

# Astrometry of minor planets made at the Skalnaté Pleso Observatory in the year 1996

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**Abstract.** The paper presents the results of position photographing of minor planets carried out at the Skalnaté Pleso Observatory in the year 1996. 105 observations of 15 minor planets are given together with the list of reference stars and dependences.

**Key words:** asteroids – astrometry

## 1. Introduction

The presented paper is a continuation of the previous papers which gave the results of positional observations of minor planets obtained at the Skalnaté Pleso Observatory (the last paper of this series: Neslušan and Svoreň; 1996) and contains the observations made in the year 1996.

The reference stars were selected from the Smithsonian Astrophysical Observatory Star Catalog (1966). The positions were measured in B1950.0 system and then converted to J2000.0 following the formulas published by System Transition Committee of the IAU Commission 20 (Yeomans, 1990). The formulas used are given in the preceding paper on astrometry of minor planets (Svoreň, 1998).

The reduction constants as well as methods of observation and processing and all the other necessary data are not repeated here. They are also given in the paper by Svoreň (1998).

A total of 105 accurate positions of 15 minor planets are given. A list of reference stars and dependences and a list of collaborators are given, together with their share in photographing, 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 - ordinal number of observation,

MP - number of minor planet,

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  $^{\circ},',''$ ),

A - the difference between independent determinations of R.A. in arc seconds,

B - the difference between independent determinations of Decl. in arc seconds.

N	MP	Date U.T.	$R.A._{2000}$	$Decl._{2000}$	A	B
1	22	1996 Dec.	4.75139	5 13 08.99	+27 10 10.3	0.3 0.4
2	22	1996 Dec.	4.88889	5 13 00.07	+27 10 47.8	0.9 0.1
3	22	1996 Dec.	5.74653	5 12 05.69	+27 14 35.6	0.7 0.2
4	22	1996 Dec.	5.89375	5 11 56.17	+27 15 15.7	0.5 0.2
5	22	1996 Dec.	7.72361	5 09 58.72	+27 23 09.8	0.4 0.1
6	22	1996 Dec.	7.92361	5 09 45.52	+27 24 02.6	0.3 0.5
7	22	1996 Dec.	8.81042	5 08 48.40	+27 27 46.6	0.5 0.3
8	22	1996 Dec.	8.91736	5 08 41.35	+27 28 13.8	0.7 0.5
9	22	1996 Dec.	29.70625	4 47 54.46	+28 36 57.8	0.5 0.0
10	22	1996 Dec.	29.72951	4 47 53.27	+28 37 01.1	0.4 0.4
11	22	1996 Dec.	30.72350	4 47 04.32	+28 39 28.8	0.3 0.9
12	22	1996 Dec.	30.74421	4 47 03.37	+28 39 32.0	0.5 0.0
13	55	1996 Dec.	3.70295	4 31 41.49	+32 18 23.4	0.6 0.8
14	55	1996 Dec.	3.73021	4 31 39.69	+32 18 23.0	0.4 0.8
15	55	1996 Dec.	4.76597	4 30 31.67	+32 17 22.7	0.8 0.0
16	55	1996 Dec.	4.90417	4 30 22.39	+32 17 14.1	0.7 0.2
17	55	1996 Dec.	5.75903	4 29 26.87	+32 16 15.3	0.2 0.1
18	55	1996 Dec.	5.90694	4 29 17.06	+32 16 05.6	0.7 0.2
19	55	1996 Dec.	7.73819	4 27 19.04	+32 13 38.2	0.6 0.1
20	55	1996 Dec.	7.93472	4 27 06.19	+32 13 22.0	0.3 0.1
21	55	1996 Dec.	9.75486	4 25 11.34	+32 10 25.8	0.4 0.1
22	55	1996 Dec.	9.87569	4 25 03.65	+32 10 14.6	0.8 0.4
23	55	1996 Dec.	10.75625	4 24 09.22	+32 08 39.0	0.4 0.8
24	55	1996 Dec.	10.85764	4 24 02.81	+32 08 28.7	0.1 0.0
25	55	1996 Dec.	11.92222	4 22 57.69	+32 06 26.7	0.2 0.1
26	55	1996 Dec.	11.99306	4 22 53.22	+32 06 18.1	0.7 0.0
27	55	1996 Dec.	12.71111	4 22 10.50	+32 04 49.1	0.1 0.3
28	55	1996 Dec.	12.73628	4 22 08.96	+32 04 46.7	0.3 0.8
29	55	1996 Dec.	31.73987	4 07 37.04	+31 13 11.5	0.8 0.6
30	55	1996 Dec.	31.82819	4 07 34.35	+31 12 56.9	0.4 0.3
31	69	1996 Jun.	6.87222	17 47 30.83	-11 35 32.2	0.0 0.4
32	69	1996 Jun.	6.91042	17 47 28.92	-11 35 28.4	0.7 0.4
33	69	1996 Jun.	13.85446	17 41 56.42	-11 27 42.2	0.4 0.8
34	69	1996 Jun.	13.88681	17 41 54.86	-11 27 42.5	0.2 0.4
35	110	1996 Jan.	12.86181	10 08 04.83	+20 20 57.6	0.8 0.4
36	110	1996 Jan.	12.92014	10 08 03.09	+20 21 15.8	0.7 0.7

