

145 CCD ASTROMETRIC POSITIONS OF COMETS AND MINOR PLANETS
observed during March-September 1998 at the Belgrade Observatory

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SUMMARY: In this paper we present precise astrometric positions of four comets and four minor planets from the MPC critical list. All the observations were carried out with CCD equipped Askania astrograph (13.5/160). The SBIG ST-8 camera was used. Comet 1998 M5 (Stonehouse) occulted an anonymous star on July 9 and that phenomenon was observed successfully.

The following list contains precise astrometric positions of comets 1998 H1 (Linear), 1997 J2 (Meunier-Dupouy), 1998 K5 (Linear) and 1998 M5 (Linear). The minor planet 1036 Ganymed and newly-discovered objects 1998 FX2, 1998 FM5 and 1998 MK30 were observed too. Some more details about the method of observation and reduction were pub-

lished in one of our previous papers (Protitch-Benishek and Benishek, 1998).

Table 1 contains the comet designations, time in UT and the topocentric coordinates Alpha and Delta for the Equinox 2000.0.

Table 2 presents precise astrometric CCD positions of the minor planets from the MPC critical list. The same designations are used in this Table.

Table 1. Positions of comets

C/1998 H1 (STONEHOUSE)

Date (UT)	R.A.(2000.0)	Decl.(2000.0)	Mag.
1998 05 07.82348	14 15 45.63	+ 34 36 24.2	
1998 05 07.82622	14 15 44.37	+ 34 36 45.7	
1998 05 07.83521	14 15 41.75	+ 34 37 30.4	
1998 05 07.83736	14 15 40.65	+ 34 37 39.0	
1998 05 07.83994	14 15 39.17	+ 34 37 51.0	13.9 T
1998 05 07.84234	14 15 38.85	+ 34 38 01.4	
1998 05 07.84531	14 15 37.21	+ 34 38 19.6	13.7 T
1998 05 08.85145	14 09 41.91	+ 35 59 25.5	
1998 05 08.85409	14 09 41.24	+ 35 59 31.0	
1998 05 08.85806	14 09 39.94	+ 35 59 54.7	

