

A. Mrkos

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## Observations of Comets and Asteroids at the Kleť Observatory in the Year 1972

A. MRKOS

Department of Astronomy and Astrophysics, Charles University, Prague,  
and the Kleť Observatory

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The routine programme 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 1972 is presented:

P/Tempel I (1972a)

P/Giacobini-Zinner (1972d)

Sandage (1972h)

Kojima (1972j)

P/Kearns-Kwee (1971c)

Asteroid 1685 Toro.

The position of comets were obtained by means of the instrument described in [1]. Reference stars were chosen from the Smithsonian Astrophysical Observatory and AGK<sub>2</sub>(AGK<sub>3</sub>) Star Catalogues.

The author wishes to express his thanks to Dr. W. Dieckvoss of the Hamburger Sternwarte and to Mrs. R. Petrovičová of the Kleť Observatory for their active help in all tasks.

### Reference

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

Periodic Comet Tempel 1 (1972a)

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
899	Feb. 16.97922	12 <sup>h</sup> 56 <sup>m</sup> 09.72 <sup>s</sup>	+13°04'36.4"	Mrkos
	17.00075	12 56 10.09	+13 04 45.3	Mrkos
902	17.98926	12 56 26.96	+13 10 21.5	Mrkos
	18.01079	12 56 27.27	+13 10 28.5	Mrkos
903	18.99065	12 56 41.94	+13 16 12.9	Petrovičová
	19.01218	12 56 42.22	+13 16 21.9	Petrovičová
906	20.00590	12 56 55.73	+13 22 17.8	Mrkos
	20.02743	12 56 55.76	+13 22 23.0	Mrkos
910	21.06630	12 57 07.80	+13 28 48.9	Mrkos
	21.08748	12 57 08.00	+13 28 56.0	Mrkos
912	Mar. 13.95657	12 53 14.49	+16 03 51.6	Mrkos
	13.97098	12 53 14.16	+16 03 58.2	Mrkos
914	14.97986	12 52 40.58	+16 11 09.6	Mrkos
	14.99444	12 52 39.99	+16 11 15.2	Mrkos
916	15.99247	12 52 04.99	+16 18 16.7	Petrovičová
	16.00670	12 52 04.55	+16 18 21.8	Petrovičová
918	16.96468	12 51 29.44	+16 25 00.3	Mrkos
	16.97909	12 51 28.84	+16 25 04.9	Mrkos
920	17.98333	12 50 50.18	+16 31 53.6	Mrkos
	17.99792	12 50 49.57	+16 32 00.1	Mrkos
922	18.97317	12 50 10.49	+16 38 25.8	Mrkos
	18.98741	12 50 09.86	+16 38 32.2	Mrkos
923	19.93638	12 49 30.37	+16 44 40.0	Mrkos
	19.95096	12 49 29.83	+16 44 44.2	Mrkos
924	20.89191	12 48 49.16	+16 50 40.1	Petrovičová
	20.90858	12 48 48.37	+16 50 45.2	Petrovičová
926	21.01656	12 48 43.51	+16 51 26.0	Mrkos
	21.03115	12 48 42.70	+16 51 30.9	Mrkos
927	Apr. 9.90993	12 31 00.52	+17 55 41.0	Mrkos
	9.92382	12 30 59.67	+17 55 38.6	Mrkos
929	10.00698	12 30 54.72	+17 55 36.6	Petrovičová
	10.01462	12 30 54.27	+17 55 35.7	Petrovičová
931	May 6.9351	12 13 45.37	+14 48 32.8	Petrovičová
932	8.9322	12 13 28.37	+14 21 53.4	Mrkos
	8.9486	12 13 28.38	+14 21 45.3	Mrkos
933	13.8508	12 13 30.07	+13 10 00.1	Mrkos
	13.8533	12 13 30.05	+13 09 52.8	Mrkos
934	13.8653	12 13 30.15	+13 09 41.8	Petrovičová
935	17.9530	12 14 18.65	+12 03 31.2	Mrkos
	17.9594	12 14 18.88	+12 03 23.9	Mrkos
939	Jun. 3.88928	12 25 02.98	+ 6 39 54.6	Mrkos
	3.89553	12 25 03.37	+ 6 39 45.3	Mrkos
941	4.88194	12 26 01.31	+ 6 18 54.3	Mrkos
	4.88819	12 26 01.64	+ 6 18 45.3	Mrkos
944	5.88785	12 27 02.68	+ 5 57 30.6	Mrkos
	5.89410	12 27 03.26	+ 5 57 21.9	Mrkos

