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NEW VARIABLE STARS DISCOVERED IN THE MISAO PROJECT

V: MisV0251–MisV0300

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This report describes 50 new variable stars (MisV0251–MisV0300) discovered in the course of the MISAO Project.

These objects are detected automatically by the PIXY system as candidates of variable stars from unfiltered CCD images taken by Kadota between 1999 April and August, then confirmed by Yoshida and Kadota. Further details are same as described in Yoshida and Kadota (1999).

Table 1 contains the list of 50 new variable stars. The position and magnitude are measured using USNO-A1.0 catalog. The magnitude is based on a preliminary V magnitude calculated from R and B magnitude in the catalog based on Kato's (1998) equation:

$$V = R + 0.375(B - R)$$

The finding charts are available electronically as 4793-f[*nnn*].eps where [*nnn*] refers to the serial number assigned to the star in the first column of Table 1.

NSV 12738 is 4.4 arcmin from MisV0251. However, it was detected on our unfiltered CCD image as around 16 mag. Therefore, MisV0251 is another new variable star.

EM Oph is 4.5 arcmin from MisV0261. QY Oph is 4.0 arcmin from MisV0263. IN Sco is 4.7 arcmin from MisV0265. No star brighter than 14 mag was detected at these positions on our unfiltered CCD images. However, considering the large distance, MisV0261, MisV0263 and MisV0265 are probably new variable objects.

MisV0297 is located at a distance of 129 arcsec from the cataloged position of the obscure nova DZ Ser. A slight uncertainty of the coordinates reported among existing references (Duerbeck 1987) may have led to a possible identification. More extensive study of the new variable and the comparison with the discovery material of DZ Ser are needed to clarify the situation.

References:

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Table 1: List of New Variable Stars

Code	R.A. (J2000.0) Decl.		Unfiltered		Type	Identified with
			CCD Mag.			
			Max	Min		
MisV0251	20 ^h 02 ^m 23 ^s .74	+45°31'48"0	11.4	12.4	?	USNO-A1.0 1350.11732426 IRAS 20008+4523
MisV0252	18 02 20.11	-03 40 43.9	12.9	14.1	?	USNO-A1.0 0825.11795307 IRAS 17596-0340
MisV0253	18 57 42.25	+11 12 57.3	11.6	12.3	?	IRAS 18553+1108
MisV0254	17 57 23.02	-18 02 45.8	12.6	13.4	?	IRAS 17544-1802
MisV0255	19 01 32.35	+15 00 21.7	11.8	12.7	?	IRAS 18592+1455
MisV0256	18 59 47.58	+13 28 44.5	12.6	13.3	?	USNO-A1.0 0975.14019473 IRAS 18574+1324
MisV0257	20 03 12.50	+32 21 57.8	13.6	14.7	?	USNO-A1.0 1200.14514625 IRAS 20012+3213
MisV0258	21 00 41.79	+38 49 59.4	11.6	12.3	?	USNO-A1.0 1275.14728592 IRAS 20587+3838
MisV0259	19 59 44.71	+26 52 03.5	14.2	15.2	?	USNO-A1.0 1125.15056625 IRAS 19577+2643
MisV0260	20 00 27.38	+27 12 27.3	12.7	13.6	?	USNO-A1.0 1125.15087259 IRAS 19584+2704
MisV0261	16 59 35.06	-25 54 29.0	11.8	13.9	?	
MisV0262	16 59 36.49	-27 47 36.4	11.2	13.2	?	USNO-A2.0 0600.22839578
MisV0263	17 02 59.91	-29 06 44.0	11.9	[14.1	?	USNO-A2.0 0600.23335362
MisV0264	16 57 01.88	-29 14 14.9	12.7	13.9	?	USNO-A2.0 0600.22499831
MisV0265	17 00 31.51	-30 20 54.9	12.0	13.4	?	
MisV0266	17 59 53.52	-07 50 18.1	13.6	15.0	?	
MisV0267	17 57 39.59	-02 48 19.9	13.1	15.0	SR?	USNO-A2.0 0825.11617631
MisV0268	18 58 29.87	+22 58 20.5	12.1	13.5	?	USNO-A2.0 1125.10932827
MisV0269	18 57 18.98	+24 53 50.5	13.0	[15.1	SR?	USNO-A2.0 1125.10869563
MisV0270	16 59 41.97	-22 50 13.0	11.7	13.4	?	USNO-A2.0 0600.22852019 IRAS 16566-2245
MisV0271	17 01 48.55	-23 01 15.3	10.7	11.7	?	USNO-A2.0 0600.23151309 IRAS 16587-2256
MisV0272	17 01 34.34	-22 44 47.6	12.2	14.5	?	USNO-A2.0 0600.23118070 IRAS 16585-2240
MisV0273	16 59 45.19	-24 12 49.8	13.0	13.8	?	IRAS 16567-2408
MisV0274	17 00 04.55	-23 56 41.8	11.9	14.0	?	USNO-A2.0 0600.22904491 IRAS 16570-2352
MisV0275	17 01 37.70	-23 38 44.0	11.0	13.1	?	GSC 6811.0931 USNO-A2.0 0600.23126044 IRAS 16585-2334