Date (UT)	R.A.(2000.0)	Decl.(2000.0)	Mag.
C/1998 M5 (LINEAR)			
1998 09 07.77248	20 49 32.86	+ 39 56 38.3	13.1 T
1998 09 07.77448	20 49 32.31	+ 39 56 42.1	
1998 09 07.77524	20 49 32.11	+ 39 56 41.0	13.0 T
1998 09 07.77839	20 49 31.67	+ 39 56 43.9	
1998 09 07.78123	20 49 30.85	+ 39 56 43.5	
1998 09 07.81311	20 49 24.59	+ 39 56 54.6	12.8 T
1998 09 07.81542	20 49 24.01	+ 39 56 56.8	
1998 09 07.81622	20 49 23.78	+ 39 56 56.0	13.0 T
1998 09 07.81951	20 49 23.09	+ 39 56 58.4	
1998 09 07.82041	20 49 23.05	+ 39 56 57.4	13.0 T
1998 09 07.82212	20 49 22.58	+ 39 56 59.1	
1998 09 07.82326	20 49 22.15	+ 39 57 01.3	
1998 09 10.77248	20 39 30.77	+ 40 12 21.9	13.2 T
1998 09 10.77448	20 39 30.48	+ 40 12 22.4	
1998 09 10.77543	20 39 30.26	+ 40 12 22.5	13.0 T
1998 09 10.77829	20 39 29.69	+ 40 12 23.2	
1998 09 10.77980	20 39 29.37	+ 40 12 23.2	
1998 09 10.78815	20 39 27.52	+ 40 12 25.1	
1998 09 10.80295	20 39 24.78	+ 40 12 28.6	
1998 09 10.80500	20 39 24.33	+ 40 12 30.5	
1998 09 10.80896	20 39 23.32	+ 40 12 31.8	13.0 T
1998 09 10.81274	20 39 22.58	+ 40 12 34.3	
1998 09 11.77794	20 36 11.19	+ 40 16 17.1	12.7 T
1998 09 11.77921	20 36 10.92	+ 40 16 17.9	
1998 09 11.78101	20 36 10.44	+ 40 16 19.0	
1998 09 11.78635	20 36 09.54	+ 40 16 18.8	12.6 T
1998 09 11.78727	20 36 09.52	+ 40 16 20.4	
1998 09 11.78990	20 36 08.76	+ 40 16 18.5	
1998 09 11.79214	20 36 08.33	+ 40 16 20.0	12.9 T
1998 09 11.79545	20 36 07.67	+ 40 16 20.8	
1998 09 11.79707	20 36 07.38	+ 40 16 22.3	
1998 09 11.80102	20 36 06.50	+ 40 16 24.4	
1998 09 15.83498	20 23 02.49	+ 40 25 41.6	13.0 T
1998 09 15.83637	20 23 02.08	+ 40 25 43.5	
1998 09 15.83792	20 23 01.68	+ 40 25 41.7	13.0 T
1998 09 15.84413	20 23 00.45	+ 40 25 42.2	
1998 09 15.84696	20 22 59.90	+ 40 25 42.9	
1998 09 15.84773	20 22 59.68	+ 40 25 43.1	12.7 T
1998 09 15.84836	20 22 59.58	+ 40 25 43.4	
1998 09 15.84902	20 22 59.37	+ 40 25 43.7	
1998 09 15.85111	20 22 59.10	+ 40 25 43.2	
1998 09 15.85839	20 22 57.73	+ 40 25 42.5	12.8 T
1998 09 15.85899	20 22 57.50	+ 40 25 43.5	
C/1997 J2 (MEUNIER - DUPOUY)			
1998 09 15.88090	21 09 03.07	+ 01 21 20.3	13.7 T
1998 09 15.88155	21 09 02.95	+ 01 21 21.2	
1998 09 15.88313	21 09 02.98	+ 01 21 18.9	13.9 T
1998 09 15.88472	21 09 02.86	+ 01 21 14.3	
1998 09 15.88660	21 09 02.86	+ 01 21 09.1	
1998 09 15.89332	21 09 02.23	+ 01 21 00.2	14.1 T
C/1998 K5 (LINEAR)			
1998 09 15.91142	03 49 10.91	+ 24 41 14.3	12.3 T
1998 09 15.91220	03 49 10.84	+ 24 41 13.0	
1998 09 15.91436	03 49 10.92	+ 24 41 10.7	12.5 T
1998 09 15.91499	03 49 10.91	+ 24 41 10.9	
1998 09 15.91997	03 49 10.74	+ 24 41 05.3	
1998 09 15.92120	03 49 10.60	+ 24 41 05.2	12.4 T
1998 09 15.92303	03 49 10.68	+ 24 41 03.0	
1998 09 15.92370	03 49 10.64	+ 24 41 02.2	12.3 T

