jan.	2.70516	04 13 56.69	+14 36 48.8	0.2 0.2
27	125	2001	Jan.	2.72215	04 13 56.17	+14 36 49.2	0.2 0.2
28	125	2001	Jan.	4.75597	04 12 59.66	+14 37 38.2	0.2 0.2
29	125	2001	Jan.	4.78287	04 12 58.93	+14 37 39.1	0.2 0.1
30	125	2001	Jan.	12.84912	04 10 15.49	+14 44 24.7	0.3 0.3
31	125	2001	Jan.	12.85880	04 10 15.34	+14 44 25.9	0.1 0.0
32	125	2001	Jan.	15.78882	04 09 40.32	+14 48 15.5	0.3 0.2
33	125	2001	Jan.	15.80256	04 09 40.16	+14 48 16.6	0.3 0.3
34	125	2001	Jan.	15.82689	04 09 39.91	+14 48 18.6	0.3 0.3
35	125	2001	Jan.	16.79208	04 09 31.33	+14 49 42.9	0.2 0.1
36	125	2001	Jan.	16.80939	04 09 31.17	+14 49 44.5	0.2 0.1
37	125	2001	Jan.	18.75596	04 09 18.16	+14 52 48.6	0.2 0.2
38	125	2001	Jan.	18.79457	04 09 17.91	+14 52 52.5	0.2 0.2
39	125	2001	Jan.	19.72314	04 09 13.86	+14 54 26.7	0.2 0.3
40	125	2001	Jan.	19.74288	04 09 13.76	+14 54 28.8	0.2 0.2
41	125	2001	Jan.	20.72073	04 09 10.82	+14 56 13.0	0.2 0.3
42	125	2001	Jan.	20.73821	04 09 10.77	+14 56 14.9	0.1 0.1
43	125	2001	Jan.	21.71404	04 09 09.40	+14 58 01.3	0.2 0.2
44	125	2001	Jan.	21.73278	04 09 09.37	+14 58 03.5	0.2 0.1
45	587	2001	Nov.	17.72086	04 38 55.69	+62 52 33.5	0.1 0.2
46	587	2001	Nov.	17.77745	04 38 49.78	+62 52 45.9	0.1 0.1

N	MP	Date	U.T.	<i>R.A.</i> <sub>2000</sub>	<i>Decl.</i> <sub>2000</sub>	d $\alpha$	d $\delta$
47	696	2001	Jan.	2.73619	06 22 13.56	+31 18 35.6	0.2 0.2
48	696	2001	Jan.	2.75676	06 22 12.29	+31 18 29.2	0.2 0.2
49	696	2001	Jan.	4.79752	06 20 09.19	+31 07 13.4	0.2 0.1
50	696	2001	Jan.	4.81289	06 20 08.27	+31 07 08.3	0.1 0.1
51	696	2001	Jan.	12.86969	06 12 46.01	+30 19 34.8	0.0 0.2
52	696	2001	Jan.	12.88406	06 12 45.34	+30 19 29.2	0.1 0.3
53	696	2001	Jan.	15.83868	06 10 24.87	+30 01 10.9	0.2 0.2
54	696	2001	Jan.	15.86017	06 10 23.87	+30 01 02.9	0.2 0.3
55	696	2001	Jan.	16.81571	06 09 41.40	+29 55 03.2	0.1 0.2
56	696	2001	Jan.	16.83081	06 09 40.73	+29 54 57.5	0.1 0.2
57	696	2001	Jan.	19.75498	06 07 39.88	+29 36 30.3	0.2 0.2
58	696	2001	Jan.	19.76890	06 07 39.31	+29 36 25.4	0.2 0.1
59	696	2001	Jan.	20.74655	06 07 02.14	+29 30 13.7	0.2 0.3
60	696	2001	Jan.	20.76982	06 07 01.24	+29 30 05.1	0.2 0.3
61	696	2001	Jan.	21.75259	06 06 25.58	+29 23 50.7	0.1 0.2
62	696	2001	Jan.	21.76957	06 06 24.97	+29 23 44.4	0.2 0.3
63	696	2001	Feb.	3.73412	06 01 21.27	+28 02 49.5	0.3 0.2
64	696	2001	Feb.	3.73755	06 01 21.19	+28 02 48.3	0.3 0.2
65	696	2001	Feb.	3.74786	06 01 21.01	+28 02 43.8	0.2 0.1
66	696	2001	Feb.	16.77291	06 01 29.18	+26 48 01.8	0.2 0.3
67	696	2001	Feb.	16.79131	06 01 29.37	+26 47 55.9	0.2 0.2
68	696	2001	Feb.	17.78116	06 01 42.17	+26 42 37.0	0.1 0.1
69	696	2001	Feb.	17.79091	06 01 42.24	+26 42 33.7	0.1 0.1
70	696	2001	Feb.	17.79885	06 01 42.41	+26 42 31.6	0.1 0.3
71	696	2001	Mar.	2.84389	06 06 56.66	+25 37 15.0	0.0 0.1
72	696	2001	Mar.	2.85920	06 06 57.14	+25 37 10.7	0.2 0.2
73	696	2001	Mar.	12.75990	06 13 35.10	+24 52 43.5	0.2 0.1
74	696	2001	Mar.	12.77456	06 13 35.77	+24 52 40.1	0.2 0.2
75	696	2001	Mar.	16.89247	06 16 55.29	+24 35 06.2	0.1 0.2
76	696	2001	Mar.	16.90840	06 16 56.11	+24 35 02.4	0.2 0.2
77	696	2001	Mar.	18.91876	06 18 40.15	+24 26 37.5	0.2 0.1
78	696	2001	Mar.	20.85003	06 20 24.09	+24 18 36.8	0.1 0.2
79	696	2001	Mar.	20.86325	06 20 24.80	+24 18 33.2	0.1 0.2
80	696	2001	Apr.	1.82017	06 32 23.94	+23 29 58.6	0.1 0.1
81	696	2001	Apr.	1.83133	06 32 24.62	+23 29 55.6	0.3 0.0
82	696	2001	Apr.	1.83957	06 32 25.17	+23 29 54.0	0.2 0.1
83	696	2001	Apr.	3.79278	06 34 33.77	+23 22 01.2	0.1 0.1
84	696	2001	Apr.	3.80922	06 34 34.82	+23 21 57.6	0.2 0.3
85	893	2001	Jan.	2.77822	05 02 45.44	+00 55 31.7	0.2 0.2
86	893	2001	Jan.	2.79179	05 02 44.91	+00 55 37.1	0.3 0.2
87	893	2001	Jan.	4.82106	05 01 31.58	+01 08 03.9	0.1 0.2
88	893	2001	Jan.	4.85219	05 01 30.44	+01 08 15.7	0.3 0.3
89	893	2001	Jan.	12.89323	04 57 31.28	+02 02 45.9	0.1 0.2
90	893	2001	Jan.	12.90904	04 57 30.84	+02 02 52.1	0.1 0.2
91	893	2001	Jan.	15.87961	04 56 24.62	+02 24 45.8	0.1 0.3
92	893	2001	Jan.	15.89150	04 56 24.35	+02 24 51.1	0.1 0.3

N	MP	Date	U.T.	<i>R.A.</i> <sub>2000</sub>	<i>Decl.</i> <sub>2000</sub>	d $\alpha$	d $\delta$
93	893	2001	Jan.	16.83531	04 56 05.97	+02 31 58.2	0.1 0.2
94	893	2001	Jan.	16.85843	04 56 05.51	+02 32 09.0	0.1 0.2
95	893	2001	Jan.	18.80526	04 55 31.59	+02 47 05.3	0.3 0.3
96	893	2001	Jan.	18.83080	04 55 31.14	+02 47 17.2	0.3 0.3
97	893	2001	Jan.	19.77935	04 55 16.72	+02 54 37.9	0.2 0.1
98	893	2001	Jan.	19.79685	04 55 16.44	+02 54 46.0	0.2 0.1
99	893	2001	Jan.	20.77894	04 55 02.82	+03 02 28.5	0.2 0.3
100	893	2001	Jan.	20.79789	04 55 02.53	+03 02 37.3	0.2 0.2
101	893	2001	Jan.	21.79156	04 54 50.25	+03 10 28.4	0.1 0.2
101	893	2001	Jan.	21.81537	04 54 49.91	+03 10 39.7	0.2 0.1
103	893	2001	Feb.	14.79332	04 57 06.40	+06 29 42.3	0.2 0.2
104	893	2001	Feb.	14.82236	04 57 07.01	+06 29 58.2	0.2 0.2
105	893	2001	Feb.	16.74369	04 57 52.14	+06 45 56.6	0.1 0.3
106	893	2001	Feb.	16.76497	04 57 52.65	+06 46 07.3	0.1 0.2
107	893	2001	Feb.	17.80835	04 58 19.11	+06 54 45.9	0.3 0.3
108	893	2001	Feb.	17.84001	04 58 19.90	+06 55 01.8	0.2 0.2
109	893	2001	Feb.	25.90113	05 02 29.44	+08 00 47.6	0.3 0.2
110	893	2001	Feb.	25.91095	05 02 29.80	+08 00 51.4	0.3 0.1
111	893	2001	Feb.	26.80759	05 03 02.35	+08 08 02.0	0.3 0.3
112	893	2001	Feb.	26.82519	05 03 03.01	+08 08 10.4	0.3 0.3
113	893	2001	Feb.	26.83800	05 03 03.47	+08 08 17.0	0.3 0.3
114	893	2001	Mar.	12.73648	05 13 15.46	+09 54 22.0	0.1 0.3
115	893	2001	Mar.	12.74462	05 13 15.88	+09 54 24.8	0.2 0.3
116	893	2001	Mar.	12.75081	05 13 16.20	+09 54 27.8	0.1 0.2
117	893	2001	Mar.	14.74174	05 14 59.11	+10 08 46.3	0.2 0.2
118	893	2001	Mar.	14.75476	05 14 59.78	+10 08 51.6	0.2 0.2
119	893	2001	Mar.	16.77505	05 16 47.76	+10 23 07.5	0.1 0.1
120	893	2001	Mar.	16.79120	05 16 48.63	+10 23 14.3	0.1 0.3
121	893	2001	Mar.	20.81559	05 20 34.19	+10 50 50.2	0.2 0.2
122	893	2001	Mar.	22.84528	05 22 32.87	+11 04 22.0	0.2 0.2
123	893	2001	Mar.	22.85732	05 22 33.57	+11 04 26.9	0.3 0.3
124	893	2001	Apr.	1.80291	05 32 59.84	+12 06 26.6	0.1 0.1
125	893	2001	Apr.	1.81565	05 33 00.59	+12 06 31.2	0.1 0.2
126	893	2001	Apr.	3.76343	05 35 11.16	+12 17 49.3	0.2 0.3
127	893	2001	Apr.	3.77831	05 35 12.16	+12 17 54.9	0.2 0.2
128	1620	2001	Oct.	25.80215	23 45 52.85	+31 20 31.5	0.2 0.3
129	1620	2001	Oct.	25.81393	23 45 52.10	+31 20 20.5	0.3 0.3
130	1620	2001	Oct.	27.78501	23 43 53.21	+30 48 16.6	0.1 0.1
131	1620	2001	Oct.	27.79996	23 43 52.31	+30 48 01.7	0.2 0.1
132	1620	2001	Nov.	4.74475	23 39 18.32	+28 47 04.5	0.1 0.1
133	1620	2001	Nov.	10.74321	23 38 56.79	+27 27 35.1	0.2 0.3
134	1620	2001	Nov.	10.75859	23 38 56.89	+27 27 24.3	0.3 0.3
135	1620	2001	Nov.	11.72638	23 39 06.43	+27 15 41.5	0.3 0.2
136	1620	2001	Nov.	11.74120	23 39 06.62	+27 15 31.2	0.3 0.2
137	1620	2001	Dec.	14.67482	00 08 29.27	+23 39 01.9	0.2 0.3
138	1620	2001	Dec.	14.68613	00 08 30.17	+23 39 00.6	0.3 0.3

