SUPPLEMENT

Comet astrometry made at the Skalnaté Pleso Observatory in the year 1991

J. Svoreň

Astronomical Institute of the Slovak Academy of Sciences
059 60 Tatranská Lomnica, The Slovak Republic

Received: February 21, 1999

Abstract. The paper presents the results of position photographing of comets carried out at the Skalnaté Pleso Observatory in the year 1991. A total of 116 observations of 11 comets are given.

Key words: comets – astrometry

1. Introduction

The presented paper is a continuation of the previous papers which gave the results of positional observations of comets made at the Skalnaté Pleso Observatory (the last paper of this series: Svoreň; 1998) and contains positional comet observations made in the year 1991.

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 comets (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 Svoreň (1998).

A total of 116 accurate positions of 11 comets, arranged according to the new system designation of the comets, are given. The list of collaborators is given, together with their share in photographing, measuring and reducing the positions.

2. Positions of comets

The data have been arranged according to individual comets. The individual columns of the table contain the following:
N - ordinal number of observation,

Contrib. Astron. Obs. Skalnaté Pleso **29**, (1999), 47 – 58.

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 °,′, ″),
T - the exposure time in minutes,
A - the difference between independent determinations of R.A. in arc seconds,
B - the difference between independent determinations of Decl. in arc seconds.

Notes: N. 15 and 16 – bad seeing, N. 30 – time uncertain, N. 65 and 76 – poor guiding, N. 67 – dark plate.

N	Date U.T.		$R.A._{.2000}$	$Decl._{.2000}$	T	A	B
			Comet C/1990 K1 (Levy)				
1	1991 Mar.	04.87778	9 06 25.43	-6 16 18.4	20	0.6	0.1
2	1991 Mar.	04.89861	9 06 22.00	-6 15 21.9	20	0.3	0.6
3	1991 Mar.	13.82431	8 46 17.19	-0 11 12.0	22	0.4	0.7
4	1991 Mar.	13.85081	8 46 14.12	-0 10 12.1	22	0.4	0.5
5	1991 Mar.	14.81528	8 44 29.36	+0 24 07.0	14	0.1	0.8
6	1991 Mar.	14.85000	8 44 25.64	+0 25 18.6	14	0.4	0.9
7	1991 Mar.	15.81250	8 42 45.49	+0 58 38.6	16	0.6	0.7
8	1991 Mar.	15.83056	8 42 43.57	+0 59 18.6	16	0.1	1.2
9	1991 Mar.	17.83125	8 39 29.54	+2 05 31.1	18	0.1	0.7
10	1991 Mar.	17.86389	8 39 26.44	+2 06 32.2	18	0.7	0.3
			Periodic comet 59P/Kearns-Kwee				
11	1991 Jan.	14.72118	6 52 47.74	+30 33 39.3	25	1.0	0.8
12	1991 Jan.	14.78935	6 52 44.75	+30 33 18.1	25	0.2	1.0
13	1991 Jan.	15.70451	6 52 06.07	+30 28 23.6	22	0.9	1.0
14	1991 Jan.	15.78194	6 52 02.88	+30 27 58.7	20	1.0	1.0
15	1991 Jan.	16.82708	6 51 19.88	+30 22 18.4	30	0.8	0.2
16	1991 Jan.	16.92778	6 51 15.39	+30 21 43.3	30	0.4	1.0
17	1991 Jan.	17.93681	6 50 35.17	+30 16 05.5	28	0.9	0.4
18	1991 Jan.	17.98264	6 50 33.37	+30 15 51.5	28	0.5	0.5
19	1991 Jan.	19.83889	6 49 23.40	+30 05 19.5	30	0.9	0.6
20	1991 Jan.	19.89097	6 49 21.36	+30 04 59.5	30	0.8	0.1
21	1991 Jan.	20.96181	6 48 42.81	+29 58 44.9	30	0.7	1.0
22	1991 Jan.	21.03889	6 48 40.48	+29 58 20.1	30	0.1	0.4
			Comet C/1991 A2 (Arai)				
23	1991 Jan.	08.90556	8 49 24.81	+19 09 45.6	40	1.0	1.2
24	1991 Jan.	08.94722	8 49 17.96	+19 15 15.8	40	1.2	1.1
25	1991 Jan.	14.81806	8 32 10.72	+32 06 29.8	25	0.2	0.8
26	1991 Jan.	14.83756	8 32 06.54	+32 08 58.6	25	0.6	0.6

