

CCD ASTROMETRIC OBSERVATIONS OF MINOR PLANETS AT THE BELGRADE OBSERVATORY DURING 1999 (II)

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SUMMARY: 76 precise astrometric positions of six observed minor planets (two NEO among them) are calculated. The SBIG ST-8 camera attached to Askania astrograph of Belgrade Observatory was used in the observations.

In spite of very difficult conditions for observational work during the first half of the year 1999, the authors realized their observational program entirely.

The results of CCD observations of six minor planets are presented. The CCD SBIG ST-8 camera (1530 × 1020 pixel array) was mounted on the visual telescope of Askania astrograph (13.5 / 160 cm).

76 precise astrometric positions were obtained.

High precision measurements of the observed minor planet coordinates were carried out by the authors. The ASTROMETRICA ver. 3.25 and GSC (Guide Star Catalog) were used for data reduction.

The results of observations and calculation are presented in Table 1. which contains the minor planets designations, time in UTC, topocentric coordinates RA and DEC for the Equinox 2000.0 and magnitudes.

The sign * denotes NEO objects.

All other details have been already published previously (Protitch - Benishek V.; 2000).

All these results are presented at the following web data bases:

ASTDyS:

<http://hamilton.dm.unipi.it/cgi-bin/astdys/astibo>

NEODyS:

<http://newton.dm.unipi.it/cgi-bin/neodys>

REFERENCES

Protitch-Benishek, V., Benishek, Vl.: 2000, *Serb. Astron. J.*, **162**, 115.

Table 1. Precise positions of the observed minor planets

1998 WS									
Time (UTC)			R.A. (2000.0)			Decl. (2000.0)			Mag.
1999	01	14.838760	08	43	08.510	+79	46	51.70	14.1 R
1999	01	14.907190	08	42	54.030	+79	46	26.80	–
1999	01	14.910040	08	42	53.640	+79	46	25.10	13.9 R
1999	01	14.910840	08	42	52.710	+79	46	25.20	–
1999	01	14.912730	08	42	52.420	+79	46	24.20	13.7 R
1999	01	14.913850	08	42	52.780	+79	46	23.10	–
1999	01	14.915560	08	42	51.800	+79	46	25.10	13.9 R
1999	01	14.916170	08	42	51.850	+79	46	24.30	–
1999	01	14.917810	08	42	51.220	+79	46	21.90	–
1999	01	14.918450	08	42	50.860	+79	46	23.50	13.9 R
1999	01	14.920310	08	42	50.430	+79	46	22.50	–
1999	01	14.920960	08	42	50.560	+79	46	22.60	14.2 R
1999	01	17.816470	08	32	56.750	+79	23	39.40	14.1 R
1999	01	17.817750	08	32	57.050	+79	23	38.50	–
1999	01	17.819760	08	32	56.390	+79	23	38.00	13.9 R
1999	01	17.820630	08	32	55.970	+79	23	36.30	–
1999	01	17.824580	08	32	55.170	+79	23	34.10	14.2 R
1999	01	17.825450	08	32	54.850	+79	23	34.60	–
1999	01	17.827680	08	32	54.900	+79	23	32.80	14.4 R
1999	01	17.829720	08	32	54.140	+79	23	32.60	–
1999	01	17.832030	08	32	53.150	+79	23	32.40	14.2 R
1999	01	17.832790	08	32	53.310	+79	23	31.30	–
1999	01	17.834320	08	32	53.380	+79	23	28.60	–
1999	01	17.835010	08	32	53.010	+79	23	30.00	14.2 R
(1240) Centenaria									
1999	01	17.782870	02	51	51.440	+29	12	37.50	14.5 R
1999	01	17.785160	02	51	51.510	+29	12	39.20	–
1999	01	17.786190	02	51	51.410	+29	12	37.90	14.5 R
1999	01	17.787940	02	51	51.670	+29	12	38.10	–
1999	01	17.793310	02	51	51.700	+29	12	36.70	14.3 R
(11405) 1999 CV ₃									
1999	03	09.765400	09	43	36.640	+67	19	29.80	
1999	03	09.767290	09	43	36.250	+67	19	45.20	
1999	03	09.772720	09	43	35.240	+67	20	20.40	
1999	03	09.777590	09	43	34.270	+67	20	54.10	
1999	03	09.781450	09	43	33.810	+67	21	20.10	
1999	03	09.783430	09	43	33.600	+67	21	34.20	
1999	03	09.784290	09	43	33.350	+67	21	40.30	
1999	03	12.879330	09	34	12.730	+72	49	24.90	
1999	03	12.880590	09	34	12.150	+72	49	33.10	
1999	03	12.882560	09	34	12.170	+72	49	45.90	
1999	03	12.883400	09	34	11.860	+72	49	48.20	