N	MP	Date U.T.		<i>R.A.</i> <sub>2000</sub>	<i>Decl.</i> <sub>2000</sub>	$d\alpha$	$d\delta$
139	3200	2001 Oct.	20.94032	04 52 41.97	+39 34 21.1	0.2	0.1
140	3200	2001 Oct.	20.94858	04 52 41.26	+39 34 22.7	0.2	0.1
141	3200	2001 Nov.	11.80652	04 04 20.94	+39 38 42.4	0.2	0.2
142	3200	2001 Nov.	11.81752	04 04 18.93	+39 38 40.5	0.1	0.1
143	3200	2001 Nov.	11.82978	04 04 16.80	+39 38 36.7	0.3	0.3
144	3200	2001 Nov.	18.84019	03 42 30.42	+38 47 31.6	0.1	0.1
145	3200	2001 Nov.	18.85377	03 42 27.74	+38 47 24.0	0.1	0.1
146	3200	2001 Nov.	27.06330	03 15 34.98	+37 03 31.8	0.3	0.3
147	3200	2001 Nov.	27.07141	03 15 33.35	+37 03 25.5	0.3	0.2
148	3200	2001 Dec.	3.70926	02 54 30.89	+35 07 32.4	0.1	0.1
149	3200	2001 Dec.	4.69006	02 51 32.69	+34 48 26.8	0.1	0.3
150	3200	2001 Dec.	4.70611	02 51 29.80	+34 48 08.4	0.2	0.3
151	3200	2001 Dec.	6.71699	02 45 33.56	+34 07 42.8	0.2	0.1
152	3200	2001 Dec.	6.73259	02 45 30.82	+34 07 23.5	0.2	0.2
153	7341	2001 Nov.	4.70142	23 16 08.69	+19 12 57.3	0.2	0.2
154	7341	2001 Nov.	4.71609	23 16 06.78	+19 12 48.3	0.3	0.2
155	7341	2001 Nov.	10.80642	23 04 12.16	+18 09 52.9	0.2	0.3
156	7341	2001 Nov.	10.82045	23 04 10.48	+18 09 43.1	0.3	0.2
157	7341	2001 Nov.	11.75309	23 02 31.41	+17 59 40.1	0.3	0.3
158	7341	2001 Nov.	11.76796	23 02 29.75	+17 59 32.2	0.2	0.2

### 3. Reference stars

The individual columns of the table contain the following:

N – serial number of the observation in agreement with the Section 2,

Numbers of reference stars in the USNO-A2.0 Star Catalog,

$\Delta\alpha$  – the O–C difference in R.A. in arc seconds,

$\Delta\delta$  – the O–C difference in Decl. in arc seconds.

The position of each reference star in the field of other reference stars is determined within the used method of plate constants.  $\Delta\alpha$  and  $\Delta\delta$  are the differences between observed (O) and calculated (C) coordinates. Except of a common measurement error, these differences are caused by an inaccuracy of position of a given star in the catalog and by the time shift between the catalog and considered epochs.

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
1	A 1050.01311289	+0.4	+0.3	A 1050.01310296	+0.3	-0.1
	A 1050.01309709	-0.3	-0.7	A 1050.01306868	+0.2	+0.1
	A 1050.01306897	-0.4	+0.3	A 1050.01307811	+0.0	-0.1
	A 1050.01312921	+0.5	+0.1	A 1050.01312936	-0.2	-0.1
	A 1050.01313993	-0.2	+0.0	A 1050.01314458	-0.3	+0.1

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
2	A 1050.01312109	+0.2	+0.2	A 1050.01311289	+0.1	-0.0
	A 1050.01309823	-0.3	+0.0	A 1050.01306868	+0.0	-0.1
	A 1050.01306897	+0.1	+0.0	A 1050.01307811	-0.1	-0.1
	A 1050.01309278	-0.0	+0.0	A 1050.01312099	+0.2	+0.4
	A 1050.01313320	-0.2	-0.1	A 1050.01313993	-0.0	-0.3
3	A 1050.01314458	+0.0	+0.0			
	A 1050.01304064	-0.2	+0.2	A 1050.01301753	-0.0	-0.2
	A 1050.01299906	-0.3	-0.4	A 1050.01305561	+0.5	-0.1
	A 1050.01306334	-0.4	+0.3	A 1050.01306546	+0.1	-0.3
	A 1050.01308094	-0.3	-0.1	A 1050.01306897	+0.5	+0.5
4	A 1050.01306868	-0.1	-0.3	A 1050.01299825	+0.3	+0.5
	A 1050.01304064	-0.1	+0.0	A 1050.01301753	-0.0	-0.1
	A 1050.01299906	-0.2	-0.4	A 1050.01305561	+0.2	+0.1
	A 1050.01306334	-0.0	+0.1	A 1050.01306546	+0.0	-0.2
	A 1050.01308094	-0.5	-0.0	A 1050.01306897	+0.2	+0.2
5	A 1050.01306868	+0.4	-0.1	A 1050.01299825	+0.2	+0.5
	A 1050.01300543	-0.3	+0.3	A 1050.01301021	-0.3	+0.1
	A 1050.01302261	+0.2	-0.1	A 1050.01307480	+0.2	+0.0
	A 1050.01308094	-0.6	-0.2	A 1050.01306868	+0.1	-0.5
	A 1050.01302904	+0.5	-0.4	A 1050.01306897	+0.2	+0.8
6	A 1050.01285079	+0.0	-0.1	A 1050.01287377	+0.3	-0.3
	A 1050.01286467	-0.7	+0.4	A 1050.01285807	+0.2	+0.2
	A 1050.01287109	+0.1	-0.0	A 1050.01281573	+0.3	-0.7
	A 1050.01279763	-0.2	+0.5			
7	A 1050.01285079	-0.1	+0.0	A 1050.01287377	+0.0	-0.1
	A 1050.01285807	+0.1	+0.2	A 1050.01287109	-0.1	+0.1
	A 1050.01281573	+0.3	-0.6	A 1050.01279763	-0.2	+0.4
8	A 1050.01279643	-0.0	+0.1	A 1050.01282071	+0.0	-0.1
	A 1050.01281498	+0.1	+0.1	A 1050.01278494	-0.3	-0.1
	A 1050.01277706	-0.2	+0.2	A 1050.01277084	+0.3	-0.1
	A 1050.01277806	+0.3	-0.3	A 1050.01276328	-0.5	+0.7
	A 1050.01275608	+0.3	-0.5			
9	A 1050.01279643	+0.0	-0.1	A 1050.01282071	-0.1	+0.0
	A 1050.01281498	+0.1	-0.0	A 1050.01278494	-0.2	-0.2
	A 1050.01277706	-0.1	+0.1	A 1050.01277084	+0.2	-0.3
	A 1050.01277806	+0.2	+0.3	A 1050.01276328	-0.3	+0.5
	A 1050.01275608	+0.1	-0.4			
10	A 1050.01277818	-0.0	-0.1	A 1050.01279643	-0.0	+0.0
	A 1050.01279614	-0.3	-0.3	A 1050.01277806	+0.5	+0.5
	A 1050.01274978	-0.2	+0.1	A 1050.01274009	-0.0	-0.2
	A 1050.01275608	+0.0	+0.0			
11	A 1050.01276430	+0.1	+0.1	A 1050.01277818	+0.0	+0.1
	A 1050.01279643	-0.1	-0.1	A 1050.01279614	-0.3	-0.4
	A 1050.01277806	+0.5	+0.5	A 1050.01274978	-0.1	+0.2
	A 1050.01274009	-0.0	-0.3	A 1050.01275608	-0.1	-0.2

