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REVISED ASTROMETRY OF 33 VARIABLE STARS

YOSHIDA, S.¹; KADOTA, K.²; KATO T.³

¹ MISAO Project, 1065-16 Miyawada Fujishiro-machi Kitasoma-gun Ibaraki 300-1514, Japan,
e-mail: seiichi@muraoka.info.waseda.ac.jp

² MISAO Project, 77-1-3-12-204 Koshikiya Ageo City Saitama 362-0064, Japan,
e-mail: kenic-k@astroarts.co.jp

³ Dept. of Astronomy, Kyoto University, Kyoto 606-8502, Japan, e-mail: tkato@kusastro.kyoto-u.ac.jp

This report describes the revised astrometry and identifications of 33 variable stars discovered in the course of variable star survey based on the MISAO Project observations.

These objects are detected automatically by the PIXY system as candidates of new variable stars from unfiltered CCD images taken by Kadota between 1999 April and August. Further details are the same as described in Yoshida and Kadota (1999). The system searched the GCVS catalog, NSV catalog, etc., and no identified object were found within 5 arcsecs. But within a larger search area, the following known variable stars are found in the catalogs. We could not find any other variable objects on our images to be identified with the known variable stars at and around the positions. Therefore we judged the positions in the catalogs are inaccurate and our objects must be identified with them.

Table 1 shows the astrometry, photometry and identifications. The positions and magnitudes 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:

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

In the revision of the GCVS, AF Aql is identified with USNO-A1.0 0750.16045701. However, USNO-A1.0 0750.16045701 is not detected from our images. In addition, the variable object we found is closer to the position given in the original GCVS. Therefore, we determined our object is true AF Aql.

VX Aql is identified with HS 1466, one of the variable stars discovered by FASTT, Flagstaff Astrometric Scanning Transit Telescope (cf. Henden et al. 1998). V886 Aql is also identified with HS 1463, one of the variable stars discovered by FASTT.

We identified USNO-A1.0 0750.16136750 with HS Aql. But this star is closer to HT Aql. HS Aql is Mira type and HT Aql is probably RR Lyrae type. USNO-A1.0 0750.16136750 is identified with IRAS 18577-0844, therefore, we determined it is proper for Mira-type object.

Table 1: Revised Astrometry and Identifications

Star	R.A. (J2000.0) Decl.		Unfiltered		Identified with
			CCD Mag.		
			Max	Min	
AF Aql	18 ^h 59 ^m 32 ^s .17	−09°06′58″.5	11.2	12.6	
AG Aql	18 59 32.748	−06 08 51.14	10.7	11.9	USNO-A1.0 0825.13965291
AN Aql	19 02 37.897	−09 32 21.03	10.8	12.7	GSC 5711.0895
AO Aql	19 02 44.043	−06 11 11.51	9.9	12.0	USNO-A1.0 0750.16330736 GSC 5140.1058
EU Aql	18 58 23.761	+16 46 54.84	9.1	10.0	USNO-A1.0 0825.14217142 GSC 1585.0882
HS Aql	19 00 27.795	−08 40 26.07	10.8	12.5	USNO-A1.0 1050.12635261
QQ Aql	19 02 08.451	−09 04 11.18	10.9	11.8	USNO-A1.0 0750.16136750
UX Aql	19 00 25.162	−11 29 22.69	11.7	12.9	USNO-A1.0 0750.16289091
V431 Aql	20 00 28.283	+10 47 21.43	10.7	12.1	USNO-A1.0 0750.16132360 GSC 1075.1268
V757 Aql	20 00 19.649	+09 54 25.11	11.5	12.5	USNO-A1.0 0975.17767279 GSC 1075.1971
V759 Aql	20 00 14.785	+13 54 58.13	10.3	12.4	USNO-A1.0 0975.17756839
V886 Aql	18 59 11.277	−01 19 09.83	10.0	11.7	USNO-A1.0 0975.17750986
V938 Aql	19 00 32.257	−07 27 54.23	10.0	12.3	USNO-A1.0 0825.13934521
VX Aql	19 00 09.508	−01 34 56.99	8.3	9.2	USNO-A1.0 0825.14049433 GSC 5128.0947
DI Cyg	21 02 26.024	+30 55 23.05	9.2	10.8	USNO-A1.0 0825.14018550 GSC 2701.1892
DN Cyg	21 58 15.41	+52 02 12.5	11.6	12.4	USNO-A1.0 1200.17132208
KM Cyg	20 00 13.42	+36 08 45.8	10.3	11.5	
V419 Cyg	20 02 29.75	+38 35 18.6	11.8	14.1	
V739 Cyg	19 58 23.811	+37 15 52.19	13.5	14.9	USNO-A2.0 1200.14007663
V1463 Cyg	19 57 43.163	+36 05 44.16	12.7	13.8	USNO-A1.0 1200.14176810
V1511 Cyg	20 00 29.538	+36 46 10.72	10.3	11.3	USNO-A2.0 1200.14138751
V1893 Cyg	20 59 47.910	+34 20 06.91	12.4	13.3	USNO-A1.0 1200.16985829
V1897 Cyg	21 02 27.084	+35 09 59.29	12.7	13.5	USNO-A1.0 1200.17133164
DM Lac	22 04 35.703	+52 53 59.36	9.1	10.1	USNO-A1.0 1425.12892254
YY Lyr	19 02 11.799	+29 35 49.91	10.8	12.3	USNO-A1.0 1125.11278836
DQ Oph	16 57 46.743	−30 04 39.33	11.5	12.6	USNO-A2.0 0525.25122865
DX Oph	16 58 18.348	−25 34 09.66	10.6	12.1	GSC 6814.1391
EG Oph	16 59 00.39	−26 01 52.0	9.3	10.2	USNO-A2.0 0600.22660252
ES Oph	17 01 16.57	−29 54 51.4	11.6	12.9	
MO Oph	16 57 36.651	−29 52 28.31	11.3	13.2	USNO-A2.0 0600.22571075
NT Oph	16 59 06.979	−25 44 22.27	11.8	13.9	USNO-A2.0 0600.22770013
NV Oph	16 59 30.735	−27 57 43.75	9.7	12.5	USNO-A2.0 0600.22826044
OW Oph	17 00 35.835	−30 09 24.08	10.8	13.3	USNO-A2.0 0525.25560998

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