Table 1. (continued)

* (10115) 1992 SK									
Time (UTC)			R.A. (2000.0)		Decl. (2000.0)			Mag.	
1999	03	09.800760	12	13	59.600	+74	57	46.60	
1999	03	09.802090	12	13	58.690	+74	57	54.20	
1999	03	09.804340	12	13	57.570	+74	58	06.80	
1999	03	09.805400	12	13	56.970	+74	58	10.40	
1999	03	09.807850	12	13	56.110	+74	58	24.00	
1999	03	09.809040	12	13	55.550	+74	58	31.00	
1999	03	09.812080	12	13	54.570	+74	58	48.00	
1999	03	09.814320	12	13	53.270	+74	58	59.70	
1999	03	09.816840	12	13	51.940	+74	59	13.70	
1999	03	09.817800	12	13	51.760	+74	59	19.40	
1999	03	09.818840	12	13	50.760	+74	59	24.00	
1999	03	09.821110	12	13	49.050	+74	59	35.00	
1999	03	09.822410	12	13	49.050	+74	59	42.70	
1999	03	12.855760	11	33	37.450	+79	47	00.00	
1999	03	12.856760	11	33	35.370	+79	47	05.30	
1999	03	12.859640	11	33	32.130	+79	47	24.50	
1999	03	12.862300	11	33	27.630	+79	47	40.80	
1999	03	12.864050	11	33	25.290	+79	47	53.20	
(16064)									
1999	12	08.927990	03	18	09.300	+39	55	38.10	14.3 R
1999	12	08.941630	03	18	10.640	+39	55	44.00	14.6 R
1999	12	08.944290	03	18	11.010	+39	55	44.60	–
1999	12	08.950180	03	18	11.690	+39	55	46.10	14.3 R
1999	12	08.952360	03	18	12.120	+39	55	46.60	14.3 R
1999	12	08.955120	03	18	12.510	+39	55	47.30	14.6 R
1999	12	08.959420	03	18	12.950	+39	55	51.00	–
1999 US ₃									
1999	12	12.899040	07	29	54.420	+20	57	13.20	13.1 R
1999	12	12.899840	07	29	54.350	+20	57	07.40	12.9 R
1999	12	12.905610	07	29	54.180	+20	56	43.00	–
1999	12	12.908910	07	29	53.380	+20	56	25.20	12.6 R
1999	12	12.911310	07	29	53.600	+20	56	15.10	12.5 R
1999	12	12.917340	07	29	53.140	+20	55	43.40	12.7 R
1999	12	12.918010	07	29	53.250	+20	55	42.50	–
1999	12	12.918600	07	29	53.220	+20	55	38.60	12.5 R
1999	12	12.920390	07	29	53.010	+20	55	30.20	–
1999	12	12.920960	07	29	52.870	+20	55	27.00	12.5 R
1999	12	12.921540	07	29	52.910	+20	55	25.40	12.5 R
1999	12	12.923680	07	29	52.710	+20	55	15.20	–
1999	12	12.924330	07	29	52.760	+20	55	11.10	12.4 R
1999	12	12.924980	07	29	52.550	+20	55	08.40	12.5 R

**ПРЕЦИЗНИ CCD АСТРОМЕТРИЈСКИ ПОЛОЖАЈИ МАЛИХ ПЛАНЕТА
ПОСМАТРАНИХ СА БЕОГРАДСКЕ ОПСЕРВАТОРИЈЕ 1999. ГОДИНЕ**

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УДК 523.41/.44
Стручни рад

У току 1999. године на Астрономској опсерваторији у Београду посматрано је 6 малих планета и изведени прецизни астрометријски положаји,

укупно 76. При снимању је коришћена SBIG CCD ST-8 камера и Askania астрограф. У обради коришћени су GSC и USNO A2.0 каталози.