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
12	A 1050.01275592	+0.0	+0.0	A 1050.01279368	+0.1	-0.2
	A 1050.01279643	-0.1	+0.1	A 1050.01278973	-0.1	+0.1
	A 1050.01279614	-0.3	-0.5	A 1050.01277806	+0.5	+0.6
	A 1050.01274978	-0.1	+0.0	A 1050.01274009	-0.1	-0.2
	A 1050.01274218	-0.0	-0.0			
13	A 1050.01275592	+0.0	+0.1	A 1050.01279368	-0.0	-0.1
	A 1050.01279643	-0.1	+0.0	A 1050.01278973	+0.1	+0.1
	A 1050.01279614	-0.4	-0.4	A 1050.01277806	+0.6	+0.5
	A 1050.01274978	-0.1	+0.1	A 1050.01274009	-0.1	-0.2
	A 1050.01274218	+0.0	-0.1			
14	A 1050.01272964	+0.1	-0.1	A 1050.01272845	-0.2	+0.1
	A 1050.01273091	+0.1	+0.1	A 1050.01275983	+0.0	-0.4
	A 1050.01278385	-0.1	+0.4	A 1050.01279368	+0.5	-0.3
	A 1050.01279291	-0.5	-0.0	A 1050.01278973	+0.1	+0.1
15	A 1050.01277995	+0.2	-0.2	A 1050.01272964	+0.1	-0.1
	A 1050.01272845	-0.3	+0.2	A 1050.01273091	-0.0	+0.2
	A 1050.01275983	+0.3	-0.6	A 1050.01278385	+0.1	-0.0
	A 1050.01279368	+0.2	+0.1	A 1050.01279291	-0.7	+0.4
16	A 1050.01277818	+0.1	-0.3	A 1050.01275608	+0.1	-0.3
	A 1050.01272845	+0.1	+0.1	A 1050.01273091	-0.0	-0.3
	A 1050.01278385	-0.1	+0.1	A 1050.01279368	+0.4	-0.4
	A 1050.01279291	-0.3	+0.0	A 1050.01278973	+0.2	+0.1
	A 1050.01276965	-0.4	+0.6	A 1050.01275960	+0.0	+0.3
17	A 1050.01277818	+0.0	+0.1	A 1050.01275608	-0.0	-0.4
	A 1050.01272845	-0.0	+0.1	A 1050.01273091	+0.1	-0.2
	A 1050.01278385	-0.1	+0.3	A 1050.01279368	+0.3	-0.1
	A 1050.01279291	-0.2	-0.6	A 1050.01278973	-0.0	+0.2
	A 1050.01276965	+0.0	+0.4	A 1050.01275960	-0.1	+0.2
18	A 1050.01277818	-0.3	+0.2	A 1050.01275608	-0.1	-0.4
	A 1050.01274218	+0.0	-0.2	A 1050.01273593	+0.1	+0.6
	A 1050.01277934	-0.2	+0.2	A 1050.01280391	-0.0	-0.4
	A 1050.01279368	+0.5	+0.1	A 1050.01279291	+0.0	+0.2
	A 1050.01275056	-0.1	-0.0	A 1050.01273297	+0.1	-0.4
19	A 1050.01277818	-0.2	+0.1	A 1050.01275608	-0.1	-0.3
	A 1050.01274218	+0.2	-0.3	A 1050.01273593	+0.0	+0.5
	A 1050.01277934	-0.2	+0.2	A 1050.01280391	-0.0	-0.3
	A 1050.01279368	+0.6	+0.0	A 1050.01279291	-0.2	+0.3
	A 1050.01275056	-0.0	-0.2			
20	A 1050.01333295	-0.1	+0.2	A 1050.01333651	+0.1	-0.2
	A 1050.01334039	+0.1	+0.0	A 1050.01334055	-0.4	+0.3
	A 1050.01330491	+0.6	-0.3	A 1050.01326490	-0.3	-0.0
	A 1050.01326894	-0.0	-0.2	A 1050.01325302	-0.1	+0.2
	A 1050.01325624	+0.2	+0.2	A 1050.01327998	-0.1	-0.2

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
21	A 1050.01333295	-0.1	+0.2	A 1050.01333651	+0.1	-0.1
	A 1050.01334039	+0.0	+0.1	A 1050.01334055	-0.4	+0.2
	A 1050.01330491	+0.6	-0.4	A 1050.01326490	-0.3	-0.1
	A 1050.01326894	-0.1	-0.2	A 1050.01325302	-0.1	+0.1
	A 1050.01325624	+0.3	+0.5	A 1050.01327998	-0.1	-0.3
22	A 1050.01335707	+0.1	-0.0	A 1050.01336648	-0.2	-0.3
	A 1050.01339485	+0.1	+0.2	A 1050.01339497	-0.1	+0.0
	A 1050.01336454	-0.0	+0.2	A 1050.01334928	+0.2	-0.6
	A 1050.01333651	-0.1	+0.3	A 1050.01333295	+0.0	+0.2
23	A 1050.01335707	+0.2	-0.0	A 1050.01336648	-0.1	-0.1
	A 1050.01339497	+0.0	+0.2	A 1050.01336454	-0.1	+0.0
	A 1050.01334928	+0.1	-0.6	A 1050.01333651	-0.0	+0.4
	A 1050.01333295	-0.1	+0.1			
24	A 0900.06853647	+0.0	-0.3	A 0900.06853987	-0.0	+0.5
	A 0900.06854151	-0.0	-0.1	A 0900.06855448	+0.1	+0.0
	A 0900.06856058	-0.0	-0.0	A 0900.06851504	-0.0	-0.0
	A 0900.06855532	-0.0	-0.1			
25	A 0900.06853647	+0.0	-0.2	A 0900.06853987	-0.1	+0.3
	A 0900.06854151	+0.0	-0.0	A 0900.06855448	+0.1	-0.0
	A 0900.06856058	-0.0	-0.0	A 0900.06851504	-0.0	-0.0
	A 0900.06855532	-0.0	-0.0			
26	A 0975.00936462	+0.3	+0.3	A 0975.00936148	+0.3	-0.2
	A 0975.00934764	-0.1	+0.1	A 0975.00935196	-0.6	-0.1
	A 0975.00935172	+0.3	+0.2	A 0975.00936194	-0.0	-0.3
	A 0975.00937196	-0.1	+0.1	A 0975.00938642	+0.2	+0.1
	A 0975.00938921	-0.0	+0.1	A 0975.00938878	-0.3	-0.2
	A 0975.00939115	-0.1	+0.1			
27	A 0975.00936462	+0.2	+0.1	A 0975.00936148	+0.3	+0.2
	A 0975.00934764	-0.4	+0.1	A 0975.00935172	+0.3	+0.3
	A 0975.00936194	-0.1	-0.3	A 0975.00937196	-0.1	+0.2
	A 0975.00938642	+0.2	+0.1	A 0975.00938921	+0.2	-0.1
	A 0975.00938878	-0.3	-0.2	A 0975.00939115	-0.1	+0.1
	A 0975.00935154	-0.1	-0.5			
28	A 0975.00933825	+0.1	+0.3	A 0975.00933052	-0.1	-0.3
	A 0975.00931599	+0.3	+0.3	A 0975.00931449	-0.2	-0.2
	A 0975.00932023	+0.1	+0.2	A 0975.00935172	+0.0	+0.0
	A 0975.00935196	-0.3	-0.2	A 0975.00935154	+0.3	+0.2
	A 0975.00932423	-0.1	-0.2			
29	A 0975.00933825	-0.1	+0.2	A 0975.00933052	-0.3	-0.2
	A 0975.00931599	+0.2	+0.2	A 0975.00931449	+0.1	-0.2
	A 0975.00932023	-0.0	+0.0	A 0975.00935172	+0.0	+0.0
	A 0975.00935196	-0.5	-0.2	A 0975.00935154	+0.6	+0.1
	A 0975.00932423	-0.0	-0.0			
30	A 0975.00922857	+0.7	-0.1	A 0975.00923790	-0.2	+0.2
	A 0975.00920786	+0.3	+0.4	A 0975.00920519	-0.2	-0.2
	A 0975.00920095	-0.1	-0.4	A 0975.00920138	-0.0	+0.3
	A 0975.00923053	-0.4	-0.2			



N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
31	A 0975.00924137	+0.0	-0.0	A 0975.00923053	-0.0	+0.0
	A 0975.00920519	+0.1	-0.0	A 0975.00920095	-0.2	+0.0
	A 0975.00920103	+0.1	-0.0			
32	A 0975.00920103	+0.4	+0.0	A 0975.00920138	-0.5	+0.0
	A 0975.00921191	+0.0	-0.1	A 0975.00921676	+0.3	-0.2
	A 0975.00920786	+0.2	+0.6	A 0975.00920519	-0.2	-0.4
	A 0975.00919559	-0.8	+0.2	A 0975.00918711	+0.4	-0.4
	A 0975.00918621	+0.2	+0.2			
33	A 0975.00920103	+0.3	-0.1	A 0975.00920138	-0.3	+0.1
	A 0975.00921191	+0.0	-0.0	A 0975.00921676	+0.5	+0.2
	A 0975.00920786	-0.1	+0.4	A 0975.00920519	-0.6	-0.8
	A 0975.00918711	+0.0	-0.2	A 0975.00918621	+0.3	+0.3
34	A 0975.00920103	+0.1	-0.1	A 0975.00920138	-0.1	-0.0
	A 0975.00921191	+0.0	+0.1	A 0975.00921676	+0.3	+0.0
	A 0975.00920786	+0.0	+0.4	A 0975.00920519	-0.2	-0.7
	A 0975.00919559	-0.9	+0.5	A 0975.00918711	+0.3	+0.2
	A 0975.00918621	+0.4	-0.3			
35	A 0975.00918851	-0.1	+0.1	A 0975.00919112	+0.1	-0.0
	A 0975.00920979	-0.3	-0.4	A 0975.00921353	+0.6	+0.3
	A 0975.00921780	-0.3	+0.1	A 0975.00919559	-0.1	-0.1
	A 0975.00918711	+0.1	+0.1			
36	A 0975.00918851	-0.1	+0.0	A 0975.00919112	+0.1	+0.0
	A 0975.00920979	-0.2	-0.4	A 0975.00921353	+0.5	+0.2
	A 0975.00921780	-0.3	+0.1	A 0975.00919559	-0.1	-0.1
	A 0975.00918711	+0.1	+0.0			
37	A 0975.00918800	+0.1	-0.3	A 0975.00918851	-0.1	+0.3
	A 0975.00919112	-0.2	+0.1	A 0975.00920136	-0.3	+0.1
	A 0975.00920103	+0.7	-0.2	A 0975.00920138	-0.3	+0.1
	A 0975.00917522	+0.0	+0.1	A 0975.00917634	-0.1	-0.2
	A 0975.00917912	+0.1	+0.2			
38	A 0975.00918800	+0.2	-0.1	A 0975.00918851	-0.1	+0.2
	A 0975.00919112	-0.1	+0.0	A 0975.00920136	-0.5	-0.0
	A 0975.00920103	+0.7	-0.3	A 0975.00920138	-0.1	+0.3
	A 0975.00917522	+0.1	+0.1	A 0975.00917634	-0.1	-0.3
	A 0975.00917912	+0.0	+0.1			
39	A 0975.00920136	-0.2	+0.0	A 0975.00920103	+0.4	-0.2
	A 0975.00918215	-0.2	+0.6	A 0975.00916770	+0.1	-0.7
	A 0975.00916676	+0.1	+0.5	A 0975.00918638	-0.2	+0.2
	A 0975.00920455	+0.2	+0.1	A 0975.00920710	+0.0	-0.0
	A 0975.00920215	-0.3	-0.2	A 1050.01156808	-0.0	-0.3
	A 0975.00920136	-0.4	+0.1	A 0975.00920103	+0.4	-0.2
40	A 0975.00918215	+0.1	+0.6	A 0975.00916770	+0.0	-0.6
	A 0975.00916676	-0.2	+0.4	A 0975.00918638	+0.2	+0.1
	A 0975.00920455	+0.0	+0.1	A 0975.00920710	-0.1	-0.2
	A 0975.00920215	-0.1	-0.1	A 1050.01156808	+0.1	-0.2

