

Astrometry of minor planets made at the Skalnaté Pleso Observatory in the year 1982

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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 1982. 52 observations of 12 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 our previous papers which gave the results of positional observations of minor planets obtained at the Skalnaté Pleso Observatory (the last paper of this series: Svoreň, Pittich; 1994) and contains the observations made in the year 1982. The reference stars were selected from the Smithsonian Astrophysical Observatory Star Catalog(1966). The reduction constants as well as methods of observation and processing and all the other necessary data are not repeated here. They are given in the paper on astrometry of comets in this volume (Svoreň; 1995).

A total of 52 accurate positions of 12 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.₁₉₅₀ - right ascension for equinox 1950.0 (in h,m,s),

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*Decl.*₁₉₅₀ - declination for equinox 1950.0 (in °, ', ''),

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

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

Note:

N. 9 - near edge of plate

N	MP	Date U.T.		<i>R.A.</i> ₁₉₅₀	<i>Decl.</i> ₁₉₅₀	A	B
1	1	1982 Jan.	21.14028	15 01 23.83	- 8 10 15.1	1.1	0.6
2	1	1982 Jan.	21.15972	15 01 25.24	- 8 10 19.5	1.4	0.9
3	1	1982 Jan.	22.17986	15 02 38.86	- 8 14 33.6	1.7	0.7
4	1	1982 Feb.	22.04688	15 32 45.06	- 9 38 23.1	0.9	0.4
5	1	1982 Feb.	22.06215	15 32 45.75	- 9 38 23.5	0.1	0.1
6	1	1982 May	14.98056	15 11 58.67	- 9 01 44.8	0.3	0.2
7	1	1982 May	15.00694	15 11 57.14	- 9 01 44.1	0.1	0.2
8	2	1982 Feb.	21.98368	13 30 42.86	+ 1 05 27.3	0.9	0.2
9	2	1982 Feb.	22.00868	13 30 42.89	+ 1 05 55.1	0.1	1.4
10	2	1982 Mar.	31.98369	13 15 45.34	+14 24 58.7	0.4	0.7
11	2	1982 Apr.	1.05278	13 15 42.22	+14 26 20.8	0.1	0.4
12	4	1982 Dec.	5.72222	22 04 15.95	-18 38 27.2	0.3	0.1
13	4	1982 Dec.	12.68299	22 14 17.32	-17 36 06.0	0.2	0.6
14	4	1982 Dec.	12.71470	22 14 20.01	-17 35 49.7	0.5	1.0
15	4	1982 Dec.	14.68021	22 17 13.56	-17 17 39.8	0.6	0.6
16	4	1982 Dec.	14.70486	22 17 15.76	-17 17 26.1	0.2	0.4
17	7	1982 Jan.	21.00139	12 25 09.94	-10 10 24.5	0.6	0.2
18	7	1982 Jan.	21.03056	12 25 10.27	-10 10 31.6	0.8	0.2
19	7	1982 Feb.	24.93993	12 15 54.73	-10 37 32.9	0.7	0.1
20	7	1982 Feb.	24.96076	12 15 53.92	-10 37 29.5	0.4	0.4
21	11	1982 Sep.	13.98542	5 32 29.95	+18 46 56.8	0.6	0.1
22	11	1982 Sep.	14.01250	5 32 31.58	+18 46 56.8	0.6	0.3
23	11	1982 Sep.	16.06840	5 34 40.04	+18 46 23.0	0.2	0.3
24	11	1982 Sep.	16.11076	5 34 42.61	+18 46 22.0	0.2	0.2
25	25	1982 Jan.	20.86181	7 13 34.82	-8 53 39.0	0.2	0.2
26	25	1982 Jan.	20.88403	7 13 33.55	-8 53 35.1	0.2	0.4
27	25	1982 Jan.	23.79757	7 10 53.13	-8 43 33.4	0.1	0.6
28	25	1982 Jan.	23.84340	7 10 50.58	-8 43 23.1	0.6	0.6
29	39	1982 May	30.98958	20 46 50.12	-7 58 39.3	0.9	0.9
30	39	1982 May	31.01875	20 46 50.51	-7 58 35.2	0.3	1.0
31	39	1982 Sep.	15.80660	20 01 45.51	-15 34 18.3	0.8	0.6
32	39	1982 Sep.	15.86076	20 01 45.73	-15 34 34.7	0.8	0.4
33	39	1982 Sep.	18.83854	20 02 08.57	-15 49 13.5	0.3	0.8
34	40	1982 Jan.	21.93333	10 57 57.42	+12 14 33.7	0.1	0.6
35	40	1982 Jan.	21.95278	10 57 57.04	+12 14 39.8	0.3	0.6

