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Observations of Comets and Asteroids at the Kleť Observatory in the Year 1973

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The routine program of comet observations at the Kleť Observatory is continued. A list of precise observations of the following objects obtained at the Observatory during the year 1973 is presented:

P/Kearns-Kwee (1971c)	Kohoutek (1973e)
Sandage (1972h)	Kohoutek (1973f)
P/Reinmuth (1972i)	Huchra (1973h)
Kojima (1972j)	P/Gehrels (1973n)
P/Schwassmann-Wachmann I	Asteroid 826 Henrika
P/Schwassmann-Wachmann II	Asteroid 897 Lysistrate
Heck-Sause (1973a)	Asteroid 502 Sigune
P/Tuttle-Giacobini-Kresák (1973b)	Asteroid 167 Urda

The positions of comets were obtained by means of the instruments described in [1]. Reference stars were chosen from the Smithsonian Astrophysical Observatory and AGK₃ Star Catalogs.

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Reference

- [1] MRKOS A.: Acta Univ. Carol., Math. et Phys. 11, 29 (1970) = Publ. Astr. Inst. Charles Univ. Prague No. 61 (1970).

Periodic comet KEARNS-KWEE 1971c

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1010	Jan. 1.93038	6 ^h 37 ^m 47 ^s .39	+32°35'42"7	15.6	Mrkos
		1.94462	6 37 46.72		+32 35 39.5
1012	6.82587	6 33 58.09	+32 11 58.4		Mrkos
		6.84010	6 33 57.30		+32 11 50.8
1015	7.84801	6 33 11.98	+32 06 36.5		Mrkos
1017	8.83578	6 32 28.38	+32 01 16.9	15.4	Mrkos
		8.85001	6 32 27.91		+32 01 15.0
1023	26.75326	6 23 06.76	+30 12 05.8		Mrkos
		26.76750	6 23 06.41		+30 11 57.2
1032	Feb. 5.81041	6 21 57.12	+29 06 10.2	16.0	Mrkos

Reference Stars Numbers

1010	SAO	059394	059376	059311	059298	059348	059371	
1012	SAO	059263	059307	059311	059273	AGK 2 +32°670	AGK 2 +31°674	
1015	SAO	059263	059307	059311	059273	AGK 2 +32°670	AGK 2 +31°674	
1017	SAO	059263	059300	059223	059226	AGK 2 +32°676	AGK 2 +32°670	
1023	SAO	059061	059045	059057	078364	059116	AGK 2 +30°683	
1032	SAO	078318	078290	078343	078379	078398	078332	

Comet SANDAGE 1972 h

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1042	March 2.10907	18 ^h 41 ^m 28 ^s .99	+43°01'34"1	14.6	Mrkos
1058		24.96424	19 06 56.27		+49 23 34.4
1066	24.97882	19 06 57.27	+49 23 49.0		Petrovičová
		28.95808	19 10 53.95		+50 31 37.4
944	28.97475	19 10 54.98	+50 31 55.0		Petrovičová
		31.01417	19 12 51.72		+51 06 43.5
1075	Apr. 4.96271	31.02944	+51 06 58.7	14.6	Mrkos
		4.97729	19 17 23.43		+52 30 54.7
1076	4.97729	19 17 24.02	+52 31 08.3		Mrkos
		5.03007	19 17 27.20		+52 32 04.1
	5.04118	19 17 27.67	+52 32 17.0		Petrovičová

Reference Stars Numbers

1042	AGK 3 +43°1563		AGK 3 +42°1620		AGK 3 +42°1614		AGK 3 +43°1555	
	AGK 3 +43°1558		AGK 3 +43°1562					
1058	AGK 3 +49°1490		AGK 3 +49°1488		AGK 3 +49°1494		AGK 3 +49°1498	
	AGK 3 +49°1507		AGK 3 +49°1492					
1066	SAO	031527	031511	031433	031450	031444	031487	
944	SAO	031481	031487	031505	031526	031494		
1075	SAO	031534	031493	031504	031554	031605	031577	
1076	SAO	031534	031493	031504	031554	031605	031577	