N	MP	Date U.T.	$R.A._{2000}$	$Decl._{2000}$	A	B
37	110	1996 Jan.	13.85833	10 07 35.25	+20 25 59.3	0.6 0.6
38	110	1996 Jan.	13.93611	10 07 32.89	+20 26 22.5	0.5 0.3
39	110	1996 Jan.	15.88472	10 06 30.70	+20 36 23.9	0.1 0.8
40	110	1996 Jan.	15.96389	10 06 27.99	+20 36 49.0	0.9 0.3
41	110	1996 Jan.	16.90139	10 05 56.15	+20 41 43.5	0.5 0.3
42	110	1996 Jan.	16.99097	10 05 52.95	+20 42 12.2	0.5 0.8
43	110	1996 Jan.	21.91343	10 02 45.75	+21 08 44.0	0.6 0.1
44	110	1996 Jan.	21.93466	10 02 44.90	+21 08 50.8	1.1 0.1
45	136	1996 Oct.	8.76458	22 34 10.76	-5 23 13.8	0.3 0.0
46	136	1996 Oct.	8.89306	22 34 09.49	-5 24 16.5	0.2 0.1
47	136	1996 Oct.	12.84167	22 33 52.75	-5 53 55.6	0.3 0.2
48	136	1996 Oct.	12.93611	22 33 52.54	-5 54 35.2	0.7 0.6
49	216	1996 Jan.	21.92413	9 58 57.25	-6 56 47.2	0.2 1.0
50	216	1996 Jan.	21.94375	9 58 56.41	-6 56 45.8	0.5 0.6
51	224	1996 Dec.	4.72917	5 02 56.23	+31 49 16.0	0.1 0.7
52	224	1996 Dec.	4.86806	5 02 46.95	+31 49 09.4	0.2 0.2
53	224	1996 Dec.	5.73056	5 01 50.01	+31 48 21.3	0.1 0.1
54	224	1996 Dec.	5.87708	5 01 40.18	+31 48 14.1	0.2 0.1
55	224	1996 Dec.	7.70764	4 59 38.90	+31 46 10.5	0.2 0.5
56	224	1996 Dec.	10.74375	4 56 17.81	+31 41 53.8	0.3 0.4
57	224	1996 Dec.	10.84514	4 56 10.95	+31 41 43.9	0.1 0.7
58	224	1996 Dec.	12.72500	4 54 07.84	+31 38 29.6	0.4 0.8
59	224	1996 Dec.	12.74942	4 54 06.22	+31 38 26.8	0.6 0.4
60	259	1996 Jan.	12.84931	10 08 04.64	+23 13 01.9	0.3 0.6
61	259	1996 Jan.	12.90833	10 08 03.17	+23 13 23.3	0.6 0.2
62	259	1996 Jan.	13.84583	10 07 39.86	+23 19 21.2	0.1 0.3
63	259	1996 Jan.	13.92222	10 07 37.88	+23 19 50.8	0.3 0.2
64	259	1996 Jan.	14.87500	10 07 12.95	+23 25 58.0	0.2 0.7
65	259	1996 Jan.	14.94028	10 07 11.17	+23 26 22.6	0.4 0.3
66	259	1996 Jan.	15.87222	10 06 45.66	+23 32 24.7	0.2 0.0
67	259	1996 Jan.	15.95139	10 06 43.31	+23 32 56.7	0.9 0.5
68	259	1996 Jan.	16.88889	10 06 16.43	+23 39 03.4	0.8 0.6
69	259	1996 Jan.	16.97847	10 06 13.69	+23 39 38.7	0.8 0.4
70	259	1996 Jan.	17.84844	10 05 47.70	+23 45 20.6	0.4 0.5
71	259	1996 Jan.	17.88385	10 05 46.64	+23 45 35.2	0.7 0.2
72	259	1996 Jan.	22.81534	10 03 02.12	+24 18 25.6	0.5 0.9
73	259	1996 Jan.	22.84034	10 03 01.34	+24 18 35.0	0.7 0.3
74	368	1996 Oct.	13.81597	23 22 26.84	+5 10 27.5	0.8 0.4
75	368	1996 Oct.	13.90694	23 22 24.76	+5 09 47.7	0.6 0.8
76	387	1996 Dec.	7.76042	4 35 52.11	-0 23 05.8	0.1 0.5
77	387	1996 Dec.	7.95556	4 35 41.36	-0 22 45.5	0.2 0.6
78	387	1996 Dec.	8.82569	4 34 54.72	-0 21 14.1	0.3 0.5
79	387	1996 Dec.	8.89375	4 34 51.09	-0 21 06.5	0.4 0.7