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
41	A 0975.00917522	+0.3	-0.1	A 0975.00917508	+0.2	-0.2
	A 0975.00918800	-0.5	+0.5	A 0975.00918851	-0.1	+0.5
	A 0975.00919112	+0.0	-0.4	A 0975.00919704	+0.2	-0.3
	A 0975.00916770	-0.3	-0.0			
42	A 0975.00917522	+0.1	-0.0	A 0975.00917508	+0.0	-0.1
	A 0975.00918800	+0.3	+0.2	A 0975.00918851	-0.0	+0.3
	A 0975.00919112	-0.2	-0.2	A 0975.00919704	-0.1	-0.1
	A 0975.00916770	-0.1	-0.0			
43	A 0975.00919112	+0.2	+0.1	A 0975.00917912	-0.3	+0.0
	A 0975.00916161	+0.2	-0.1	A 1050.01155462	-0.4	+0.3
	A 1050.01156152	+0.4	-0.3	A 0975.00919515	-0.1	+0.3
	A 0975.00919704	-0.0	-0.4			
44	A 0975.00919112	+0.2	-0.0	A 0975.00917912	-0.2	-0.1
	A 0975.00916161	+0.1	+0.1	A 1050.01155462	-0.3	+0.1
	A 1050.01156152	+0.3	-0.1	A 0975.00919515	-0.0	-0.1
	A 0975.00919704	-0.1	+0.2			
45	A 1500.03826471	-0.3	+0.2	A 1500.03820845	-0.0	-0.1
	A 1500.03816330	+0.0	+0.0	A 1500.03816362	+0.1	-0.1
	A 1500.03820718	-0.2	+0.1	A 1500.03826831	+0.1	-0.1
	A 1500.03827603	-0.0	+0.5	A 1500.03829631	-0.1	-0.4
	A 1500.03828496	+0.3	-0.1			
46	A 1500.03826471	-0.2	+0.3	A 1500.03820845	-0.0	-0.1
	A 1500.03816330	+0.0	+0.1	A 1500.03816362	+0.0	-0.2
	A 1500.03820718	-0.1	+0.1	A 1500.03826831	+0.0	+0.1
	A 1500.03827603	+0.1	+0.0	A 1500.03829631	-0.2	-0.3
	A 1500.03828496	+0.3	-0.0			
47	A 1200.04689090	+0.3	-0.2	A 1200.04682509	+0.2	-0.2
	A 1200.04682791	-0.4	+0.1	A 1200.04685919	-0.1	-0.0
	A 1200.04688027	+0.4	+0.0	A 1200.04695991	-0.2	-0.1
	A 1200.04697723	-0.0	+0.0	A 1200.04697560	+0.2	-0.1
	A 1200.04694463	-0.4	+1.0	A 1200.04698909	+0.1	-0.4
48	A 1200.04689090	+0.2	-0.2	A 1200.04682509	+0.2	-0.2
	A 1200.04682791	-0.4	+0.2	A 1200.04685919	-0.1	-0.1
	A 1200.04688027	+0.3	-0.0	A 1200.04695991	-0.2	-0.1
	A 1200.04697723	+0.0	+0.1	A 1200.04697560	+0.3	-0.2
	A 1200.04694463	-0.3	+0.8	A 1200.04698909	-0.0	-0.4
49	A 1200.04644206	-0.4	-0.2	A 1200.04638445	+0.2	-0.0
	A 1200.04637093	+0.1	+0.3	A 1200.04639138	-0.1	-0.2
	A 1200.04648841	+0.1	-0.0	A 1200.04653210	+0.1	+0.1
	A 1200.04654662	-0.4	+0.0	A 1200.04654952	+0.4	-0.2
	A 1200.04651205	-0.0	+0.2			
50	A 1200.04644206	-0.2	-0.1	A 1200.04638445	+0.2	-0.2
	A 1200.04637093	-0.1	+0.4	A 1200.04639138	-0.0	-0.2
	A 1200.04648841	+0.2	+0.0	A 1200.04653210	-0.1	+0.1
	A 1200.04654662	-0.2	-0.1	A 1200.04654952	+0.3	-0.1
	A 1200.04651205	-0.0	+0.1			

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
51	A 1200.04498430	-0.0	+0.0	A 1200.04496567	-0.0	+0.2
	A 1200.04484534	+0.0	-0.6	A 1200.04479037	-0.0	+0.3
	A 1200.04479936	-0.0	+0.1			
52	A 1200.04498430	+0.0	+0.1	A 1200.04496567	-0.1	+0.2
	A 1200.04484534	+0.2	-0.8	A 1200.04479037	-0.1	+0.5
	A 1200.04479936	-0.0	+0.1	A 1200.04484148	-0.0	-0.1
53	A 1200.04425385	-0.6	+0.4	A 1200.04426319	+0.3	+0.0
	A 1200.04428216	+0.1	-0.1	A 1200.04437174	-0.2	-0.4
	A 1200.04438784	+0.2	+0.6	A 1125.03531293	-0.1	-0.1
	A 1125.03525529	-0.1	-0.1	A 1125.03515382	+0.2	+0.0
54	A 1200.04424569	+0.1	-0.3			
	A 1200.04425385	-0.6	+0.5	A 1200.04426319	+0.4	+0.1
	A 1200.04428216	+0.0	-0.1	A 1200.04437174	-0.2	-0.3
	A 1200.04438784	+0.2	+0.6	A 1125.03531293	-0.0	-0.2
	A 1125.03525529	-0.1	-0.0	A 1125.03515382	+0.2	+0.0
55	A 1200.04424569	+0.1	-0.4			
	A 1125.03484248	-0.1	-0.2	A 1125.03486996	-0.1	+0.3
	A 1125.03500075	+0.1	-0.1	A 1125.03507516	+0.1	-0.1
	A 1125.03505487	-0.0	+0.3	A 1125.03494246	+0.1	-0.1
	A 1125.03488713	-0.2	-0.4	A 1125.03482263	-0.3	+0.5
	A 1125.03478130	+0.2	-0.2	A 1125.03476814	+0.2	-0.0
56	A 1125.03484248	-0.0	-0.2	A 1125.03486996	-0.0	+0.3
	A 1125.03500075	+0.0	-0.1	A 1125.03507516	+0.0	-0.2
	A 1125.03505487	-0.1	+0.3	A 1125.03494246	+0.1	-0.1
	A 1125.03488713	-0.2	-0.3	A 1125.03482263	-0.1	+0.4
	A 1125.03478130	+0.1	-0.2	A 1125.03476814	+0.1	+0.0
57	A 1125.03420950	+0.2	-0.3	A 1125.03412146	-0.0	+0.2
	A 1125.03408701	-0.1	+0.1	A 1125.03413124	+0.0	-0.2
	A 1125.03430491	+0.3	+0.0	A 1125.03436358	-0.4	+0.1
	A 1125.03440561	+0.1	-0.1	A 1125.03438452	+0.4	-0.2
	A 1125.03437032	-0.5	+0.3			
58	A 1125.03420950	+0.1	-0.1	A 1125.03408701	-0.1	+0.2
	A 1125.03413124	-0.0	-0.2	A 1125.03430491	+0.2	+0.2
	A 1125.03436358	-0.2	-0.1	A 1125.03440561	+0.0	-0.1
	A 1125.03438452	+0.4	-0.2	A 1125.03437032	-0.4	+0.3
59	A 1125.03409036	+0.4	-0.5	A 1125.03388286	-0.1	+0.1
	A 1125.03382818	-0.0	-0.1	A 1125.03388618	-0.0	-0.2
	A 1125.03394057	-0.1	+0.2	A 1125.03409016	+0.3	+0.5
	A 1125.03412732	+0.2	-0.3	A 1125.03419981	-0.7	-0.4
	A 1125.03415202	+0.2	+0.6	A 1125.03404587	-0.1	+0.1
60	A 1125.03409036	+0.1	-0.3	A 1125.03388286	+0.1	-0.0
	A 1125.03382818	+0.1	+0.0	A 1125.03388618	+0.0	-0.1
	A 1125.03394057	+0.0	+0.1	A 1125.03409016	-0.2	+0.7
	A 1125.03412732	-0.1	-0.8	A 1125.03419981	+0.6	+0.4
	A 1125.03415202	-0.3	-0.3	A 1125.03404587	-0.2	+0.3