Periodic comet REINMUTH 1972 i

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1009	Jan. 1.89392	6 ^h 25 ^m 58 ^s .54	+17°17'13".6	18.0	Mrkos
	1.90816	6 25 57.85	+17 17 17.3		Mrkos
1013	6.86927	6 22 19.04	+17 48 49.7		Mrkos
	6.88715	6 22 18.43	+17 48 56.3		Mrkos
1018	8.88369	6 20 53.63	+18 02 10.7		Mrkos
	8.90175	6 20 53.07	+18 02 16.9	17.6	Mrkos

Reference Stars Numbers

1009	SAO	095702	095706	095750	095741	095762	095673
1013	SAO	095601	095654	095683	095690	095673	095609
1018	SAO	095645	095601	095557	095660	095654	AGK 2 +18°590

Comet KOJIMA 1972 j

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1008	Jan. 1.85955	4 ^h 27 ^m 01 ^s .24	-18°31'42".4	11.0	Mrkos
	1.86233	4 27 00.28	-18 31 35.7		Mrkos
1011	6.80365	4 04 30.83	-16 14 49.7		Mrkos
	6.80642	4 04 30.09	-16 14 46.1		Mrkos
1014	7.79662	4 00 19.17	-15 46 21.6		Mrkos
	7.79940	4 00 18.43	-15 46 16.8		Mrkos
1016	8.80105	3 56 11.47	-15 17 22.8		Mrkos
	8.80348	3 56 10.82	-15 17 20.1		Mrkos
1022	26.72861	3 01 12.36	-6 58 14.2	12.0	Mrkos
	26.73104	3 01 11.97	-6 58 10.1		Mrkos
1027	Feb. 3.78828	2 46 06.83	-3 44 53.8		Mrkos
	3.79123	2 46 06.81	-3 44 46.7		Mrkos
1031	5.73957	2 43 08.86	-3 01 27.4		Mrkos
	5.74304	2 43 08.43	-3 01 24.3		Mrkos
1035	11.77189	2 35 22.34	-0 55 06.8	12.6	Mrkos
1043	March 5.76490	2 19 55.58	+5 24 58.3		Mrkos
	5.76976	2 19 55.24	+5 25 04.5	12.8	Mrkos

Reference Stars Numbers

1008	SAO	149652	149637	149639	149680	149714	149698
1011	SAO	149365	149331	149384	149396	149407	149387
1014	SAO	149364	149331	149318	149309	149298	149336
1016	SAO	149298	149309	149276	149250	149256	149265
1022	SAO	130253	130261	130270	130278	130264	130251
1027	SAO	130117	130129	130154	130156	130145	130114
1031	SAO	130111	130061	130065	130090	130116	130114
1035	SAO	130019	130031	130049	130046	130023	129997
1043	SAO	110480	110486	110500	110519	110506	110507

Periodic comet SCHWASSMANN-WACHMANN I

Plate No.	1973 UT		α 1950.0	δ 1950.0	m_1	Observer
1101	July	5.99446	21 ^h 40 ^m 53 ^s .50	—14°42'10"9	13.6	Mrkos
		6.00869	21 40 53.16	—14 42 13.1		Mrkos
996	Aug.	23.89622	21 19 31.68	—15 34 52.4	17.0	Petrovičová
		23.91080	21 19 31.21	—15 34 53.0		Petrovičová
1124	Sept.	20.80479	21 08 54.46	—15 54 45.6		Mrkos
		20.81920	21 08 54.59	—15 54 36.1		Mrkos
1125		22.87226	21 08 24.34	—15 54 51.7		Mrkos
		22.88771	21 08 24.14	—15 54 53.0	17.8	Mrkos

Reference Stars Numbers

1101	SAO	164591	164634	164622	164613	164578	164569
996	SAO	164350	164358	164341	164331	164345	
1124	SAO	164199	164187	164175	164217	164229	164201
1125	SAO	164199	164187	164175	164217	164229	164201