N	MP	Date U.T.	<i>R.A.</i> ₁₉₅₀	<i>Decl.</i> ₁₉₅₀	A	B
36	40	1982 Apr.	2.05764	10 04 38.95	+18 20 08.5	0.2 0.1
37	40	1982 Apr.	16.85000	10 03 16.56	+18 02 08.5	0.3 0.4
38	40	1982 Apr.	16.89028	10 03 16.74	+18 02 03.5	0.3 0.9
39	389	1982 Jan.	19.72014	5 45 54.37	+24 11 50.4	1.0 0.7
40	389	1982 Jan.	19.77847	5 45 51.96	+24 11 38.7	0.2 0.5
41	389	1982 Jan.	19.91042	5 45 46.46	+24 11 11.7	1.1 0.2
42	532	1982 Jan.	21.86250	8 54 48.24	+26 27 29.6	0.4 0.7
43	532	1982 Jan.	21.92083	8 54 45.14	+26 28 10.7	1.2 0.1
44	532	1982 Feb.	24.79410	8 25 55.26	+31 38 25.1	0.5 0.8
45	532	1982 Feb.	24.81493	8 25 54.44	+31 38 32.1	0.6 0.1
46	582	1982 Jan.	20.95069	10 20 37.77	-4 06 30.2	0.7 0.4
47	582	1982 Jan.	20.98681	10 20 37.13	-4 05 57.3	0.6 0.4
48	582	1982 Jan.	24.02708	10 19 36.96	-3 17 25.8	0.1 0.7
49	582	1982 Jan.	24.04931	10 19 36.44	-3 17 02.4	0.1 0.8
50	704	1982 Jan.	20.93542	10 03 07.25	-5 39 21.5	0.7 0.8
51	704	1982 Jan.	24.01389	10 01 04.44	-5 46 17.6	0.2 1.0
52	704	1982 Jan.	24.03958	10 01 03.38	-5 46 20.7	0.6 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 (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	140277	.35098	140301	.41130	140327	.23772	
	140280	.45479	140305	.32922	140331	.21599	8
2	140277	.34651	140301	.41149	140327	.24200	
	140280	.44900	140305	.33168	140331	.21932	8
3	140277	.11540	140301	.41418	140327	.47042	
	140280	.15609	140305	.44369	140331	.40022	10
4	159308	.34082	140606	.19091	140681	.46827	
	159325	.36050	140595	.11654	140666	.52296	7
5	159308	.34054	140606	.18924	140681	.47022	
	159325	.35993	140595	.11510	140666	.52497	7
6	140350	.39650	140432	.23954	140442	.36396	
	140373	.39432	140382	.27522	140456	.33046	10

N	Numbers of stars and dependences						T
7	140350	.39961	140432	.23770	140442	.36269	
	140373	.39690	140382	.27616	140456	.32694	
8	119979	.19615	119995	.57018	120003	.23367	
	119959	.49970	120006	.26242	120055	.23788	
9	119979	.19120	119995	.58857	120003	.22023	
	119959	.54750	139416	.17824	120055	.27426	
10	100493	.38929	100500	.22578	100513	.38493	
	100485	.41397	100505	.31189	100527	.27414	
11	100493	.42623	100500	.20117	100513	.37260	
	100485	.42945	100505	.30389	100527	.26666	
12	164850	.29261	164856	.34540	164892	.36199	
	164846	.33289	164847	.34638	164917	.32073	
13	164937	.42675	164963	.32799	165037	.24526	
	164937	.17424	164943	.33481	165004	.49095	
14	164937	.42263	164963	.32768	165037	.24969	
	164937	.16832	164943	.33334	165004	.49834	
15	164946	.39781	165002	.25574	165071	.34645	
	164965	.50304	165005	.21369	165075	.28327	
16	164946	.39394	165002	.25699	165071	.34907	
	164965	.49842	165005	.21543	165075	.28615	
17	157262	.09316	138797	.60962	157313	.29722	
	157290	.86971	157296	-.00822	157357	.13851	
18	157262	.09193	138797	.60805	157313	.30002	
	157290	.86803	157296	-.00719	157357	.13916	
19	157139	.16782	138719	.40657	157217	.42561	
	157141	.16568	138712	.27664	157217	.55768	
20	157139	.16940	138719	.40735	157217	.42325	
	157141	.16718	138712	.27747	157217	.55535	
21	94606	.31413	94688	.47859	94738	.20728	
	94646	.22870	94651	.43849	94725	.33281	
22	94606	.31073	94688	.47958	94738	.20969	
	94646	.22750	94651	.43468	94725	.33782	
23	94669	.45551	94723	.28706	94738	.25743	
	94651	.40285	94739	.26233	94741	.33482	
24	94669	.44554	94723	.29238	94738	.26208	
	94651	.39624	94739	.26806	94741	.33570	
25	134384	.35465	134419	.38823	134520	.25712	
	134337	.40039	134437	.26192	134540	.33769	