Table 1 (cont.)

Code	R.A. (J2000.0)	Decl.	Unfiltered CCD Mag.		Type	Identified with
			Max	Min		
MisV0276	16 ^h 58 ^m 22 ^s .42	-25°48'46"9	11.7	[13.1	?	IRAS 16552-2544
MisV0277	16 58 52.97	-27 58 03.7	11.7	12.8	?	USNO-A2.0 0600.22739287 IRAS 16557-2753
MisV0278	16 56 57.13	-30 01 10.1	10.7	11.7	?	USNO-A2.0 0525.24992420 IRAS 16537-2956
MisV0279	16 57 12.82	-12 51 22.7	11.1	12.0	SR?	USNO-A2.0 0750.10195334 IRAS 16544-1246
MisV0280	16 58 46.73	-12 43 46.7	11.2	[14.2	M?	GSC 5651.1718 USNO-A2.0 0750.10225820 IRAS 16559-1239
MisV0281	18 02 43.59	-02 52 45.1	13.9	14.8	SR?	IRAS 18001-0252
MisV0282	17 59 30.06	-04 10 50.8	14.0	14.9	?	IRAS 17568-0410
MisV0283	17 58 11.47	-05 45 13.3	14.0	14.9	?	IRAS 17555-0545
MisV0284	18 02 49.22	-06 32 36.0	13.9	14.7	?	IRAS 18001-0632
MisV0285	18 00 00.16	-05 54 11.1	13.5	14.4	?	USNO-A2.0 0825.11696058 IRAS 17573-0554
MisV0286	18 01 51.07	-06 30 15.2	12.9	15.5	?	IRAS 17591-0630
MisV0287	18 01 13.99	-06 08 42.5	12.8	15.2	?	USNO-A2.0 0825.11733574 IRAS 17585-0608
MisV0288	17 58 08.32	-07 17 42.2	13.7	16.3	?	USNO-A2.0 0825.11634411 IRAS 17554-0717
MisV0289	18 00 07.51	-07 02 35.4	13.0	14.8	?	IRAS 17573-0702
MisV0290	18 00 38.43	-07 14 20.0	13.5	15.7	?	IRAS 17579-0714
MisV0291	17 59 17.66	-06 57 51.5	12.4	14.5	?	USNO-A2.0 0825.11673408 IRAS 17565-0657
MisV0292	17 58 19.70	-07 31 55.4	13.2	14.6	?	USNO-A2.0 0750.12420588 IRAS 17556-0731
MisV0293	18 00 07.23	-08 07 45.0	12.5	13.5	?	IRAS 17573-0807
MisV0294	18 00 10.41	-08 09 54.3	13.5	15.3	?	USNO-A2.0 0750.12483760
MisV0295	17 59 36.57	-09 28 32.5	11.0	13.3	?	IRAS 17568-0928
MisV0296	17 59 01.18	-08 32 06.9	12.9	14.5	?	IRAS 17563-0831
MisV0297	18 00 53.02	-10 32 36.0	12.3	14.6	SR?	USNO-A2.0 0750.12507224 IRAS 17581-1032
MisV0298	17 58 13.22	-09 47 54.5	11.9	[14.5	?	USNO-A2.0 0750.12417014 IRAS 17554-0947
MisV0299	18 58 29.95	+20 06 35.5	9.8	10.6	?	USNO-A2.0 1050.12423588 IRAS 18563+2002
MisV0300	18 57 26.51	+19 48 47.6	11.1	12.6	SR?	GSC 1593.1782 USNO-A2.0 1050.12354776 IRAS 18552+1944