N	MP	Date	U.T.	<i>R.A.</i> <sub>2000</sub>	<i>Decl.</i> <sub>2000</sub>	A	B
80	387	1996 Dec.	9.76875	4 34 04.46	-0 19 25.2	0.2	0.3
81	387	1996 Dec.	9.86250	4 33 59.39	-0 19 13.5	0.5	0.3
82	387	1996 Dec.	10.76806	4 33 11.61	-0 17 19.7	0.2	0.5
83	387	1996 Dec.	10.86806	4 33 06.23	-0 17 06.9	0.0	0.2
84	387	1996 Dec.	11.90833	4 32 11.73	-0 14 44.1	0.2	0.4
85	387	1996 Dec.	11.97986	4 32 07.92	-0 14 33.4	0.3	0.5
86	422	1996 Dec.	7.99444	4 23 02.93	+29 59 25.5	0.3	0.8
87	422	1996 Dec.	8.06806	4 22 57.44	+29 59 13.4	0.1	0.1
88	441	1996 Oct.	13.83889	22 55 20.28	+5 32 29.5	0.8	0.0
89	441	1996 Oct.	13.92847	22 55 18.06	+5 31 56.8	0.9	0.0
90	476	1996 Oct.	8.78056	22 51 19.86	+10 16 12.2	0.2	0.0
91	476	1996 Oct.	8.90833	22 51 15.85	+10 15 27.6	0.3	0.0
92	476	1996 Oct.	12.82431	22 49 31.81	+9 52 54.2	0.1	0.5
93	476	1996 Oct.	12.92014	22 49 29.45	+9 52 21.8	0.1	0.0
94	491	1996 Jan.	13.87361	9 35 47.44	-3 20 18.5	0.2	0.3
95	491	1996 Jan.	13.95069	9 35 45.07	-3 20 03.6	0.2	0.0
96	491	1996 Jan.	14.89097	9 35 16.58	-3 17 10.8	0.0	0.1
97	491	1996 Jan.	14.95625	9 35 14.60	-3 16 58.4	0.3	0.3
98	491	1996 Jan.	15.90000	9 34 45.09	-3 13 53.3	0.7	0.5
99	491	1996 Jan.	15.97847	9 34 42.55	-3 13 38.4	0.2	0.3
100	491	1996 Jan.	16.91667	9 34 12.24	-3 10 23.2	0.4	0.1
101	491	1996 Jan.	17.00486	9 34 09.23	-3 10 03.8	0.5	0.7
102	491	1996 Jan.	20.87778	9 31 55.78	-2 54 38.2	0.6	0.9
103	491	1996 Jan.	20.89583	9 31 55.16	-2 54 33.0	0.5	0.1
104	893	1996 Jan.	23.74184	7 02 42.37	+8 35 38.4	0.7	0.3
105	893	1996 Jan.	23.76759	7 02 41.40	+8 35 46.8	0.1	0.5

### 3. Reference stars and dependences

The individual columns of the table contain the following:

N - ordinal number of the observation in agreement with the Section 2,  
 Numbers of reference stars and dependences (SAO catalogue of reference stars  
 is used at all the calculations),

T - the exposure time in minutes.