N	Date U.T.	$R.A._{2000}$	$Decl._{2000}$	T	A	B
		Periodic comet 81P/Wild 2				
27	1991 Jan.	20.15347	15 24 15.90	−15 51 12.0	40	0.6	0.6
28	1991 Jan.	20.18333	15 24 20.31	−15 51 25.3	40	0.6	0.7
29	1991 Jan.	21.14236	15 26 52.39	−15 59 19.5	40	0.9	0.5
30	1991 Jan.	21.17014	15 26 56.91	−15 59 33.8	30	0.2	0.1
31	1991 Jan.	22.15625	15 29 30.85	−16 07 17.3	30	0.4	0.1
32	1991 Jan.	22.17986	15 29 34.80	−16 07 30.3	30	0.6	0.3
33	1991 June	13.00000	17 22 57.93	−18 23 49.8	40	0.1	0.1
34	1991 June	14.99097	17 21 00.75	−18 25 19.3	40	0.4	0.6
35	1991 June	15.90069	17 20 07.69	−18 26 01.6	40	0.7	0.9
36	1991 June	15.96944	17 20 03.69	−18 26 06.8	40	0.1	0.4
		Periodic comet 97P/Metcalf-Brewington				
37	1991 Feb.	02.73056	1 20 33.86	−0 37 46.6	24	0.1	0.8
38	1991 Feb.	02.75556	1 20 38.02	−0 37 29.0	24	0.4	0.5
39	1991 Feb.	03.73542	1 23 18.47	−0 24 51.5	16	0.2	0.1
40	1991 Feb.	03.75278	1 23 21.39	−0 24 37.8	28	0.4	1.0
		Periodic comet P/1991 L3 Levy				
41	1991 July	19.01840	4 34 13.99	+33 19 43.7	15	0.2	0.7
42	1991 July	19.03299	4 34 18.29	+33 20 04.0	15	0.2	1.0
43	1991 Aug.	08.00625	6 09 08.71	+36 43 07.9	18	0.2	0.5
44	1991 Aug.	08.02153	6 09 12.66	+36 43 11.2	18	0.4	0.1
45	1991 Sep.	11.09479	8 08 16.55	+34 38 10.1	15	0.3	0.3
46	1991 Oct.	07.98889	9 05 17.34	+31 29 11.5	28	0.6	0.1
47	1991 Oct.	08.03056	9 05 21.66	+31 28 52.5	28	0.3	0.2
48	1991 Oct.	17.02569	9 18 31.00	+30 36 38.3	40	0.1	1.2
49	1991 Oct.	17.06597	9 18 34.95	+30 36 18.6	40	0.2	0.7
		Periodic comet 103P/Hartley 2				
50	1991 Aug.	07.95556	3 52 03.23	+30 12 21.0	28	0.3	0.3
51	1991 Aug.	07.98264	3 52 14.57	+30 12 31.5	28	0.9	1.1
52	1991 Aug.	10.94028	4 12 05.93	+30 25 24.1	20	0.1	0.4
53	1991 Aug.	10.98611	4 12 24.51	+30 25 35.7	10	0.2	0.2
54	1991 Sep.	11.06262	7 16 49.62	+23 18 28.0	5	0.5	0.1
55	1991 Sep.	11.08455	7 16 55.68	+23 17 57.5	5	0.5	0.6
56	1991 Oct.	08.05347	9 00 21.43	+12 19 10.0	18	0.4	0.1
57	1991 Oct.	08.11875	9 00 33.14	+12 17 38.8	10	0.6	0.7
		Periodic comet 46P/Wirtanen				
58	1991 Oct.	05.10139	9 31 30.55	+16 43 00.1	30	0.1	0.3
59	1991 Oct.	05.12361	9 31 35.90	+16 42 46.5	30	0.8	0.6
60	1991 Oct.	08.10417	9 43 27.62	+16 16 25.2	24	1.2	1.0