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
946	6.88433	12 28 05.74	+ 5 36 06.7	Mrkos
947	9.88771	12 31 28.65	+ 4 30 31.7	Mrkos
	9.89396	12 31 28.98	+ 4 30 26.8	Mrkos

*Reference Stars Numbers*

899	SAO	100353	100349	100336	100333	100364	100378
902	SAO	100353	100349	100336	100333	100364	100378
903	SAO	100353	100349	100336	100333	100364	100378
906	SAO	100378	100389	100364	100333	100336	100353
910	SAO	100378	100389	100364	100333	100336	100353
912	SAO	100338	100310	100316	100324	100369	100355
914	SAO	100338	100310	100316	100324	100369	100355
916	SAO	100338	100310	100316	100324	100339	100342
918	SAO	100338	100310	100316	100324	100339	100342
920	SAO	100310	100303	100316	100324	100339	100338
922	SAO	100316	100339	100338	100299	100274	100257
923	SAO	100316	100339	100338	100299	100274	100257
924	SAO	100299	100288	100274	100257	100316	100338
926	SAO	100299	100288	100274	100257	100316	100338
927	SAO	100129	100123	100144	100167	AGK 2 +18° 1194	
						AGK 2 +17° 1303	
929	SAO	100129	100123	100144	100167	AGK 2 +18° 1194	
						AGK 2 +17° 1303	
931	SAO	100014	100007	099990	100011	100025	100044
932	SAO	100021	099990	099977	100016	100036	100044
933	SAO	100018	100027	100036	100016	099993	100002
934	SAO	100018	100027	100036	100016	099993	100002
935	SAO	100022	099996	100002	100018	100059	100045
939	SAO	119411	119427	119425	119404	119366	119384
941	SAO	119411	119427	119455	119434	119398	119387
944	SAO	119411	119427	119455	119434	119398	119387
946	SAO	119440	119454	119459	119455	119434	119428
947	SAO	119440	119454	119459	119455	119434	119428

Periodic Comet Giacobini-Zinner (1972d)

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
937	May 18.0200	21 <sup>h</sup> 54 <sup>m</sup> 53.74 <sup>s</sup>	+26°21'56.4"	Mrkos
	18.0264	21 54 55.33	+26 22 06.7	Mrkos
940	Jun. 3.96706	23 01 08.09	+32 56 56.8	Mrkos
	3.97192	23 01 09.46	+32 57 01.9	Mrkos
943	4.97517	23 05 35.88	+33 17 49.9	Mrkos
	4.97986	23 05 37.28	+33 17 56.1	Mrkos
945	5.95521	23 09 59.90	+33 37 45.0	Mrkos
	5.95937	23 10 01.09	+33 37 49.9	Mrkos
951	Jul. 1.95986	1 27 41.09	+38 13 21.8	Mrkos
	1.96177	1 27 41.62	+38 13 19.3	Mrkos
954	4.95248	1 45 24.64	+38 02 00.7	Mrkos
	4.95491	1 45 25.46	+38 02 00.1	Mrkos
957	5.95957	1 51 24.05	+37 55 48.7	Mrkos
	5.96166	1 51 24.66	+37 55 48.1	Mrkos
959	7.96779	2 03 21.85	+37 39 49.2	Mrkos
961	8.98697	2 09 26.06	+37 29 51.5	Mrkos
	8.98905	2 09 26.68	+37 29 50.1	Mrkos
963	9.98383	2 15 21.85	+37 18 52.4	Mrkos
	9.98557	2 15 22.48	+37 18 52.0	Mrkos
966	16.99201	2 56 33.57	+35 28 54.6	Mrkos
	16.99410	2 56 34.30	+35 28 52.8	Mrkos
983	Aug. 14.07965	5 18 16.79	+21 01 08.7	Mrkos
	14.08174	5 18 17.38	+21 01 03.6	Mrkos

Reference Stars Numbers

937	SAO	090105	090094	090125	090163	090153	090145
940	SAO	072925	072932	072942	072970	072991	072985
943	SAO	073009	073064	073052	073026	072985	072991
945	SAO	073082	073097	073132	073110	073064	073052
951	SAO	054729	054774	054763	054777	054745	054715
954	SAO	054987	054956	054954	054981	055043	055008
957	SAO	055080	055054	055049	055089	055121	055140
963	SAO	055474	055494	055482	055426	055436	AGK 2 +37° 255
966	SAO	056048	056057	056102	056092	056029	056033
983	SAO	077111	077118	077141	077145	077149	077096

Comet Sandage (1972h)