Periodic comet SCHWASSMANN-WACHMANN II

Plate No.	1973 UT		α 1950.0	δ 1950.0	m_1	Observer
1001	Sept.	28.95961	2 ^h 19 ^m 56 ^s .98	+8°29'06"9	18.0	Mrkos
		28.98096	2 19 56.43	+8 29 03.8		Mrkos

Reference Stars Numbers

1001	AGK 3 + 8°367	AGK 3 + 8°375	AGK 3 + 7°369	AGK 3 + 8°367	AGK 3 + 8°364
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Comet HECK-SAUSE 1973 a

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1028	Feb. 3.86432	11 ^h 51 ^m 21 ^s .78	+26°56'50".3	11.8	Mrkos
		3.86848	+26 56 59.4		Mrkos
1030	5.16287	11 51 21.10	+27 46 46.1		Mrkos
		5.16547	+27 46 51.5		Mrkos
1034	5.91492	11 48 20.75	+27 46 51.5		Petrovičová
		5.91839	+28 15 38.2		Petrovičová
1037	11.87258	11 46 33.81	+28 15 46.6		Mrkos
		11.87536	+32 00 56.8		Mrkos
1039	25.00194	11 31 15.17	+32 01 03.7	12.0	Mrkos
		25.00611	+39 19 32.0		Mrkos
1040	25.02972	10 51 28.48	+39 19 37.2		Petrovičová
		25.03436	+39 20 17.8		Petrovičová
1041	March 2.08269	10 51 22.06	+39 20 26.4		Mrkos
		2.08668	+41 34 31.5		Mrkos
1044	5.78608	10 34 47.43	+41 34 36.7		Mrkos
		5.79094	+42 58 24.9		Mrkos
1048	23.80907	10 22 35.45	+42 58 31.7	12.2	Mrkos
		23.81532	+47 03 28.4		Mrkos
1054	24.85069	9 28 42.56	+47 03 29.6		Mrkos
		24.85660	+47 10 43.7		Mrkos
1059	25.00556	9 26 04.09	+47 10 45.7		Petrovičová
		25.01181	+47 11 44.1		Petrovičová
1060	27.81770	9 25 40.48	+47 11 47.5		Mrkos
		27.82395	+47 28 16.0		Mrkos
1063	28.83725	9 18 53.80	+47 28 16.8		Petrovičová
		28.84350	+47 33 13.5		Petrovičová
1067	30.82181	9 16 33.24	+47 33 15.4		Mrkos
		30.82875	+47 41 43.4		Mrkos
1072	Apr. 4.85056	9 12 10.56	+47 41 44.4		Mrkos
		4.85681	+47 56 16.4		Mrkos
1076	5.00368	9 02 09.28	+47 56 17.8		Mrkos
		5.00993	+47 56 34.6		Mrkos
1081	27.87324	9 01 52.30	+47 56 34.8	13.6	Petrovičová
		27.88227	+47 49 54.4		Petrovičová
1083	29.91610	8 33 58.10	+47 49 53.1		Mrkos
		29.92522	+47 46 26.7		Mrkos
1089	May 1.84108	8 32 38.62	+47 46 28.4		Mrkos
		1.85062	+47 43 07.7		Mrkos
1093	3.88944	8 31 32.93	+47 43 06.7		Mrkos
		3.89830	+47 39 23.0		Mrkos
		8 30 30.63	+47 39 21.1	14.2	Mrkos