N	Date U.T.		$R.A._{2000}$	$Decl._{2000}$	T	A	B
			Periodic comet 46P/Wirtanen - cont.				
61	1991 Oct.	08.13333	9 43 34.02	+16 16 09.4	24	1.3	0.3
62	1991 Oct.	17.10208	10 17 31.54	+14 48 17.1	26	0.4	0.8
63	1991 Oct.	17.14583	10 17 41.16	+14 47 51.4	26	0.6	0.7
			Periodic comet P/1991 V1 Shoemaker-Levy 6				
64	1991 Nov.	27.71181	0 59 59.93	+24 54 18.8	30	0.3	0.6
65	1991 Nov.	27.79792	1 00 11.97	+24 58 38.6	30	0.9	0.4
66	1991 Nov.	28.86389	1 02 43.69	+25 47 16.5	30	0.2	1.2
67	1991 Nov.	28.90278	1 02 48.00	+25 48 58.8	30	1.0	0.6
68	1991 Nov.	29.78264	1 04 55.93	+26 27 59.1	30	0.5	1.0
69	1991 Nov.	29.82292	1 05 01.84	+26 29 34.7	30	0.1	0.4
70	1991 Dec.	03.74514	1 14 23.70	+29 03 15.9	30	1.0	0.1
71	1991 Dec.	03.77431	1 14 28.58	+29 04 24.2	30	0.7	0.4
			Periodic comet 4P/Faye				
72	1991 Aug.	06.93542	0 51 53.17	+13 35 47.1	40	1.2	0.7
73	1991 Aug.	06.96528	0 51 55.45	+13 35 58.9	40	0.8	0.2
74	1991 Aug.	10.89630	0 57 07.79	+13 58 16.3	45	0.7	0.3
75	1991 Aug.	10.96493	0 57 12.50	+13 58 35.5	40	0.2	1.0
76	1991 Aug.	16.86771	1 04 42.57	+14 26 03.2	40	0.1	0.4
77	1991 Sep.	03.86944	1 24 46.59	+14 55 39.2	28	0.4	0.4
78	1991 Sep.	03.90972	1 24 48.92	+14 55 38.6	28	0.3	0.1
79	1991 Sep.	04.86181	1 25 43.81	+14 54 25.2	28	0.4	0.1
80	1991 Sep.	04.90417	1 25 46.04	+14 54 23.9	28	0.5	0.4
81	1991 Sep.	08.85417	1 29 21.85	+14 46 07.3	28	0.3	0.4
82	1991 Sep.	08.87535	1 29 22.89	+14 46 04.8	28	1.0	0.3
83	1991 Oct.	01.84028	1 43 46.03	+12 03 11.2	20	0.4	0.4
84	1991 Oct.	01.88125	1 43 46.85	+12 02 44.1	20	0.4	0.3
85	1991 Oct.	03.85417	1 44 29.57	+11 39 40.0	10	0.5	0.3
86	1991 Oct.	03.89583	1 44 30.40	+11 39 10.2	10	0.1	0.1
87	1991 Oct.	04.76319	1 44 47.95	+11 28 37.2	10	0.6	0.6
88	1991 Oct.	04.79028	1 44 48.37	+11 28 16.8	10	1.0	0.6
89	1991 Oct.	06.98194	1 45 27.82	+11 00 38.8	10	0.9	0.3
90	1991 Oct.	07.00347	1 45 28.14	+11 00 21.8	10	1.3	0.6
91	1991 Oct.	07.78333	1 45 41.81	+10 50 08.1	8	0.8	0.1
92	1991 Oct.	07.87083	1 45 43.07	+10 48 59.7	8	0.4	1.2
93	1991 Oct.	16.99722	1 47 37.98	+8 39 52.5	6	1.0	1.2
94	1991 Oct.	17.04514	1 47 38.35	+8 39 08.6	6	0.8	0.9
95	1991 Oct.	29.76192	1 49 38.49	+5 30 07.3	6	0.7	1.0
96	1991 Oct.	29.77778	1 49 38.63	+5 29 53.4	6	0.9	0.9
97	1991 Oct.	31.84514	1 50 01.56	+5 00 48.1	10	0.6	0.1
98	1991 Oct.	31.90278	1 50 02.02	+5 00 00.0	10	0.8	0.7
99	1991 Nov.	01.80903	1 50 13.29	+4 47 35.4	10	0.5	0.6