N	Numbers of stars and dependences						T
1	76973	.18277	76979	.27575	77078	.54149	
	76984	.21862	77041	.41140	77046	.36998	16
2	76973	.19694	76979	.27826	77078	.52480	
	76984	.24861	77041	.39791	77046	.35348	16

N	Numbers of stars and dependences						T
3	76973	.28295	76979	.29352	77078	.42353	
	76984	.43204	77041	.31536	77046	.25259	14
4	76973	.29811	76979	.29618	77078	.40571	
	76984	.46394	77041	.30110	77046	.23496	14
5	76960	.21129	76970	.32529	77034	.46342	
	76949	.25742	76995	.40675	77041	.33583	14
6	76960	.24733	76970	.32468	77034	.42798	
	76949	.29071	76995	.38811	77041	.32118	14
7	76960	.40308	76970	.32252	77034	.27440	
	76949	.43380	76995	.30857	77041	.25763	14
8	76960	.42219	76970	.32238	77034	.25542	
	76949	.45145	76995	.29875	77041	.24981	14
9	76738	.31078	76743	.23010	76778	.45912	
	76718	.23331	76744	.22156	76784	.54514	10
10	76738	.31772	76743	.22730	76778	.45498	
	76718	.23556	76744	.22174	76784	.54269	10
11	76738	.61308	76743	.10810	76778	.27882	
	76718	.32210	76744	.23715	76784	.44075	8
12	76738	.61888	76743	.10554	76778	.27557	
	76718	.32384	76744	.23742	76784	.43874	8
13	57248	.37022	57266	.26085	57328	.36893	
	57248	.35154	57298	.27673	57304	.37174	15
14	57248	.37465	57266	.26078	57328	.36457	
	57248	.35832	57298	.27176	57304	.36991	15
15	57234	.24098	57266	.36746	57298	.39156	
	57231	.19742	57273	.35913	57289	.44345	14
16	57234	.27002	57266	.35822	57298	.37176	
	57231	.22536	57273	.35139	57289	.42325	14
17	57234	.44321	57266	.30420	57298	.25259	
	57231	.39252	57273	.30415	57289	.30332	12
18	57234	.47383	57266	.29446	57298	.23171	
	57231	.42215	57273	.29591	57289	.28193	12
19	57209	.28150	57235	.45330	57281	.26519	
	57205	.35573	57244	.33520	57266	.30907	10
20	57209	.31993	57235	.43791	57281	.24216	
	57205	.38863	57244	.33329	57266	.27807	10
21	57185	.16132	57214	.19841	57231	.64028	
	57147	.14084	57205	.44673	57248	.41243	10
22	57185	.18699	57214	.20254	57231	.61047	
	57147	.15033	57205	.45493	57248	.39474	10
23	57185	.36994	57214	.22908	57231	.40098	
	57147	.21540	57205	.51654	57248	.26806	8
24	57185	.39144	57214	.23251	57231	.37605	
	57147	.22312	57205	.52363	57248	.25325	8

N	Numbers of stars and dependences						T
25	57178	.25752	57182	.37975	57231	.36274	8
	57169	.35060	57205	.42551	57223	.22390	
26	57178	.26666	57182	.38453	57231	.34881	8
	57169	.36649	57205	.42010	57223	.21341	
27	57144	.20795	57194	.47780	57205	.31425	8
	57147	.23297	57152	.35532	57231	.41171	
28	57144	.21379	57194	.47437	57205	.31184	8
	57147	.23351	57152	.35844	57231	.40805	
29	56950	.20278	56983	.34682	57017	.45040	8
	56918	.34976	57038	.43897	57041	.21126	
30	56932	.25386	56983	.51862	57064	.22752	8
	56918	.35535	57038	.44019	57041	.20446	
31	160791	.35504	160833	.34597	160845	.29899	12
	160781	.40363	160843	.22293	160849	.37344	
32	160791	.36096	160833	.34493	160845	.29411	12
	160781	.40846	160843	.22220	160849	.36934	
33	160729	.54546	160794	.27309	160791	.18145	12
	160729	.32894	160751	.20074	160781	.47033	
34	160729	.55115	160794	.27254	160791	.17631	12
	160729	.33539	160751	.20133	160781	.46328	
35	98938	.40918	81193	.25444	81225	.33638	12
	98946	.41384	81181	.28164	81232	.30452	
36	98938	.41123	81193	.25771	81225	.33107	12
	98946	.41367	81181	.28635	81232	.29998	
37	98938	.44475	81193	.30877	81225	.24648	12
	98946	.41151	81181	.36079	81232	.22770	
38	98938	.44767	81193	.31296	81225	.23937	12
	98946	.41136	81181	.36706	81232	.22158	
39	81160	.27893	81193	.29088	81197	.43019	12
	81166	.30366	98938	.40834	81216	.28800	
40	81160	.29005	81193	.29166	81197	.41830	12
	81166	.31405	98938	.40528	81216	.28066	
41	81160	.42183	81193	.30014	81197	.27804	12
	81166	.43553	98938	.36888	81216	.19559	
42	81160	.43509	81193	.30085	81197	.26406	12
	81166	.44767	98938	.36531	81216	.18702	
43	81128	.33166	81160	.33113	81170	.33721	10
	81142	.23545	81145	.49133	81183	.27322	
44	81128	.33467	81160	.32894	81170	.33639	10
	81145	.39579	81150	.36325	81179	.24096	
45	146144	.42213	146154	.19276	146190	.38511	16
	146124	.31476	146158	.23423	146205	.45101	