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
61	A 1125.03367315	-0.2	+0.0	A 1125.03365988	+0.1	-0.1
	A 1125.03377750	+0.2	+0.1	A 1125.03389302	-0.1	+0.2
	A 1125.03393376	+0.0	-0.4	A 1125.03396423	+0.1	+0.1
	A 1125.03393439	-0.3	-0.2	A 1125.03384229	+0.0	+0.3
	A 1125.03379126	+0.4	+0.1	A 1125.03365326	-0.2	-0.2
62	A 1125.03367315	-0.0	+0.2	A 1125.03365988	+0.2	-0.1
	A 1125.03377750	+0.0	+0.1	A 1125.03389302	-0.0	+0.2
	A 1125.03393376	+0.1	-0.4	A 1125.03396423	-0.2	+0.1
	A 1125.03393439	-0.2	-0.4	A 1125.03384229	+0.0	+0.3
	A 1125.03379126	+0.6	+0.3	A 1125.03365326	-0.5	-0.5
63	A 1125.03207664	-0.7	-0.1	A 1125.03191534	+0.3	-0.3
	A 1125.03184107	+0.1	+0.2	A 1125.03182946	-0.4	+0.2
	A 1125.03188283	+0.4	+0.1	A 1125.03196927	-0.1	-0.4
	A 1125.03208963	-0.1	+0.1	A 1125.03212064	-0.1	+0.1
	A 1125.03213135	+0.6	+0.2			
64	A 1125.03191534	-0.3	-0.1	A 1125.03184107	+0.4	+0.1
	A 1125.03182946	-0.4	-0.3	A 1125.03188283	+0.1	+0.1
	A 1125.03208963	+0.0	+0.1	A 1125.03212064	-0.1	+0.0
	A 1125.03213135	-0.4	-0.5	A 1125.03201420	+0.2	+0.1
	A 1125.03204894	+0.6	+0.4			
65	A 1125.03191534	+0.0	-0.0	A 1125.03184107	+0.1	-0.0
	A 1125.03188283	+0.2	-0.2	A 1125.03213135	+0.3	+0.2
	A 1125.03201420	-0.3	+0.1	A 1125.03204894	-0.4	-0.1
	A 1125.03181347	-0.1	+0.2	A 1125.03216378	+0.0	-0.1
66	A 1125.03198655	-0.1	+0.2	A 1125.03201933	-0.2	+0.4
	A 1125.03202413	+0.2	-0.3	A 1125.03217280	-0.0	-0.4
	A 1125.03221047	-0.0	+0.4	A 1125.03219182	+0.2	+0.1
	A 1125.03211659	-0.5	-0.3	A 1125.03210531	-0.1	+0.2
	A 1125.03204979	+0.4	-0.2	A 1125.03201816	-0.1	-0.0
67	A 1125.03198655	-0.2	+0.4	A 1125.03201933	-0.3	+0.2
	A 1125.03202413	+0.3	-0.3	A 1125.03217280	-0.0	-0.3
	A 1125.03221047	-0.1	+0.3	A 1125.03219182	+0.3	+0.3
	A 1125.03211659	-0.4	-0.3	A 1125.03210531	-0.2	+0.0
	A 1125.03204979	+0.3	-0.3	A 1125.03201816	+0.2	+0.0
68	A 1125.03198655	+0.1	+0.3	A 1125.03215348	-0.4	+0.0
	A 1125.03219182	+0.3	-0.0	A 1125.03221812	-0.0	-0.1
	A 1125.03210076	-0.0	+0.0	A 1125.03200362	+0.1	-0.0
	A 1125.03196965	-0.1	+0.2	A 1125.03196215	+0.0	-0.5
69	A 1125.03198655	+0.1	+0.1	A 1125.03215348	-0.4	+0.1
	A 1125.03219182	+0.3	+0.1	A 1125.03221812	+0.0	-0.2
	A 1125.03214527	-0.0	+0.0	A 1125.03200362	+0.0	+0.1
	A 1125.03196215	-0.1	-0.2			
70	A 1125.03198655	+0.1	+0.4	A 1125.03215348	-0.4	+0.2
	A 1125.03219182	+0.3	+0.1	A 1125.03221812	-0.0	-0.3
	A 1125.03214527	-0.0	+0.0	A 1125.03200362	+0.0	+0.3
	A 1125.03196215	-0.1	-0.6			

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
71	A 1125.03400013	-0.0	-0.0	A 1125.03404809	+0.0	+0.1
	A 1125.03411366	-0.0	-0.1	A 1125.03408227	+0.0	+0.1
	A 1125.03403839	-0.0	-0.0			
72	A 1125.03385618	+0.1	-0.1	A 1125.03400013	+0.1	-0.1
	A 1125.03404809	-0.1	+0.2	A 1125.03411366	-0.2	+0.1
	A 1125.03408227	-0.0	-0.0	A 1125.03403839	+0.1	+0.1
	A 1125.03386361	+0.3	-0.3	A 1125.03382418	+0.1	-0.1
	A 1125.03372123	-0.5	+0.5	A 1125.03377571	+0.2	-0.2
73	A 1125.03613460	+0.0	-0.1	A 1125.03607149	-0.0	+0.1
	A 1125.03602130	+0.0	-0.0	A 1125.03596719	+0.0	+0.1
	A 1125.03597820	-0.3	-0.1	A 1125.03605228	+0.2	+0.2
	A 1125.03612444	+0.3	-0.2	A 1125.03616732	-0.9	+0.4
	A 1125.03615200	+0.4	-0.2	A 1125.03614136	+0.3	+0.0
74	A 1125.03613460	+0.1	+0.3	A 1125.03607149	-0.1	+0.2
	A 1125.03602130	+0.0	-0.1	A 1125.03596719	+0.0	+0.0
	A 1125.03597820	-0.2	-0.2	A 1125.03605228	+0.1	+0.1
	A 1125.03612444	+0.2	+0.3	A 1125.03616732	-0.6	-0.4
	A 1125.03615200	+0.4	-0.0	A 1125.03614136	+0.0	-0.1
75	A 1125.03691859	-0.1	-0.3	A 1125.03688462	-0.2	-0.1
	A 1125.03682380	-0.0	+0.2	A 1125.03683254	-0.1	+0.3
	A 1125.03684418	+0.1	-0.4	A 1125.03693624	-0.0	+0.1
	A 1125.03695988	+0.1	+0.0	A 1125.03701117	-0.1	+0.0
	A 1125.03692489	+0.3	+0.2			
76	A 1125.03691859	+0.0	-0.2	A 1125.03688462	-0.5	-0.3
	A 1125.03682380	+0.5	+0.4	A 1125.03683254	+0.0	-0.1
	A 1125.03684418	-0.1	-0.1	A 1125.03693624	-0.2	+0.1
	A 1125.03695988	+0.2	-0.1	A 1125.03701117	+0.2	+0.2
	A 1125.03692489	-0.1	-0.0			
77	A 1125.03743024	-0.2	+0.0	A 1125.03735243	-0.2	-0.3
	A 1125.03723148	+0.2	+0.1	A 1125.03725088	-0.3	+0.3
	A 1125.03722752	+0.4	-0.1	A 1125.03730756	-0.0	-0.1
	A 1125.03738686	-0.3	-0.1	A 1125.03747608	+0.2	+0.0
	A 1125.03749752	+0.2	+0.1			
78	A 1125.03800230	+0.0	+0.2	A 1125.03795284	-0.2	+0.1
	A 1125.03792016	+0.2	+0.1	A 1125.03777392	-0.1	-0.2
	A 1125.03778622	+0.1	+0.1	A 1125.03781505	+0.1	-0.3
	A 1125.03805323	+0.0	-0.4	A 1125.03800830	+0.1	+0.2
	A 1125.03785501	-0.1	+0.2			
79	A 1125.03800230	-0.0	-0.0	A 1125.03795284	+0.2	+0.1
	A 1125.03792016	-0.1	+0.2	A 1125.03777392	-0.0	-0.3
	A 1125.03778622	+0.0	+0.3	A 1125.03781505	+0.1	-0.4
	A 1125.03805323	-0.1	-0.3	A 1125.03800830	+0.1	+0.2
	A 1125.03785501	-0.1	+0.2			

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
80	A 1125.04131386	-0.2	+0.1	A 1125.04132785	+0.1	-0.1
	A 1125.04148340	-0.1	+0.0	A 1125.04149348	+0.1	-0.0
	A 1125.04148938	-0.0	+0.4	A 1125.04144255	+0.1	-0.4
	A 1125.04131637	-0.2	-0.1	A 1125.04128091	+0.1	+0.2
	A 1125.04128178	+0.1	+0.0			
81	A 1125.04132785	+0.2	-0.0	A 1125.04145813	-0.4	+0.0
	A 1125.04139912	+0.6	-0.1	A 1125.04134242	-0.1	+0.0
	A 1125.04127477	-0.3	+0.0			
82	A 1125.04132785	+0.2	+0.1	A 1125.04145813	-0.3	-0.1
	A 1125.04139912	+0.5	+0.1	A 1125.04134242	-0.0	-0.0
	A 1125.04127477	-0.2	-0.1			
83	A 1125.04191468	+0.0	-0.1	A 1125.04179722	-0.0	-0.0
	A 1125.04177905	+0.0	-0.0	A 1125.04189547	+0.0	-0.0
	A 1125.04192484	-0.1	+0.1	A 1125.04203007	-0.0	-0.1
	A 1125.04202069	+0.3	-0.1	A 1125.04202035	-0.3	-0.2
	A 1125.04199873	+0.1	+0.5			
84	A 1125.04191468	-0.5	+0.2	A 1125.04179722	+0.2	-0.1
	A 1125.04177905	+0.0	+0.3	A 1125.04189547	+0.0	-0.1
	A 1125.04192484	-0.1	-0.4	A 1125.04202069	+0.5	+0.3
	A 1125.04202035	-0.3	+0.1	A 1125.04199873	+0.1	-0.6
	A 1125.04201206	-0.0	+0.4			
85	A 0900.01314588	-0.4	-0.2	A 0900.01323028	-0.3	-0.0
	A 0900.01322489	+0.2	+0.0	A 0900.01320430	-0.2	-0.0
	A 0900.01314215	+0.1	+0.0	A 0900.01317130	+0.4	+0.6
	A 0900.01321370	+0.0	+0.1	A 0900.01318059	+0.0	-0.5
86	A 0900.01314588	-0.5	-0.2	A 0900.01323028	-0.2	+0.0
	A 0900.01322489	+0.4	+0.2	A 0900.01320430	-0.2	-0.1
	A 0900.01314215	-0.0	-0.1	A 0900.01317130	+0.5	+0.5
	A 0900.01321370	-0.3	-0.1	A 0900.01318059	+0.3	-0.4
	A 0900.01313284	+0.1	+0.2			
87	A 0900.01308331	+0.3	-0.0	A 0900.01306868	-0.3	-0.2
	A 0900.01302629	+0.1	+0.4	A 0900.01303754	-0.1	-0.2
	A 0900.01305426	+0.0	-0.0	A 0900.01309004	-0.0	-0.1
	A 0900.01310643	+0.1	-0.0	A 0900.01310701	-0.2	+0.5
	A 0900.01308503	+0.1	-0.3			
88	A 0900.01308331	+0.2	-0.2	A 0900.01306868	-0.3	-0.0
	A 0900.01302629	+0.3	-0.1	A 0900.01303754	-0.5	+0.4
	A 0900.01305426	+0.4	-0.4	A 0900.01309004	-0.2	+0.3
	A 0900.01310643	+0.3	-0.4	A 0900.01310701	-0.1	+0.4
89	A 0900.01267208	-0.0	-0.1	A 0900.01274554	-0.0	+0.1
	A 0900.01272917	-0.1	-0.1	A 0900.01269754	+0.2	+0.1
	A 0900.01265603	-0.1	-0.4	A 0900.01264586	+0.0	+0.5
	A 0900.01264546	-0.0	-0.0			
90	A 0900.01267208	+0.1	-0.1	A 0900.01271238	+0.0	-0.0
	A 0900.01274554	-0.1	+0.2	A 0900.01272917	-0.1	-0.2
	A 0900.01269754	+0.3	+0.2	A 0900.01265603	+0.1	-0.3
	A 0900.01264586	-0.3	+0.3			