N	Date U.T.		$R.A._{2000}$	$Decl._{2000}$	T	A	B
			Periodic comet 4P/Faye – cont.				
100	1991 Nov.	01.86042	1 50 13.81	+4 46 54.4	10	0.4	1.3
101	1991 Nov.	03.74236	1 50 38.85	+4 21 48.2	10	0.4	0.5
102	1991 Nov.	03.78125	1 50 39.41	+4 21 18.1	10	0.1	0.2
103	1991 Nov.	29.73333	2 03 50.60	+0 54 06.0	20	0.1	0.3
104	1991 Nov.	29.80278	2 03 54.02	+0 53 58.6	20	0.1	1.0
105	1991 Dec.	01.69722	2 05 31.91	+0 50 23.7	16	0.4	0.1
106	1991 Dec.	01.80972	2 05 37.55	+0 50 11.6	16	0.8	0.5
107	1991 Dec.	02.71181	2 06 26.40	+0 49 03.1	14	0.5	0.3
108	1991 Dec.	02.75208	2 06 28.55	+0 49 02.5	14	0.1	0.1
109	1991 Dec.	03.72500	2 07 22.64	+0 48 13.7	14	0.4	1.2
110	1991 Dec.	03.79236	2 07 26.17	+0 48 10.3	14	0.2	1.0
111	1991 Dec.	08.71111	2 12 22.44	+0 50 05.5	15	1.1	0.1
112	1991 Dec.	08.74977	2 12 24.74	+0 50 07.9	15	0.8	0.6
113	1991 Dec.	12.89167	2 17 02.53	+0 58 53.3	16	0.4	0.1
114	1991 Dec.	12.93125	2 17 05.31	+0 59 01.0	16	0.5	0.2
			Comet P/1991 B1 (Shoemaker-Levy)				
115	1991 Dec.	03.05486	14 59 39.92	+37 13 31.2	30	0.5	1.0
116	1991 Dec.	03.08056	14 59 45.29	+37 13 41.7	30	0.1	0.6

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

N	Numbers of stars and dependences					
1	136535	.41952	136583	.26665	136637	.31383
	136516	.32505	136587	.46780	136660	.20715
2	136535	.43435	136583	.25454	136637	.31111
	136516	.32285	136587	.48205	136660	.19510
3	136215	.34937	117078	.27726	117184	.37337
	136186	.26287	117111	.34703	136299	.39010
4	136215	.34237	117078	.29341	117184	.36422
	136186	.26576	117111	.35986	136299	.37438
5	116999	.30150	117103	.15049	136270	.54801
	117033	.29248	136186	.38174	117179	.32578

SUPPLEMENT

N	Numbers of stars and dependences					
6	116999	.30972	117103	.15424	136270	.53604
	117033	.30558	136186	.37615	117179	.31827
7	116999	.53080	117103	.26531	136270	.20389
	117033	.66779	136186	.21491	117179	.11730
8	116999	.53506	117103	.26770	136270	.19724
	117033	.67492	136186	.21160	117179	.11348
9	116941	.35276	117012	.33771	117033	.30953
	116978	.36972	116987	.43860	117064	.19168
10	116941	.35976	117012	.34869	117033	.29155
	116978	.39499	116987	.42067	117064	.18434
11	59487	.22505	59591	.42740	78854	.34755
	59539	.36182	78797	.35461	59638	.28357
12	59487	.23290	59591	.41798	78854	.34912
	59539	.36081	78797	.36391	59638	.27528
13	59487	.33651	59591	.29096	78854	.37253
	59539	.28330	78797	.50092	59617	.21578
14	59487	.34508	59591	.28033	78854	.37459
	59539	.28491	78797	.51048	59617	.20461
15	59437	.14728	78757	.34448	59610	.50824
	59430	.06146	78757	.43972	59606	.49882
16	59437	.15197	78757	.34787	59610	.50016
	59430	.06724	78757	.44189	59606	.49087
17	59437	.19102	78757	.38301	59610	.42597
	59430	.11664	78757	.46452	59606	.41884
18	59437	.19278	78757	.38442	59610	.42280
	59430	.11907	78757	.46529	59606	.41564
19	59437	.25622	78757	.45289	59610	.29089
	59430	.20081	78757	.51178	59606	.28741
20	59437	.25794	78757	.45509	59610	.28697
	59430	.20304	78757	.51342	59606	.28354
21	59459	.20227	78730	.25737	59541	.54036
	78701	.21331	59487	.33681	78797	.44988
22	59437	.29172	78757	.50027	59610	.20801
	59430	.24813	78757	.54529	59606	.20658
23	98114	.41948	98135	.21061	98198	.36991
	98094	.36850	80458	.19270	98182	.43880
24	98114	.33783	98135	.34089	98198	.32128
	98094	.37710	80458	.25746	98182	.36544
25	60828	.12078	60886	.56534	60894	.31388
	60821	.33795	60905	.33998	60911	.32207