N	Numbers of stars and dependences						T
46	146144	.41598	146154	.20779	146190	.37623	
	146124	.32625	146158	.21640	146205	.45736	16
47	146128	.29477	146172	.54473	146202	.16050	
	146109	.34904	146186	.35250	146203	.29846	16
48	146128	.29307	146172	.55099	146202	.15594	
	146109	.34853	146186	.35898	146203	.29249	16
49	137252	.21605	137261	.42891	137285	.35503	
	137227	.26749	137272	.39203	137291	.34048	7
50	137252	.21855	137261	.43099	137285	.35045	
	137227	.27046	137272	.38999	137291	.33954	7
51	57543	.11109	57584	.38680	57616	.50210	
	57550	.26409	57595	.39095	57624	.34496	20
52	57543	.13379	57584	.39337	57616	.47284	
	57550	.28818	57595	.39262	57624	.31919	20
53	57543	.27251	57584	.43495	57616	.29254	
	57550	.43552	57595	.40402	57624	.16046	18
54	57543	.29656	57584	.44183	57616	.26160	
	57550	.46106	57595	.40579	57624	.13315	18
55	57523	.22285	57550	.43538	57584	.34177	
	57516	.24137	57552	.37761	57585	.38101	18
56	57490	.27422	57523	.39793	57525	.32785	
	57481	.23335	57504	.40994	57552	.35671	18
57	57490	.31286	57523	.40980	57525	.27734	
	57481	.25099	57504	.41025	57552	.33876	18
58	57454	.41714	57504	.20661	57523	.37625	
	57439	.31797	57504	.41725	57537	.26478	18
59	57454	.42187	57504	.20493	57523	.37319	
	57439	.32115	57504	.41634	57537	.26251	19
60	81163	.26035	81184	.40305	81230	.33660	
	81173	.20323	81193	.47158	81219	.32519	16
61	81163	.26144	81184	.40586	81230	.33270	
	81173	.20848	81193	.47077	81219	.32075	16
62	81163	.27795	81184	.45195	81230	.27011	
	81173	.29319	81193	.45460	81219	.25221	16
63	81163	.27936	81184	.45577	81230	.26488	
	81173	.30032	81193	.45334	81219	.24634	16
64	81152	.24864	81184	.48557	81230	.26580	
	81168	.26645	81180	.49239	81228	.24117	16
65	81152	.24992	81184	.48863	81230	.26145	
	81168	.26218	81180	.50252	81228	.23530	16