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
91	A 0900.01254044	+0.0	-0.1	A 0900.01256261	-0.0	-0.5
	A 0900.01257053	-0.1	+0.7	A 0900.01257854	+0.2	-0.1
	A 0900.01255007	+0.1	-0.0	A 0900.01254062	-0.2	-0.3
	A 0900.01250055	-0.1	+0.3	A 0900.01249100	+0.2	+0.2
	A 0900.01247939	+0.1	-0.5	A 0900.01248018	-0.1	+0.3
92	A 0900.01254044	-0.0	+0.0	A 0900.01256261	+0.1	-0.4
	A 0900.01257053	-0.1	+0.5	A 0900.01257854	+0.1	-0.2
	A 0900.01255007	+0.2	+0.0	A 0900.01254062	-0.2	-0.2
	A 0900.01250055	-0.3	+0.3	A 0900.01249100	+0.2	+0.2
	A 0900.01247939	+0.1	-0.6	A 0900.01248018	-0.1	+0.2
93	A 0900.01251092	-0.1	+0.2	A 0900.01251547	+0.1	-0.5
	A 0900.01251756	+0.0	+0.1	A 0900.01252502	-0.1	+0.3
	A 0900.01252020	+0.0	-0.2	A 0900.01250995	-0.0	+0.0
	A 0900.01245752	+0.0	+0.0			
94	A 0900.01251092	-0.1	+0.2	A 0900.01251547	+0.1	-0.4
	A 0900.01251756	+0.0	+0.2	A 0900.01252502	-0.1	+0.2
	A 0900.01252020	+0.1	-0.2	A 0900.01250995	+0.0	+0.0
	A 0900.01245752	-0.0	+0.0			
95	A 0900.01245502	+0.3	-0.3	A 0900.01248989	-0.3	+0.7
	A 0900.01249821	-0.2	-0.5	A 0900.01252360	+0.5	-0.3
	A 0900.01252293	-0.1	+0.2	A 0900.01249885	-0.2	+0.4
	A 0900.01248483	-0.1	-0.3	A 0900.01245158	+0.4	-0.1
	A 0900.01243885	-0.3	+0.2			
96	A 0900.01245502	+0.3	-0.3	A 0900.01248989	-0.2	+0.6
	A 0900.01249821	-0.2	-0.3	A 0900.01252360	+0.4	-0.3
	A 0900.01252293	-0.1	+0.1	A 0900.01249885	-0.1	+0.4
	A 0900.01248483	-0.2	-0.2	A 0900.01245158	+0.4	-0.2
	A 0900.01243885	-0.3	+0.2			
97	A 0900.01243300	+0.0	-0.2	A 0900.01241923	-0.1	+0.0
	A 0900.01238008	-0.1	-0.2	A 0900.01237626	+0.2	+0.3
	A 0900.01239007	-0.1	-0.0	A 0900.01239204	+0.1	+0.1
	A 0900.01244835	+0.4	-0.1	A 0900.01245807	-0.3	+0.0
	A 0900.01246286	-0.2	+0.0	A 0900.01246927	+0.2	+0.1
98	A 0900.01243300	+0.0	-0.2	A 0900.01241923	-0.2	-0.1
	A 0900.01238008	-0.1	-0.2	A 0900.01237626	+0.2	+0.3
	A 0900.01239007	-0.2	-0.1	A 0900.01239204	+0.1	+0.1
	A 0900.01244835	+0.3	+0.1	A 0900.01245807	-0.3	-0.1
	A 0900.01246286	-0.1	-0.0	A 0900.01246927	+0.2	+0.2
99	A 0900.01239735	-0.2	-0.8	A 0900.01238455	+0.4	+0.3
	A 0900.01236155	-0.3	+0.0	A 0900.01237765	-0.2	-0.5
	A 0900.01240972	+0.1	-0.0	A 0900.01242626	+0.1	+0.3
	A 0900.01242994	-0.1	+0.0	A 0900.01243767	-0.1	+0.1
	A 0900.01241814	+0.1	+0.1	A 0900.01234487	+0.2	+0.4

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
100	A 0900.01239735	-0.1	-0.8	A 0900.01238455	+0.6	+0.4
	A 0900.01236155	-0.5	+0.2	A 0900.01240972	+0.1	+0.1
	A 0900.01242626	+0.2	-0.1	A 0900.01243767	-0.1	+0.3
	A 0900.01241814	+0.1	+0.1	A 0900.01234487	+0.0	-0.0
	A 0900.01243897	-0.3	-0.0			
101	A 0900.01240972	-0.0	-0.0	A 0900.01233866	+0.0	+0.1
	A 0900.01232785	+0.2	-0.1	A 0900.01231697	+0.3	-0.3
	A 0900.01232413	-0.5	+0.3	A 0900.01236470	+0.1	+0.0
	A 0900.01237405	+0.0	+0.2	A 0900.01240566	-0.0	-0.2
102	A 0900.01240972	-0.0	-0.2	A 0900.01233866	+0.2	-0.0
	A 0900.01232785	-0.0	-0.1	A 0900.01233235	+0.0	+0.1
	A 0900.01236231	+0.0	-0.1	A 0900.01239458	-0.7	+0.2
	A 0900.01239920	+0.6	-0.3	A 0900.01241176	+0.2	+0.2
	A 0900.01237765	-0.3	+0.2			
103	A 0900.01257606	+0.0	-0.0	A 0900.01259319	-0.2	+0.3
	A 0900.01260891	+0.3	+0.1	A 0900.01263504	-0.4	-0.5
	A 0900.01261125	+0.0	+0.0	A 0900.01259423	+0.2	+0.5
	A 0900.01254509	-0.0	-0.1	A 0900.01253127	-0.4	-0.1
	A 0900.01255740	+0.5	-0.2			
104	A 0900.01257606	-0.1	-0.3	A 0900.01259319	-0.2	+0.4
	A 0900.01260891	+0.3	+0.0	A 0900.01263504	-0.2	-0.3
	A 0900.01261125	-0.1	-0.1	A 0900.01259423	+0.3	+0.5
	A 0900.01254509	-0.1	-0.1	A 0900.01253127	-0.1	-0.1
	A 0900.01255740	+0.2	+0.0			
105	A 0900.01264170	-0.0	-0.1	A 0900.01272742	-0.0	-0.0
	A 0900.01266986	+0.1	+0.4	A 0900.01266107	-0.2	-0.6
	A 0900.01265375	+0.1	+0.3			
106	A 0900.01264170	-0.1	+0.0	A 0900.01274050	+0.0	-0.0
	A 0900.01272742	-0.1	+0.1	A 0900.01271361	+0.1	-0.2
	A 0900.01266986	-0.1	+0.7	A 0900.01266107	-0.1	-0.6
	A 0900.01265375	+0.3	+0.0			
107	A 0900.01268625	-0.0	-0.2	A 0900.01271835	-0.2	+0.4
	A 0900.01277051	+0.1	+0.2	A 0900.01277370	-0.2	-0.2
	A 0900.01276155	+0.1	-0.2	A 0900.01275132	+0.5	-0.3
	A 0900.01272114	-0.3	+0.2	A 0900.01270297	-0.5	+0.8
	A 0900.01268245	+0.4	-0.6	A 0900.01267840	+0.2	-0.1
108	A 0900.01268625	-0.2	-0.3	A 0900.01271835	-0.3	+0.2
	A 0900.01277051	+0.2	+0.2	A 0900.01277370	-0.2	-0.2
	A 0900.01275132	+0.3	-0.3	A 0900.01272114	-0.4	+0.5
	A 0900.01268245	+0.2	-0.2	A 0900.01268366	+0.4	+0.1
	A 0900.01274892	+0.0	+0.1	A 0900.01276155	+0.1	-0.1
109	A 0975.01298459	+0.0	-0.1	A 0975.01291820	-0.2	+0.3
	A 0975.01290023	+0.1	-0.3	A 0975.01290405	-0.1	+0.1
	A 0975.01297705	-0.4	+0.2	A 0975.01298206	+0.6	-0.3
	A 0975.01299520	-0.4	+0.1	A 0975.01298013	+0.2	-0.0