N	Numbers of stars and dependences					
26	60828	.12907	60886	.60455	60894	.26638
	60821	.35015	60905	.31781	60911	.33204
27	159186	.38830	159217	.24546	159285	.36624
	159199	.31872	159226	.41069	159276	.27059
28	159176	.35200	159259	.10205	159265	.54595
	159188	.27320	159218	.42937	159284	.29743
29	159235	.55623	159297	.20710	159301	.23667
	159220	.44103	159289	.23980	159293	.31917
30	159235	.54334	159297	.20949	159301	.24717
	159220	.42848	159289	.24176	159293	.32976
31	159247	.19441	159256	.37693	159354	.42866
	159235	.26814	159293	.29530	159331	.43656
32	159265	.26585	159300	.55696	159315	.17719
	159268	.27007	159277	.35473	159338	.37520
33	160465	.36173	160494	.33347	160558	.30480
	160454	.43144	160461	.21781	160576	.35075
34	160429	.24795	160461	.36814	160520	.38391
	160432	.30195	160465	.37827	160533	.31978
35	160429	.35171	160461	.40925	160520	.23904
	160432	.37442	160465	.43958	160533	.18600
36	160429	.35921	160461	.41275	160520	.22804
	160432	.37949	160465	.44484	160533	.17567
37	129194	.31842	129258	.39727	109876	.28431
	109794	.38737	129253	.47696	109848	.13567
38	129194	.31235	129258	.39531	109876	.29234
	109794	.37456	129253	.47479	109848	.15065
39	129247	.44363	129278	.40327	109876	.15310
	129237	.33322	109878	.30430	129298	.36248
40	129227	.38048	109830	.26370	129318	.35582
	129245	.38607	109860	.48697	129309	.12696
41	57273	.33157	57328	.31860	57332	.34983
	57298	.52468	57316	.33909	57357	.13623
42	57273	.31833	57328	.31949	57332	.36218
	57273	.45068	57316	.20454	57357	.34478
43	58721	.45367	58807	.25873	58881	.28760
	58744	.44040	58758	.21615	58869	.34345
44	58721	.44646	58807	.25872	58881	.29482
	58744	.43258	58758	.21495	58869	.35247
45	60552	.22431	60596	.45427	60599	.32142
	60569	.55258	60592	.16249	60622	.28493