Reference Stars Numbers

1028	SAO	082028	082043	082062	082056	082031	AGK 3 +27°1178
1030	SAO	081997	082024	082012	082041	082031	AGK 3 +27°1177
1034	SAO	081989	082024	082025	081996	AGK 3 +27°1177	AGK 3 +27°1173
1037	SAO	062600	062608	062607	062610	062597	AGK 3 +31°1091
1039	AGK 3	+38°1091	AGK 3 +39°1156	AGK 3 +39°1156	AGK 3 +39°1155		AGK 3 +39°1159
		AGK 3 +39°1157	AGK 3 +39°1158				
1040	AGK 3	+38°1091	AGK 3 +39°1156	AGK 3 +39°1156	AGK 3 +39°1155		AGK 3 +39°1159
		AGK 3 +39°1157	AGK 3 +39°1158				
1041	AGK 3	+41°1013	AGK 3 +41°1014	AGK 3 +41°1014	AGK 3 +41°1015		AGK 3 +41°1012
		AGK 3 +41°1010	AGK 3 +41°1011				
1044	AGK 3	+43°966	AGK 3 +43°962	AGK 3 +43°962	AGK 3 +42°1025		AGK 3 +42°1030
		AGK 3 +42°1026	AGK 3 +43°967				
1048	SAO	042894	042896	042919	042925	042880	AGK 3 +46°775
1054	SAO	042894	042845	042862	042904	AGK 3 +46°775	AGK 3 +46°772
1059	SAO	042894	042845	042862	042904	AGK 3 +46°775	AGK 3 +46°772
1060	SAO	042830	042803	042845	AGK 3 +47°812		AGK 3 +48°825
		AGK 3 +47°816					
1063	SAO	042830	042803	042774	AGK 3 +47°812		AGK 3 +48°825
		AGK 3 +47°816					
1067	SAO	042774	042758	042755	AGK 3 +47°809		AGK 3 +47°813
		AGK 3 +47°812					
1072	SAO [†]	042702	042701	042655	042656	AGK 3 +47°792	AGK 3 +48°810
1076	SAO	042702	042701	042655	042656	AGK 3 +47°792	AGK 3 +48°810
1081	SAO	042430	042426	042442	AGK 3 +47°766		AGK 3 +47°768
		AGK 3 +47°771					
1083	SAO	042430	042426	042442	042454	AGK 3 +47°763	AGK 3 +47°768
1089	SAO	042430	042426	042442	042454	AGK 3 +47°766	AGK 3 +47°763
1093	SAO	042414	042426	042442	AGK 3 +47°763		AGK 3 +47°760
		AGK 3 +47°766					

Periodic comet TUTTLE-GIACOBINI-KRESÁK 1973 b

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1102	July 10.89331	13 ^h 02 ^m 25 ^s .78	+13°21'05"1	11.6	Petrovičová
1103	10.91206	13 02 30.63	+13 20 33.9		Petrovičová

Reference Stars Numbers

1102	SAO	100409	100391	100382	100397	100431	100423
1103	SAO	100409	100391	100382	100397	100431	100423

Comet KOHOUTEK 1973 e

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1052	March 23.90906	8 ^h 52 ^m 42 ^s 39	+47°18'17"2	14.7	Mrkos
	23.91670	8 52 39.39	+47 18 37.2		Mrkos
937	27.84634	8 28 40.04	+49 25 27.1		Petrovičová
	27.85381	8 28 38.10	+49 25 36.4		Petrovičová
939	28.86120	8 22 43.25	+49 52 26.3		Mrkos
	28.86850	8 22 40.78	+49 52 38.7		Mrkos
943	30.84681	8 11 27.18	+50 39 18.3		Mrkos
	30.85514	8 11 24.09	+50 39 30.0		Mrkos
1074	Apr. 4.35235	7 45 01.26	+52 08 25.1	15.0	Mrkos
	4.94326	7 44 59.03	+52 08 34.3		Mrkos

Reference Stars Numbers

1052	SAO	042588	042590	042626	042606	AGK 3 +47°789	AGK 3 +47°783
937	SAO	042403	042401	042421	AGK 3 +49°803		
939	SAO	042341	042358	042378	042368	026843	
943	SAO	026743	026734	026740	AGK 3 +50°716		
1074	AGK 3 +51°643 AGK 3 +51°650 AGK 3 +52°674 AGK 3 +52°677 AGK 3 +52°680 AGK 3 +51°655						