N	Numbers of stars and dependences						T
66	81152	.26671	81184	.53449	81230	.19879	
	81168	.20062	81180	.64801	81228	.15137	16
67	81152	.26837	81184	.53859	81230	.19304	
	81168	.19525	81180	.66098	81228	.14377	16
68	81168	.30753	81184	.51810	81195	.17437	
	81152	.20894	81173	.34149	81204	.44957	16
69	81168	.32133	81184	.52434	81195	.15433	
	81152	.21092	81173	.35138	81204	.43770	16
70	81138	.31213	81184	.22109	81204	.46678	
	81135	.23417	81175	.28070	81204	.48513	18
71	81138	.31344	81184	.22469	81204	.46187	
	81135	.23501	81175	.28394	81204	.48105	18
72	81103	.30846	81162	.35281	81188	.33873	
	81148	.42249	81151	.31936	81180	.25815	12
73	81103	.30943	81162	.35413	81188	.33645	
	81148	.42366	81151	.32120	81180	.25514	12
74	128131	.42548	128139	.24409	128170	.33043	
	128089	.29764	128152	.36199	128180	.34036	30
75	128131	.43589	128139	.24032	128170	.32379	
	129089	.30344	128152	.35672	128180	.33984	30
76	131318	.28776	111911	.46105	131356	.25118	
	111892	.29694	131337	.30964	131362	.39342	40
77	131318	.34344	111911	.46159	131356	.19497	
	111892	.33480	131337	.32083	131362	.34437	40
78	131268	.15478	111892	.32056	131349	.52466	
	131267	.26651	131337	.36833	111916	.36517	20
79	131268	.16163	111892	.33035	131349	.50802	
	131267	.28143	131337	.35693	111916	.36164	20
80	131268	.24922	111892	.45685	131349	.29393	
	131267	.47336	131337	.21028	111916	.31637	18
81	131268	.25870	111892	.47081	131349	.27050	
	131267	.49426	131337	.19421	111916	.31153	18
82	131244	.33075	111884	.34015	131356	.32911	
	111854	.31927	131268	.34145	131362	.33927	16
83	131244	.34202	111884	.34027	131356	.31771	
	111854	.32792	131268	.34490	131362	.32718	16
84	131244	.45525	111884	.34320	131356	.20155	
	111854	.41744	131268	.37778	131362	.20478	16
85	131244	.46309	111884	.34353	131356	.19338	
	111854	.42378	131268	.37995	131362	.19626	16



N	Numbers of stars and dependences						T
86	57187	.41183	76576	.24493	57215	.34324	
	76566	.38844	57191	.35298	76604	.25858	26
87	57187	.44717	76576	.24113	57215	.31170	
	76566	.40944	57191	.35673	76604	.23383	26
88	127817	.25115	127843	.38874	127856	.36011	
	127809	.28373	127842	.34018	127861	.37609	20
89	127817	.25850	127843	.39444	127856	.34707	
	127809	.29612	127842	.32719	127861	.37669	20
90	108185	.30786	127807	.50526	108245	.18688	
	108195	.42360	127808	.33944	108241	.23696	16
91	108185	.31430	127807	.51521	108245	.17049	
	108195	.43357	127808	.34568	108241	.22075	16
92	127765	.30374	108185	.31969	127807	.37657	
	108181	.46269	127775	.21326	127808	.32405	16
93	127765	.31506	108185	.31763	127807	.36731	
	108181	.46318	127775	.22337	127808	.31345	16
94	136943	.24084	136981	.31298	137005	.44618	
	136944	.32792	136980	.35237	137029	.31970	20
95	136943	.24933	136981	.31244	137005	.43824	
	136944	.33324	136980	.35395	137029	.31281	20
96	136943	.35255	136981	.30431	137005	.34313	
	136944	.39630	136980	.37359	137029	.23011	20
97	136943	.35976	136981	.30378	137005	.33645	
	136944	.40073	136980	.37485	137029	.22443	20
98	136943	.46615	136981	.29650	137005	.23735	
	136944	.46668	136980	.39415	137029	.13917	20
99	136943	.47531	136981	.29571	137005	.22898	
	136944	.47228	136980	.39599	137029	.13173	20
100	136935	.42972	136963	.32671	137004	.24357	
	136922	.27375	136980	.32961	136981	.39665	20
101	136935	.43984	136963	.32655	137004	.23361	
	136922	.28631	136980	.32019	136981	.39349	20
102	136886	.32210	136944	.44930	136960	.22860	
	136886	.36483	136948	.38625	136962	.24892	20
103	136886	.32389	136944	.44943	136960	.22668	
	136886	.36638	136948	.38715	136962	.24646	20
104	114794	.42769	114809	.31517	114884	.25713	
	114802	.66146	114846	.19358	114869	.14496	35
105	114794	.42708	114809	.32172	114884	.25120	
	114802	.66763	114846	.19425	114869	.13812	35

#### 4. List of collaborators

Name	Exposures	Measurements	Reductions
G. Červák	79	79	—
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P. Rychtarčík	25	26	—
J. Svoreň	1	—	—

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