SUPPLEMENT

N	Numbers of stars and dependences					
46	61217	.34349	61244	.13103	61270	.52548
	61198	.29975	61256	.53231	61297	.16794
47	61217	.32951	61244	.12351	61270	.54698
	61198	.29020	61256	.53663	61297	.17317
48	61359	.39410	61393	.39686	61459	.20904
	61347	.24541	61382	.42810	61434	.32649
49	61359	.38248	61393	.40444	61459	.21308
	61347	.24151	61382	.42229	61434	.33620
50	56742	.29887	76263	.46744	56816	.23369
	56718	.25342	76289	.47743	56804	.26915
51	56742	.26305	76263	.46416	56816	.27279
	56718	.21843	76289	.48361	56804	.29796
52	57038	.55701	76508	.18053	57103	.26246
	57008	.39703	76503	.28959	57109	.31338
53	57038	.48889	76508	.18620	57103	.32491
	57008	.36654	76503	.25974	57109	.37372
54	79196	.34762	79229	.39756	79302	.25482
	79214	.29115	79218	.38249	79284	.32636
55	79196	.32740	79229	.40261	79302	.26999
	79214	.26156	79218	.38628	79284	.35216
56	98273	.31981	98280	.48754	98336	.19265
	98244	.40012	98286	.30046	98341	.29942
57	98273	.28549	98280	.48650	98336	.22801
	98244	.37897	98286	.29370	98341	.32733
58	98598	.17750	98601	.59264	98684	.22986
	98585	.32530	98625	.44682	98666	.22788
59	98598	.16016	98601	.60059	98684	.23925
	98585	.31495	98625	.44638	98666	.23867
60	98693	.23363	98713	.34972	98766	.41665
	98688	.41646	98748	.28963	98774	.29391
61	98717	.37243	98722	.24992	98753	.37765
	98702	.20956	98728	.43451	98749	.35593
	98693	.22309	98713	.34615	98766	.43076
	98688	.40450	98748	.29220	98774	.30330
62	99029	.20688	99030	.38884	99066	.40428
	98997	.31300	99067	.48422	99072	.20278
63	99029	.20040	99030	.35393	99066	.44567
	98997	.29280	99067	.50092	99072	.20628
64	74394	.37541	74423	.28937	74441	.33522
	74404	.45427	74408	.31454	74475	.23119

N	Numbers of stars and dependences					
65	74394	.29177	74423	.38489	74441	.32334
	74404	.35883	74408	.38116	74475	.26001
66	74429	.39209	74444	.30627	74477	.30164
	74418	.30628	74465	.21094	74468	.48278
67	74429	.38675	74444	.28606	74477	.32719
	74418	.28952	74465	.24392	74468	.46656
68	74465	.39084	74477	.40362	74488	.20554
	74453	.10893	74457	.62887	74514	.26220
69	74465	.36646	74477	.36019	74488	.27335
	74453	.13648	74457	.58172	74514	.28180
70	74545	.22641	74580	.55881	74616	.21478
	74551	.52507	74581	.19675	74625	.27818
71	74545	.22938	74580	.53216	74616	.23846
	74551	.49855	74581	.21619	74625	.28526
72	92098	.19707	92122	.53098	92149	.27195
	92104	.31746	92127	.58222	92158	.10032
73	92098	.18933	92122	.53341	92149	.27726
	92104	.31658	92127	.57351	92158	.10991
74	92158	.60741	92168	.24636	92213	.14623
	92132	.24780	92164	.27721	92192	.47499
75	92158	.59658	92168	.24459	92213	.15883
	92132	.23636	92164	.27707	92192	.48657
76	92218	.30884	92236	.50946	92241	.18170
	92214	.22327	92232	.23790	92236	.53883
77	92397	.42831	92433	.37978	92452	.19191
	92396	.36512	92420	.43744	92472	.19744
78	92397	.42227	92433	.37900	92452	.19873
	92396	.36093	92420	.43708	92472	.20199
79	92397	.28428	92433	.34977	92452	.36595
	92396	.25581	92420	.43772	92472	.30647
80	92397	.27843	92433	.34894	92452	.37263
	92396	.25174	92420	.43752	92472	.31074
81	92418	.14001	92455	.45433	92487	.40566
	92418	.20799	92464	.41878	92486	.37323
82	92418	.13749	92455	.45522	92487	.40729
	92418	.20567	92464	.41889	92486	.37544
83	92584	.24554	92602	.39256	92609	.36190
	92586	.27785	92592	.42982	92620	.29233
84	92584	.23633	92602	.40872	92609	.35495
	92586	.28153	92592	.42104	92620	.29743