Comet KOHOUTEK 1973 f

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1050	March 23.84935	8 ^h 12 ^m 42 ^s 94	+ 5°39'54"7	15.4	Mrkos
	23.86029	8 12 42.60	+5 39 57.8		Mrkos
1053	24.81962	8 12 14.70	+5 44 01.2		Mrkos
	24.83403	8 12 14.21	+5 44 03.8		Mrkos
1071	Apr. 4.81757	8 07 57.65	+6 28 01.4		Mrkos
	4.83354	8 07 57.23	+6 28 06.7		15.2
1085	30.83711	8 05 38.06	+7 49 41.7	14.5	Mrkos
	30.85134	8 05 38.36	+7 49 45.4		Mrklos
1092	May 3.85692	8 06 03.50	+7 56 38.5		Mrkos
	3.87122	8 06 04.10	+7 56 42.1		Mrkos
1129	Oct. 6.15612	10 38 00.73	-1 38 27.4	10.5	Mrkos
	6.16064	10 38 01.00	-1 38 30.4		Petrovičová
1136	25.17147	11 16 55.30	-5 58 29.6	8.8	Mrkos
	25.17407	11 16 55.55	-5 58 31.0		Mrkos
1139	26.17231	11 19 17.87	-6 14 35.0	8.6	Petrovičová
	26.17440	11 19 18.10	-6 14 35.5		Bielicki
1142	28.18152	11 24 11.43	-6 47 42.8		Mrkos
	28.18447	11 24 11.61	-6 47 46.4		Mrkos
1146	29.17579	11 26 40.84	-7 04 37.0	8.5	Mrkos
	29.17787	11 26 41.26	-7 04 38.2		Mrkos

Comet KOHOUTEK 1973f

Contd.

Plato No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1150	Nov. 1.17854	11 ^h 34 ^m 29 ^s .58	-7°57'21" 0	8.2	Mrkos
	1.18062	11 34 29.90	-7 57 21.5		Mrkos
1154	2.17958	11 37 12.25	-8 15 35.4	8.0	Mrkos
	2.18097	11 37 12.44	-8 15 36.3		Mrkos
1158	3.17958	11 39 58.12	-8 34 07.4		Mrkos
	3.18097	11 39 58.35	-8 34 07.8		Mrkos
1162	4.18236	11 42 47.83	-8 53 02.9		Mrkos
	4.18375	11 42 48.08	-8 53 03.6		Mrkos
1164	18.18648	12 30 28.54	-13 58 01.2	6.5	Petrovičová
1165	18.19273	12 30 29.81	-13 58 11.8		Petrovičová
1170	23.20189	12 52 42.80	-16 07 07.6	6.0	Mrkos
	23.20328	12 52 43.19	-16 07 10.1		Mrkos
1173	30.20515	13 30 47.20	-19 22 09.1	5.5	Mrkos
	30.20637	13 30 47.62	-19 22 12.2		Mrkos
1178	Dec. 1.20639	13 37 03.51	-19 50 51.9		Petrovičová
	1.20778	13 37 04.06	-19 50 54.9		Petrovičová
1179	1.21021	13 37 04.96	-19 50 58.2	5.3	Mrkos
	1.21108	13 37 05.33	-19 50 59.7		Mrkos
1182	3.20750	13 50 19.44	-20 48 14.3		Petrovičová
	3.20889	13 50 20.06	-20 48 16.6		Petrovičová
1183	3.21080	13 50 20.78	-20 48 19.8	5.2	Mrkos
	3.21167	13 50 21.19	-20 48 23.4		Mrkos

Reference Stars Numbers

1050	SAO	116517	116480	116503	116565	116564	116572
1053	SAO	116517	116480	116503	116565	116564	116572
1071	SAO	116460	116414	116419	116438	116461	AGK 3 + 6°1886
1085	SAO	116374	116366	116429	116394	116400	116381
1092	SAO	116374	116366	116429	116462	116400	116381
1129	SAO	137728	137747	137738	137719	137712	137696
1130	SAO	137728	137747	137738	137719	137712	137696
1136	SAO	138117	138156	138174	138149	138124	138109
1139	SAO	138149	138158	138181	138188	138184	138156
1142	SAO	138222	138215	138212	138188	138181	138205
1146	SAO	138215	138222	138237	138242	138255	138228
1150	SAO	138282	138316	138323	138340	138297	138265
1154	SAO	138352	138372	138358	138310	138297	138326
1158	SAO	138352	138340	138358	138372	138376	138364
1162	SAO	138376	138398	138416	138419	138390	138371
1164	SAO	157350	157337	157303	157342	157367	157409
1165	SAO	157350	157337	157303	157342	157367	157409
1170	SAO	157570	157611	157626	157599	157553	157555
1173	SAO	158003	157974	157991	157999	158046	181772
1178	SAO	158063	158066	158102	158110	181855	181822
1179	SAO	158063	158066	158102	158110	181855	181822
1182	SAO	182057	182076	182082	158215	182014	182019
1183	SAO	182057	182076	182082	158215	182014	182019