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
950	Jul. 1.92686	15 <sup>h</sup> 14 <sup>m</sup> 56.59 <sup>s</sup>	+23°37'26.7"	Mrkos
952	4.91498	15 13 47.31	+23 48 05.6	Mrkos
	4.92262	15 13 47.14	+23 48 06.4	Mrkos
956	5.94117	15 13 25.35	+23 51 19.8	Mrkos
	5.94881	15 13 25.24	+23 51 25.1	Mrkos
958	7.88962	15 12 46.69	+23 57 17.1	Mrkos
	7.89726	15 12 46.39	+23 57 19.1	Mrkos
960	8.96752	15 12 26.78	+24 00 16.6	Mrkos
	8.97447	15 12 26.61	+24 00 18.7	Mrkos
962	9.95744	15 12 09.45	+24 02 50.3	Mrkos
	9.96473	15 12 09.35	+24 02 53.2	Mrkos
964	16.89306	15 10 33.78	+24 17 21.4	Mrkos
	16.90208	15 10 33.71	+24 17 23.2	Mrkos
967	31.85425	15 09 43.35	+24 30 06.8	Mrkos
968	Aug. 6.87139	15 10 21.60	+24 29 49.8	Mrkos
	6.88042	15 10 21.47	+24 29 53.0	Mrkos
973	7.87354	15 10 31.06	+24 29 37.4	Mrkos
	7.88257	15 10 31.13	+24 29 35.6	Mrkos
978	10.89464	15 11 05.20	+24 28 24.0	Mrkos
	10.90575	15 11 05.44	+24 28 28.0	Mrkos
984	Sept. 3.81053	15 20 07.61	+24 09 11.2	Mrkos
986	5.81683	15 21 13.38	+24 07 15.6	Mrkos
	5.83141	15 21 13.67	+24 07 15.7	Mrkos
987	6.81933	15 21 47.20	+24 06 17.9	Mrkos
	6.83356	15 21 47.73	+24 06 17.4	Mrkos
988	11.81229	15 24 46.80	+24 01 47.6	Mrkos

Reference Stars Numbers

950	SAO	083732	083754	083764	083766	083740	AGK 2 +23° 1447
952	SAO	083742	083764	083766	083728	083711	AGK 2 +23° 1443
956	SAO	083742	083764	083766	083728	083711	AGK 2 +23° 1443
958	SAO	083742	083764	083766	083728	083711	AGK 2 +23° 1443
960	SAO	083742	083764	083766	083728	083711	AGK 2 +23° 1443
962	SAO	083740	083766	083728	083719	083710	AGK 2 +23° 1443
964	SAO	083710	083742	083739	083728	083719	AGK 2 +23° 1443
967	SAO	083728	083719	083692	AGK 2	+24° 1528	AGK 2 +23° 1443
968	SAO	083728	083719	083687	AGK 2	+23° 1443	AGK 2 +24° 1528
		AGK 2	+24° 1532				
973	SAO	083728	083719	083687	AGK 2	+23° 1443	AGK 2 +24° 1528
		AGK 2	+24° 1532				
978	SAO	083728	083719	083710	AGK 2	+24° 1528	AGK 2 +23° 1443
		AGK 2	+24° 1532				
984	SAO	083805	083793	083766	083807	083783	AGK 2 +24° 1538
986	SAO	083793	083766	083807	083823	083819	083811
987	SAO	083793	083766	083807	083823	083819	083811
988	SAO	083823	083805	083819	083850	083833	083828

Comet Kojima (1972j)

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
994	Dec. 6.00141	6 <sup>h</sup> 47 <sup>m</sup> 03.97 <sup>s</sup>	—24°16'26.1"	Mrkos
	6.00558	6 47 02.82	—24 16 25.7	Mrkos
996	6.99384	6 42 27.31	—24 18 13.8	Mrkos
	6.99759	6 42 26.35	—24 18 16.8	Mrkos
997	7.00704	6 42 23.55	—24 18 12.5	Petrovičová
	7.01120	6 42 22.41	—24 18 15.2	Petrovičová
998	23.88144	5 13 28.65	—21 58 10.8	Mrkos
1000	24.84455	5 08 15.54	—21 39 43.0	Mrkos
	24.84733	5 08 14.53	—21 39 40.3	Mrkos
1002	25.89584	5 02 36.25	—21 18 26.4	Mrkos
	25.89862	5 02 35.37	—21 18 22.0	Mrkos
1004	28.87824	4 46 54.23	—20 11 58.5	Petrovičová
	28.88102	4 46 53.32	—20 11 53.3	Petrovičová
1005	29.85734	4 41 53.14	—19 48 23.2	Petrovičová
	29.86012	4 41 52.31	—19 48 18.9	Petrovičová
1006	30.84024	4 36 55.86	—19 23 59.6	Petrovičová
	30.84615	4 36 54.06	—19 23 49.5	Petrovičová
1007	31.82388	4 32 03.39	—18 58 52.2	Petrovičová
	31.82665	4 32 02.73	—18 58 47.7	Petrovičová