N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
110	A 0975.01298459	+0.4	-0.2	A 0975.01291820	-0.2	+0.0
	A 0975.01290023	+0.2	-0.0	A 0975.01290405	-0.1	-0.0
	A 0975.01297705	-0.3	+0.2	A 0975.01298206	+0.6	-0.2
	A 0975.01299520	-0.4	+0.1	A 0975.01298013	-0.1	+0.1
111	A 0975.01297376	-0.4	+0.5	A 0975.01303205	+0.1	-0.0
	A 0975.01307467	-0.0	-0.3	A 0975.01304086	+0.2	+0.2
	A 0975.01298804	-0.3	+0.3	A 0975.01297705	-0.3	+0.0
	A 0975.01295883	+0.7	-0.8			
112	A 0975.01301696	+0.6	+0.0	A 0975.01304140	-0.6	-0.0
	A 0975.01306647	+0.2	-0.0	A 0975.01307271	+0.0	-0.1
	A 0975.01306507	+0.0	-0.0	A 0975.01301643	-0.0	+0.3
	A 0975.01299895	-0.1	-0.3	A 0975.01296572	-0.4	+0.7
	A 0975.01295883	+0.6	-0.9	A 0975.01297452	-0.4	+0.4
113	A 0975.01301696	+0.4	+0.0	A 0975.01304140	-0.5	-0.1
	A 0975.01306647	+0.3	+0.0	A 0975.01307271	-0.1	-0.1
	A 0975.01306507	+0.1	-0.0	A 0975.01301643	-0.0	+0.3
	A 0975.01299895	-0.1	-0.4	A 0975.01296572	-0.4	+0.6
	A 0975.01295883	+0.6	-0.7	A 0975.01297452	-0.3	+0.3
114	A 0975.01436252	+0.0	-0.2	A 0975.01429857	-0.0	-0.3
	A 0975.01429549	+0.1	+0.3	A 0975.01429394	-0.1	+0.1
	A 0975.01429831	+0.2	-0.1	A 0975.01432715	-0.2	-0.3
	A 0975.01436381	+0.0	+0.0	A 0975.01438780	+0.1	+0.3
	A 0975.01439220	-0.2	-0.1	A 0975.01439751	+0.3	-0.5
115	A 0975.01438171	-0.2	+0.6			
	A 0975.01436252	+0.0	-0.4	A 0975.01429857	-0.1	-0.1
	A 0975.01429549	+0.2	+0.3	A 0975.01429394	-0.1	+0.1
	A 0975.01429831	+0.3	-0.2	A 0975.01432715	-0.4	+0.0
	A 0975.01436381	+0.1	-0.1	A 0975.01438780	-0.0	+0.1
	A 0975.01439220	-0.1	+0.2	A 0975.01439751	+0.3	-0.6
116	A 0975.01438171	-0.2	+0.8			
	A 0975.01436252	+0.1	-0.1	A 0975.01429857	-0.0	-0.0
	A 0975.01429549	+0.0	-0.0	A 0975.01429394	-0.1	+0.1
	A 0975.01429831	+0.2	-0.1	A 0975.01432715	-0.1	+0.1
	A 0975.01436381	+0.1	-0.0	A 0975.01438780	-0.1	+0.3
	A 0975.01439220	+0.1	-0.1	A 0975.01439751	+0.1	-0.5
117	A 0975.01438171	-0.2	+0.5			
	A 0975.01456643	-0.2	+0.1	A 0975.01452685	-0.1	-0.5
	A 0975.01451363	+0.3	+0.4	A 0975.01452194	-0.1	+0.2
	A 0975.01452331	+0.2	-0.3	A 0975.01454787	-0.3	+0.1
	A 0975.01458593	+0.2	+0.1	A 0975.01461186	+0.3	+0.0
	A 0975.01459392	-0.1	-0.2	A 0975.01458120	-0.2	+0.0
118	A 0975.01456643	-0.2	+0.3	A 0975.01452685	-0.4	-0.3
	A 0975.01451363	+0.6	+0.0	A 0975.01452194	-0.1	+0.1
	A 0975.01452331	+0.0	-0.1	A 0975.01454787	-0.1	+0.0
	A 0975.01458593	+0.1	-0.1	A 0975.01461186	+0.3	-0.4
	A 0975.01459392	-0.1	+0.2	A 0975.01458120	-0.1	+0.3

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
119	A 0975.01475496	-0.0	+0.0	A 0975.01474240	-0.0	+0.2
	A 0975.01473847	-0.1	-0.2	A 0975.01477502	+0.1	+0.0
	A 0975.01481865	-0.3	+0.2	A 0975.01484127	+0.3	-0.1
	A 0975.01483406	+0.1	-0.3	A 0975.01483089	-0.3	+0.4
	A 0975.01479879	+0.2	-0.2	A 0975.01473056	+0.1	+0.0
120	A 0975.01475496	+0.1	-0.1	A 0975.01474240	-0.0	+0.2
	A 0975.01473847	-0.1	-0.5	A 0975.01477502	+0.1	+0.0
	A 0975.01481865	-0.3	+0.4	A 0975.01484127	+0.2	-0.1
	A 0975.01483406	+0.3	-0.6	A 0975.01483089	-0.2	+0.3
	A 0975.01479879	-0.1	+0.1	A 0975.01473056	+0.1	+0.2
121	A 0975.01525566	-0.0	-0.0	A 0975.01518956	-0.3	+0.3
	A 0975.01516565	+0.2	-0.3	A 0975.01517772	+0.2	-0.2
	A 0975.01519871	-0.4	+0.6	A 0975.01523577	+0.5	-0.4
	A 0975.01526796	-0.3	+0.1	A 0975.01523070	+0.2	-0.1
	A 0975.01515781	-0.1	+0.1			
122	A 0975.01551136	+0.2	+0.6	A 0975.01547649	-0.3	-0.5
	A 0975.01542067	+0.2	+0.2	A 0975.01540419	-0.3	+0.1
	A 0975.01543159	+0.3	-0.1	A 0975.01550876	+0.1	-0.1
	A 0975.01550573	-0.1	+0.2	A 0975.01551150	-0.3	-0.1
	A 0975.01551513	-0.1	+0.1	A 0975.01551904	+0.3	-0.3
123	A 0975.01551136	+0.3	+0.9	A 0975.01547649	-0.4	-0.5
	A 0975.01542067	+0.1	+0.1	A 0975.01540419	+0.4	+0.1
	A 0975.01543159	-0.4	-0.1	A 0975.01550876	+0.2	+0.2
	A 0975.01550573	+0.1	-0.1	A 0975.01551150	-0.3	-0.0
	A 0975.01551513	-0.2	+0.2	A 0975.01551904	+0.3	-0.7
124	A 0975.01696407	+0.1	+0.0	A 0975.01695034	-0.1	-0.1
	A 0975.01695435	-0.0	+0.1	A 0975.01708990	-0.1	-0.0
	A 0975.01695054	+0.3	+0.1	A 0975.01692532	-0.3	-0.1
125	A 0975.01696407	+0.1	+0.5	A 0975.01695034	-0.0	-0.5
	A 0975.01695435	-0.0	-0.2	A 0975.01707975	-0.1	-0.1
	A 0975.01708990	+0.1	-0.1	A 0975.01705139	-0.0	+0.1
	A 0975.01695054	+0.1	+0.3	A 0975.01692532	-0.0	-0.1
126	A 0975.01742655	+0.3	-0.7	A 0975.01736175	-0.3	+0.4
	A 0975.01735484	+0.5	-0.3	A 0975.01736876	-0.2	+0.1
	A 0975.01743008	-0.0	+0.1	A 0975.01748843	-0.2	+0.2
	A 0975.01751020	+0.3	-0.4	A 0975.01749286	+0.1	-0.0
	A 0975.01746406	-0.2	+0.5	A 0975.01751486	-0.2	+0.1
127	A 0975.01746990	-0.2	+0.4	A 0975.01742655	+0.3	-0.5
	A 0975.01736175	-0.4	+0.2	A 0975.01734124	+0.1	+0.3
	A 0975.01735484	+0.4	-0.4	A 0975.01751020	+0.0	-0.1
	A 0975.01751478	+0.2	+0.0	A 0975.01745906	+0.1	-0.2
	A 0975.01743008	-0.4	+0.2	A 0975.01739944	+0.0	+0.1

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
128	A 1200.20032407	+0.4	+0.3	A 1200.20032390	-0.4	-0.4
	A 1200.20032650	+0.2	+0.5	A 1200.20035735	-0.0	-0.1
	A 1200.20038097	-0.1	-0.1	A 1200.20034470	-0.3	-0.4
	A 1200.20038868	+0.2	+0.3			
129	A 1200.20033895	+0.3	-0.3	A 1200.20032407	+0.3	+0.1
	A 1200.20035121	+0.2	+0.5	A 1200.20035365	-0.7	-0.9
	A 1200.20032650	-0.2	+0.0	A 1200.20032390	-0.0	+0.2
	A 1200.20038097	+0.2	+0.3			
130	A 1200.20019997	-0.0	-0.1	A 1200.20018981	+0.1	+0.2
	A 1200.20017936	-0.0	-0.1	A 1200.20017446	-0.0	-0.0
131	A 1200.20019997	-0.2	-0.1	A 1200.20018981	+0.4	+0.2
	A 1200.20017936	-0.2	-0.1	A 1200.20017446	+0.1	+0.0
	A 1200.20019421	-0.1	-0.0			
132	A 1125.19891349	-0.1	+0.2	A 1125.19889860	+0.2	-0.1
	A 1125.19889485	-0.2	-0.1	A 1125.19891166	+0.0	+0.1
	A 1125.19892761	+0.2	-0.2	A 1125.19893863	-0.1	+0.0
	A 1125.19892765	-0.0	+0.0			
133	A 1125.19888382	+0.2	+0.3	A 1125.19889934	+0.1	+0.1
	A 1125.19891922	-0.3	-0.4	A 1125.19893854	+0.3	+0.3
	A 1125.19891437	-0.3	-0.0	A 1125.19890751	+0.1	-0.3
	A 1125.19888098	+0.2	+0.5	A 1125.19886795	-0.2	-0.4
134	A 1125.19888382	+0.3	+0.1	A 1125.19889934	+0.0	+0.2
	A 1125.19893854	+0.2	+0.0	A 1125.19893540	-0.7	-0.5
	A 1125.19891437	+0.3	-0.2	A 1125.19890751	+0.3	+0.7
	A 1125.19888098	+0.1	+0.1	A 1125.19886795	-0.5	-0.5
135	A 1125.19888530	+0.4	+0.3	A 1125.19892129	-0.1	-0.1
	A 1125.19892212	-0.3	-0.2	A 1125.19889944	+0.3	+0.2
	A 1125.19887804	+0.2	+0.1	A 1125.19887155	+0.1	+0.0
	A 1125.19886360	-0.6	-0.4	A 1125.19885586	+0.0	+0.0
136	A 1125.19886233	+0.5	-0.3	A 1125.19889040	-0.2	-0.0
	A 1125.19892301	+0.2	-0.1	A 1125.19893150	-0.1	-0.0
	A 1125.19892212	+0.0	+0.3	A 1125.19892335	-0.1	-0.0
	A 1125.19888197	+0.6	-0.6	A 1125.19886790	-0.6	+0.4
137	A 1125.19886360	-0.3	+0.3			
	A 1125.00056342	+0.3	-0.5	A 1125.00054830	+0.1	+0.4
	A 1125.00053223	-0.1	-0.3	A 1125.00053091	+0.2	-0.1
	A 1125.00053475	-0.2	+0.3	A 1125.00055355	-0.1	-0.4
	A 1125.00055812	+0.3	+0.1	A 1125.00056476	-0.2	+0.2
138	A 1125.00055610	-0.4	+0.2			
	A 1125.00054830	-0.1	+0.1	A 1125.00053223	+0.3	+0.2
	A 1125.00053091	+0.3	-0.3	A 1125.00053475	-0.2	+0.4
	A 1125.00055355	-0.1	-0.5	A 1125.00055812	+0.2	-0.2
	A 1125.00056476	-0.1	+0.5	A 1125.00055610	-0.6	-0.1
	A 1125.00057921	+0.4	+0.0			