N	Numbers of stars and dependences						T
26	134384	.35655	134419	.39040	134520	.25305	12
	134337	.40294	134437	.26178	134540	.33528	
27	134252	.33053	134392	.46110	134491	.20837	15
	134277	.39037	134384	.38465	134488	.22498	
28	134252	.17306	134392	.47143	134393	.35551	15
	134277	.27856	134384	.39547	134419	.32597	
29	144806	.31808	144836	.39996	144894	.28196	10
	144777	.31334	144844	.20954	144884	.47712	
30	144806	.31642	144836	.40047	144894	.28311	10
	144777	.31272	144844	.20862	144884	.47866	
31	163209	.42457	163226	.30383	163276	.27160	7
	163200	.30324	163233	.16102	163255	.53574	
32	163209	.41931	163226	.31028	163276	.27041	7
	163200	.30384	163233	.15577	163255	.54039	
33	163209	.31382	163231	.35996	163276	.32622	7
	163200	.40779	163249	.35958	163289	.23263	
34	99356	.30673	99404	.47498	99431	.21829	8
	99366	.38581	99406	.26669	99420	.34750	
35	99356	.30813	99404	.47312	99431	.21875	8
	99366	.38643	99406	.26790	99420	.34567	
36	98937	.14861	98947	.47702	98975	.37437	16
	98950	.26796	98952	.55687	98975	.17517	
37	98904	.27390	98947	.44125	98976	.28485	16
	98890	.30836	98952	.45854	98992	.23310	
38	98927	.23991	98937	.50306	98975	.25703	16
	98927	.32894	98952	.36307	98955	.30799	
39	77508	.26086	77583	.53273	77704	.20641	10
	77390	.27988	77593	.25508	77688	.46504	
40	77558	.29879	77581	.36312	77620	.33809	10
	77524	.30456	77609	.41874	77629	.27670	
41	77508	.26069	77583	.55608	77704	.18323	10
	77390	.29437	77593	.24413	77688	.46150	
42	80510	.40663	80555	.42016	80558	.17321	8
	80517	.51790	80533	.14110	80566	.34100	
43	80510	.41775	80555	.42712	80558	.15512	8
	80517	.43385	80533	.24309	80562	.32306	
44	60798	.30222	60846	.29746	60871	.40032	7
	60806	.29153	60852	.48641	60871	.22206	

N	Numbers of stars and dependences						T
45	60798	.30428	60846	.29774	60871	.39798	
	60806	.29381	60852	.48693	60871	.21926	7
46	137512	.35840	137522	.28275	137553	.35885	
	137513	.30018	137527	.51149	137562	.18833	10
47	137512	.35408	137522	.29320	137553	.35272	
	137513	.30979	137527	.50117	137562	.18904	10
48	137479	.43366	137536	.24243	137562	.32391	
	137491	.46925	137536	.20276	137551	.32799	10
49	137479	.43226	137536	.24976	137562	.31798	
	137491	.46903	137536	.20990	137551	.32107	10
50	137313	.29090	137349	.25542	137357	.45368	
	137323	.27863	137348	.39076	137356	.33061	10
51	137279	.27459	137322	.34294	137349	.38247	
	137276	.31499	137287	.20293	137356	.48208	10
52	137279	.27765	137322	.34285	137349	.37950	
	137276	.31508	137287	.20566	137356	.47926	10

4. List of collaborators

Name	Exposures	Measurements	Reductions
G. Červák	—	12	—
I. Donoval	9	5	—
J. Fabricius	39	22	—
L. Kornoš	—	1	1
E.M. Pittich	—	—	2
P. Rychtarčík	4	11	—
J. Svoreň	—	1	49

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