Table 2. Positions of minor planets

Date (UT)	R.A.(2000.0)	Decl.(2000.0)	Mag.
1998 FX2			
1998 03 25.81679	11 53 05.44	+ 06 40 11.2	
1998 03 25.82162	11 53 07.85	+ 06 40 38.1	
1998 03 25.82322	11 53 08.39	+ 06 40 48.4	14.0
1998 03 25.82573	11 53 09.53	+ 06 40 59.5	
1998 03 25.83407	11 53 13.13	+ 06 41 42.0	
1998 03 25.83999	11 53 15.77	+ 06 42 11.7	
1998 03 26.85303	12 01 15.87	+ 08 07 26.3	14.0
1998 03 26.85479	12 01 16.66	+ 08 07 37.8	
1998 03 26.85674	12 01 17.44	+ 08 07 48.7	13.8
1998 03 26.86777	12 01 22.52	+ 08 08 40.8	
1998 03 26.87210	12 01 24.81	+ 08 09 07.2	
1998 03 27.82306	12 09 13.83	+ 09 30 31.3	14.0
1998 03 27.82554	12 09 15.42	+ 09 30 35.6	
1998 03 27.82710	12 09 15.75	+ 09 30 48.7	
1998 03 27.82822	12 09 16.18	+ 09 30 57.8	14.3
1998 03 27.82977	12 09 17.00	+ 09 31 02.3	
1998 03 27.83174	12 09 17.99	+ 09 31 14.7	
1998 03 27.83451	12 09 19.33	+ 09 31 32.8	13.9
1998 03 27.83566	12 09 20.37	+ 09 31 33.2	
1998 03 27.83779	12 09 20.87	+ 09 31 44.8	
1998 03 27.83913	12 09 21.65	+ 09 31 51.5	13.9
1998 03 27.84032	12 09 22.14	+ 09 31 59.0	
1998 03 29.77710	12 26 04.62	+ 12 19 31.6	14.0
1998 03 29.77874	12 26 05.50	+ 12 19 37.6	
1998 03 29.78106	12 26 06.53	+ 12 19 51.2	
1998 03 29.78306	12 26 07.49	+ 12 20 01.0	14.1
1998 03 29.78475	12 26 08.39	+ 12 20 09.9	14.0
1998 03 29.78627	12 26 09.15	+ 12 20 17.9	
1998 03 29.78802	12 26 10.21	+ 12 20 27.8	
1998 03 29.78979	12 26 11.02	+ 12 20 37.4	14.2
1998 03 31.96560	12 45 54.77	+ 15 26 39.4	14.3
1998 03 31.96873	12 45 56.55	+ 15 26 53.9	
1998 03 31.97046	12 45 57.84	+ 15 27 04.0	
1998 03 31.97735	12 46 00.99	+ 15 27 40.6	14.6
1998 03 31.98432	12 46 04.81	+ 15 28 12.3	
1998 03 31.98852	12 46 06.89	+ 15 28 35.3	14.1
1998 03 31.98975	12 46 07.76	+ 15 28 40.1	
1998 03 31.99183	12 46 08.96	+ 15 28 51.5	
1998 03 31.99499	12 46 10.71	+ 15 29 07.4	14.0
1998 03 31.99652	12 46 11.23	+ 15 29 13.5	
1998 FM5			
1998 03 29.81920	08 28 27.99	+ 18 37 43.8	
1998 03 29.82337	08 28 29.97	+ 18 37 51.2	
1998 03 29.82551	08 28 30.66	+ 18 37 53.1	
1998 03 29.82789	08 28 32.08	+ 18 37 54.5	
1036 GANYMED			
1998 07 09.85371	23 03 04.18	+ 48 24 17.8	10.9
1998 07 09.85501	23 03 04.43	+ 48 24 20.1	11.1
1998 07 09.85887	23 03 05.43	+ 48 24 27.4	
1998 07 09.86023	23 03 05.58	+ 48 24 29.3	
1998 07 09.86120	23 03 06.00	+ 48 24 30.8	10.9
1998 07 09.89419	23 03 13.09	+ 48 25 27.4	
1998 07 09.89479	23 03 13.14	+ 48 25 28.9	10.8
1998 07 09.89529	23 03 13.27	+ 48 25 30.0	
1998 MK 30			
1998 09 11.82237	23 04 10.25	+ 05 50 57.2	14.9
1998 09 11.82396	23 04 10.42	+ 05 50 57.3	
1998 09 11.83066	23 04 10.61	+ 05 50 51.9	15.0
1998 09 11.84512	23 04 10.84	+ 05 50 45.3	
1998 09 11.84616	23 04 10.79	+ 05 50 42.3	
1998 09 11.84840	23 04 10.74	+ 05 50 43.1	

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145 CCD АСТРОМЕТРИЈСКА ПОЛОЖАЈА КОМЕТА И МАЛИХ ПЛАНЕТА

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Стручни рад

У раду су приказани астрометријски положаји четири комете и четири мале планете са MPC списка. Сва посматрања су изведена са Askania астрографом (13.5/160) опремље-

ним CCD SBIG ST8 камером. Успешно је посматрана окултација једне звезде са кометом 1998 М5.