Reference Stars Numbers

994	SAO	172382	172335	172349	172372	172430	172458
996	SAO	172258	172222	172269	172312	172310	172284
997	SAO	172258	172222	172269	172312	172310	172284
998	SAO	170270	170290	170272	170205	170220	170231
1000	SAO	170157	170153	170138	170118	170099	170107
1002	SAO	170055	170059	170063	170009	170003	170008
1004	SAO	169774	169773	169781	169824	149912	149899
1005	SAO	149842	169719	169774	149898	149860	149828
1006	SAO	149795	149834	149828	149792	149752	149772
1007	SAO	149731	149714	149733	149742	149752	149754

Periodic Comet Kearns-Kwee (1971c)

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
989	Nov. 30.90919	6 <sup>h</sup> 57 <sup>m</sup> 55.95 <sup>s</sup>	+33°51'01.6"	Mrkos
	30.92377	6 57 55.76	+33 51 00.7	Mrkos
990	Dec. 1.88725	6 57 41.16	+33 50 27.4	Petrovičová
	2.88860	6 57 24.19	+33 49 51.2	Mrkos
991	2.89971	6 57 23.97	+33 49 51.0	Mrkos
	4.87679	6 56 44.11	+33 48 21.8	Petrovičová
992	4.89138	6 56 43.68	+33 48 18.3	Petrovičová
	5.96218	6 56 18.65	+33 47 25.9	Mrkos
993	5.97676	6 56 18.40	+33 47 24.4	Mrkos
	6.96919	6 55 53.17	+33 46 27.6	Petrovičová
995	6.98308	6 55 52.86	+33 46 23.7	Petrovičová
	24.81017	6 44 20.42	+33 07 56.2	Mrkos
999	24.82476	6 44 19.72	+33 07 55.2	Mrkos
	25.86564	6 43 30.02	+33 04 16.6	Mrkos
1001	25.88022	6 43 29.15	+33 04 14.8	Mrkos

Reference Stars Numbers

989	SAO	059667	059719	059730	AGK 2 +34° 763	AGK 2 +33° 721
		AGK 2 +33° 725				
990	SAO	059654	059667	059703	059730	AGK 2 +34°763
991	SAO	059667	059703	059646	059654	AGK 2 +33°721
992	SAO	059667	059703	059646	059654	AGK 2 +34°763
993	SAO	059667	059703	059646	059654	AGK 2 +33°721
995	SAO	059675	059703	059644	059627	AGK 2 +34°763
999	SAO	059527	059482	059450	059465	059504
1001	SAO	059527	059482	059450	059465	059504

Asteroid 1685 Toro

Plate No.	1972 UT	$\alpha$ (1950.0)	$\delta$ (1950.0)	Observer
965	Jul. 16.94115	21 <sup>h</sup> 40 <sup>m</sup> 29.54 <sup>s</sup>	+ 9°40'46.0"	Mrkos
969	Aug. 6.89708	22 29 24.16	+60 17 17.1	Mrkos
	6.90125	22 29 25.81	+60 18 07.4	Mrkos
972	6.97867	22 29 55.95	+60 33 44.2	Petrovičová
	6.98249	22 29 57.59	+60 34 30.5	Petrovičová
974	7.89872	22 37 10.90	+63 37 01.9	Mrkos
	7.90427	22 37 13.61	+63 38 08.6	Mrkos
977	7.96365	22 37 42.52	+63 50 04.5	Petrovičová
	7.96816	22 37 45.23	+63 50 59.5	Petrovičová
979	10.93353	23 17 30.39	+73 20 37.7	Mrkos
	10.93839	23 17 36.38	+73 21 27.7	Mrkos



*Reference Stars Numbers*

965	SAO	127032	127039	126994	126973	127010	127017
969	SAO	020135	020129	020111	020093	020105	AGK 2 +59° 1521
972	SAO	020129	020111	020093	020059	020121	020160
974	SAO	020189	020181	020196	020224	020175	AGK 2 +63° 1273
977	SAO	020189	020181	020196	020224	020213	AGK 2 +63° 1273
979	SAO	010709	010686	010694	010683	010698	010716