SUPPLEMENT

N	Numbers of stars and dependences					
85	92584	.32672	92612	.30545	92620	.36783
	92586	.34098	92609	.37607	92625	.28295
86	92584	.32079	92612	.31396	92620	.36525
	92586	.34064	92609	.37079	92625	.28857
87	92584	.19646	92612	.49516	92620	.30838
	92586	.33178	92609	.25958	92625	.40864
88	92584	.19299	92612	.50099	92620	.30602
	92586	.33217	92609	.25580	92625	.41203
89	92586	.45960	110090	.20364	92659	.33676
	110082	.34969	92620	.44924	110140	.20107
90	92602	.42776	110101	.36093	92656	.21131
	92590	.50186	92633	.22626	110139	.27188
	92586	.45568	110090	.20774	92659	.33658
	110082	.34984	92620	.44649	110140	.20367
91	92586	.31083	110090	.35329	92659	.33588
	110082	.34924	92620	.34895	110140	.30181
92	92586	.29518	110090	.36950	92659	.33532
	110082	.34996	92620	.33797	110140	.31207
93	110101	.38241	110142	.38341	110171	.23418
	110107	.50675	110158	.28977	110163	.20348
94	110101	.37840	110142	.39156	110171	.23004
	110107	.50619	110158	.28444	110163	.20937
95	110120	.30183	110129	.22080	110191	.47737
	110118	.37399	110173	.54788	110188	.07813
96	110120	.29879	110129	.22396	110191	.47725
	110118	.37314	110173	.55094	110188	.07592
97	110129	.37741	110172	.37293	110179	.24966
	110131	.34172	110166	.35595	110178	.30233
98	110129	.37598	110172	.36545	110179	.25857
	110131	.34106	110166	.34911	110178	.30983
99	110129	.33733	110172	.25564	110179	.40703
	110131	.31179	110166	.24883	110178	.43938
100	110129	.33560	110172	.24941	110179	.41499
	110131	.31057	110166	.24322	110178	.44621
101	110133	.32953	110173	.37040	110187	.30007
	110141	.36432	110151	.30637	110210	.32931
102	110133	.32893	110173	.36356	110187	.30751
	110141	.36714	110151	.30081	110210	.33205
103	110285	.33366	110310	.37926	110344	.28708
	110277	.25758	110313	.48675	110350	.25567

N	Numbers of stars and dependences					
104	110285	.32256	110310	.37927	110344	.29817
	110277	.24950	110313	.48508	110350	.26542
105	110310	.40896	110319	.29350	110376	.29754
	110305	.38645	129681	.42752	110391	.18603
106	110310	.40165	110319	.28491	110376	.31344
	110305	.37152	129681	.43231	110391	.19617
107	110310	.33026	110319	.21942	110376	.45032
	110305	.24660	129681	.46735	110391	.28605
108	110310	.32666	110319	.21709	110376	.45625
	110305	.24144	129681	.46839	110391	.29017
109	110344	.38540	110350	.36473	110364	.24987
	110333	.42067	129702	.27839	110375	.30094
110	110344	.36105	110350	.35706	110364	.28189
	110333	.39883	129702	.28896	110375	.31221
111	110364	.12899	129742	.51318	110424	.35783
	110380	.40016	110391	.21304	110428	.38680
112	110364	.12058	129742	.51710	110424	.36232
	110380	.39309	110391	.21220	110428	.39471
113	110428	.27099	110451	.46269	110467	.26632
	110432	.54096	110434	.17160	110482	.28744
114	110428	.25487	110451	.46977	110467	.27536
	110432	.53863	110434	.16404	110482	.29733
115	64410	.31238	64452	.46695	64491	.22067
	64406	.36795	64433	.20950	64483	.42255
116	64410	.30176	64452	.46746	64491	.23078
	64406	.34380	64433	.22976	64483	.42644

4. List of collaborators

Name	Exposures	Measurements	Reductions
J. Borošová	3	–	–
G. Červák	89	81	–
P. Rychtarčík	24	23	–
J. Svoreň	–	12	116

Acknowledgements. This work was supported, in part, by the Slovak Grant Agency for Science (grant No. 2/5100/99).

References

Smithsonian Astrophysical Observatory Star Catalog. Parts 1-3, Washington, Smithsonian Institution, 1966

Svoreň, J.: 1998, *Contrib. Astron. Obs. Skalnaté Pleso* **28**, 73

Yeomans, D.K.: 1990, *Conversion to FK5/J2000.0*, IAU Commission 20, The letter dated 5 December 1990

SUPPLEMENT