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
139	A 1275.03901723	+0.1	-0.1	A 1275.03893259	-0.0	+0.1
	A 1275.03888533	+0.4	+0.1	A 1275.03885929	-0.4	-0.2
	A 1275.03888423	+0.1	+0.1	A 1275.03904955	+0.1	+0.0
	A 1275.03906641	+0.0	-0.2	A 1275.03905593	-0.2	+0.2
140	A 1275.03901723	+0.1	-0.1	A 1275.03893259	-0.1	+0.2
	A 1275.03888533	+0.4	+0.1	A 1275.03885929	-0.3	-0.2
	A 1275.03888423	+0.0	+0.1	A 1275.03904955	+0.0	-0.0
	A 1275.03906641	+0.1	-0.1	A 1275.03905593	-0.2	+0.2
141	A 1275.02916776	-0.1	-0.1	A 1275.02916456	+0.0	-0.2
	A 1275.02929099	+0.1	-0.2	A 1275.02922416	+0.2	+0.2
	A 1275.02922519	-0.0	-0.2	A 1275.02917695	-0.3	-0.3
	A 1275.02926603	-0.1	+0.3	A 1275.02915018	+0.3	+0.4
142	A 1275.02928368	-0.1	-0.1	A 1275.02927676	+0.3	+0.2
	A 1275.02927748	-0.2	-0.1	A 1275.02922416	+0.0	+0.0
	A 1275.02911536	-0.0	-0.0			
143	A 1275.02916776	+0.2	+0.1	A 1275.02916456	+0.1	-0.0
	A 1275.02929099	+0.1	-0.2	A 1275.02922416	-0.7	-0.8
	A 1275.02922519	+0.6	+0.4	A 1275.02917695	+0.3	+0.4
	A 1275.02926603	-0.1	+0.3	A 1275.02915018	-0.4	-0.3
144	A 1275.02581659	-0.1	+0.0	A 1275.02577595	+0.2	+0.0
	A 1275.02575430	-0.1	-0.2	A 1275.02580127	+0.0	+0.1
	A 1275.02586348	+0.0	+0.0	A 1275.02589986	-0.0	+0.0
	A 1275.02590842	-0.1	-0.1	A 1275.02588439	+0.2	-0.3
145	A 1275.02586660	-0.0	+0.2			
	A 1275.02581659	-0.1	+0.1	A 1275.02577595	+0.2	-0.0
	A 1275.02575430	-0.1	-0.1	A 1275.02580127	+0.0	+0.1
	A 1275.02586348	+0.0	+0.0	A 1275.02589986	-0.0	+0.0
146	A 1275.02590842	-0.1	-0.0	A 1275.02588439	+0.2	-0.2
	A 1275.02586660	-0.0	+0.2			
	A 1200.01467478	-0.3	+0.2	A 1200.01472241	+0.2	-0.2
	A 1200.01473067	+0.1	-0.1	A 1200.01467838	-0.0	+0.2
	A 1200.01466264	-0.5	+0.1	A 1200.01464703	+0.3	+0.2
147	A 1200.01463763	+0.2	-0.3	A 1200.01464736	+0.5	-0.6
	A 1200.01465749	-0.5	+0.5			
	A 1200.01467478	-0.3	+0.1	A 1200.01472241	+0.1	-0.1
	A 1200.01473067	+0.3	+0.0	A 1200.01467838	-0.6	-0.2
	A 1200.01466264	-0.0	+0.2	A 1200.01464703	-0.0	+0.4
148	A 1200.01463763	+0.5	-0.4	A 1200.01464736	+0.3	-0.3
	A 1200.01465749	-0.3	+0.3			
	A 1200.01270606	+0.1	-0.1	A 1200.01270850	+0.0	-0.1
	A 1200.01273979	-0.0	+0.3	A 1200.01275136	-0.0	+0.0
	A 1200.01275690	+0.0	-0.3	A 1200.01275419	+0.4	-0.1
	A 1200.01274938	-0.4	+0.1	A 1200.01273597	-0.0	+0.2

N	Number of star	$\Delta\alpha$	$\Delta\delta$	Number of star	$\Delta\alpha$	$\Delta\delta$
149	A 1200.01246996	+0.1	-0.4	A 1200.01243397	-0.0	+0.4
	A 1200.01243589	-0.0	-0.4	A 1200.01243715	-0.1	-0.1
	A 1200.01244080	+0.1	+0.2	A 1200.01244923	-0.0	+0.1
	A 1200.01248668	-0.2	+0.0	A 1200.01248434	+0.2	-0.4
	A 1200.01248360	-0.2	+0.6	A 1200.01246980	-0.0	+0.1
150	A 1200.01246996	-0.1	-0.2	A 1200.01243397	+0.1	+0.3
	A 1200.01243589	-0.1	-0.5	A 1200.01243715	-0.0	-0.1
	A 1200.01244080	+0.1	+0.3	A 1200.01244923	+0.2	-0.0
	A 1200.01248668	+0.1	+0.1	A 1200.01248434	+0.5	-0.5
	A 1200.01248360	-0.2	+0.4	A 1200.01246980	-0.4	+0.2
151	A 1200.01195063	-0.1	-0.0	A 1200.01198656	-0.2	+0.3
	A 1200.01199477	+0.5	-0.2	A 1200.01200361	-0.2	-0.1
	A 1200.01200357	-0.1	+0.1	A 1200.01195369	+0.2	+0.0
	A 1200.01193579	+0.1	+0.1	A 1200.01192008	-0.2	-0.0
	A 1200.01191473	+0.3	+0.1	A 1200.01193920	-0.3	-0.2
152	A 1200.01195063	+0.0	-0.3	A 1200.01198656	-0.2	+0.3
	A 1200.01199477	+0.5	-0.2	A 1200.01200361	-0.3	+0.1
	A 1200.01200357	-0.0	+0.0	A 1200.01195369	+0.1	+0.0
	A 1200.01193579	+0.1	-0.0	A 1200.01192008	-0.2	+0.0
	A 1200.01191473	+0.2	+0.3	A 1200.01193920	-0.3	-0.3
153	A 1050.20615291	-0.1	+0.3	A 1050.20612242	-0.1	+0.4
	A 1050.20611662	-0.2	-0.3	A 1050.20615187	+0.3	+0.0
	A 1050.20615138	-0.5	-0.3	A 1050.20614094	+0.5	-0.2
	A 1050.20611966	-0.0	+0.1	A 1050.20611368	+0.1	-0.0
	A 1050.20612242	-0.0	+0.3	A 1050.20611662	-0.2	-0.3
154	A 1050.20615187	+0.3	+0.1	A 1050.20615138	-0.5	+0.0
	A 1050.20614094	+0.6	+0.1	A 1050.20611966	-0.1	-0.3
	A 1050.20611368	+0.2	+0.4	A 1050.20613617	-0.2	-0.2
	A 1050.20550885	-0.0	-0.1	A 1050.20552725	+0.0	+0.1
	A 1050.20552718	-0.1	-0.4	A 1050.20551594	+0.4	+0.7
155	A 1050.20549422	-0.7	-0.6	A 1050.20547541	+0.3	+0.1
	A 1050.20547682	+0.1	+0.3	A 1050.20545622	-0.1	-0.0
	A 1050.20550885	-0.0	-0.0	A 1050.20552725	-0.0	+0.1
	A 1050.20552718	-0.1	-0.5	A 1050.20551594	+0.4	+0.5
	A 1050.20549422	-0.8	+0.1	A 1050.20547541	+0.2	-0.1
156	A 1050.20547682	+0.4	-0.2	A 1050.20545622	-0.1	+0.1
	A 1050.20537367	+0.1	+0.1	A 1050.20537667	+0.2	-0.1
	A 1050.20543079	+0.2	-0.5	A 1050.20543373	-0.2	+0.5
	A 1050.20543502	+0.1	+0.2	A 1050.20542813	-0.2	-0.1
	A 1050.20539642	+0.0	-0.6	A 1050.20538601	+0.6	+0.5
157	A 1050.20537559	-0.8	+0.1			
	A 1050.20537367	+0.0	+0.3	A 1050.20537667	-0.1	-0.2
	A 1050.20543891	-0.1	+0.1	A 1050.20543502	+0.5	-0.2
	A 1050.20542813	-0.4	+0.2	A 1050.20537559	+0.1	-0.1

#### 4. List of collaborators

Name	Exposures	Measurements	Reductions
G. Červák	68	68	–
M. Husárik	3	3	–
M. Jakubík	2	2	–
M. Kamenický	5	5	–
L. Neslušan	–	–	158
P. Rychtarčík	79	79	–
J. Svoreň	1	1	–

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