Comet HUCHRA 1973 h

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1096	May 20.89780	14 ^h 02 ^m 49 ^s .40	+23°36'07"2	14.0	Petrovičová
	20.90995	14 02 48.82	+23 35 49.5		Petrovičová
1098	27.90450	13 56 42.03	+20 29 01.4	15.0	Mrkos

Reference Stars Numbers

1096	SAO	083165	083175	083159	083145	083132	AGK3 +23°1365
1098	SAO	083126	083118	083085	083089	AGK3 +20°1462	AGK3 +20°1466

Periodic comet GEHRELS 1973 n

Plate No.	1973 UT	α 1950.0	δ 1950.0	m_1	Observer
1155	Nov. 2.95284	1 ^h 20 ^m 50 ^s .17	+9°46'55"6	16	Mrkos
	2.96742	1 20 49.72	+9 46 49.2		Mrkos
1159	3.94660	1 20 24.87	+9 40 09.2		Mrkos
	3.96187	1 20 24.28	+9 40 05.1		Mrkos
1167	22.78453	1 16 13.62	+7 58 04.4	16	Mrkos

Reference Stars Numbers

1155	SAO	92406	109806	109823	109857	92435	92411
1159	SAO	92406	109806	109823	109857	92435	92411
1167	SAO	109807	109777	109781	109802	109822	109827

Asteroida 826 HENRIKA

Plate No.	1973 UT	α 1950.0	δ 1950.0	Observer
1013	Jan. 6.86927	6 ^h 15 ^m 51 ^s .39	+15°57'33"8	Petrovičová
	6.88715	6 15 50.42	+15 57 35.0	Petrovičová

Reference Stars Numbers

1013	SAO	095538	095535	095505	095445	095486	095509
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Asteroida 897 LYSISTRATA

Plate No.	1973 UT	α 1950.0	δ 1950.0	Observer
1013	Jan. 6.86927	6 ^h 25 ^m 53 ^s .06	+15°04'07".4	Petrovičová
	6.88715	6 25 52.23	+15 04 23.1	Petrovičová

Reference Stars Numbers

1013	SAO	095713	095725	095758	095742	095712	095600
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Asteroida 502 SIGUNE

Plate No.	1973 UT	α 1950.0	δ 1950.0	Observer
1029	Jan. 3.88619	7 ^h 05 ^m 03 ^s .97	+11°34'56".1	Kopáček
	3.90164	7 05 03.26	+11 35 14.5	Kopáček
1033	5.83610	7 03 45.63	+12 16 03.8	Kopáček
	5.84791	7 03 45.29	+12 16 14.0	Kopáček

Reference Stars Numbers

1029	SAO	096517	096500	096486	096512	096593	096607
1033	SAO	096461	096451	096488	096519	096500	096517

Asteroida 167 URDA

Plate No.	1973 UT	α 1950.0	δ 1950.0	Observer
1163	Nov. 17.89238	1 ^h 20 ^m 23 ^s .17	+6°01'27".2	Petrovičová
	17.90905	1 20 22.61	+6 01 23.6	Petrovičová
1166	18.72015	1 20 00.80	+5 59 20.8	Mrkos
	18.73456	1 20 00.40	+5 59 17.2	Mrkos

Reference Stars Numbers

1163	SAO	109838	109818	109810	109833	109874	109864
1166	SAO	109838	109818	109810	109833	109874	109864