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**COORDINATES AND IDENTIFICATIONS FOR
SONNEBERG VARIABLES ON MVS 254–255**

KINNUNEN, TIMO¹; SKIFF, BRIAN A.²

¹ Ursa Astronomical Association, Raatimiehenkatu 3 A 2, SF-00140 Helsinki, Finland (stars@personal.eunet.fi)

² Lowell Observatory, 1400 West Mars Hill Road, Flagstaff AZ 86001-4499, USA (bas@lowell.edu)

This report, the first of a series, contains accurate positions and identifications for known and suspected variables appearing on the Sonneberg *MVS* charts 254 and 255. Discovery details about the stars were given by Hoffmeister in 1936 (Hoffmeister 1936), but the corresponding identification charts for non-Durchmusterung stars were not published until after the War (Hoffmeister 1957, *et seq.*).

The working methods for star-identification were similar to those of Manek (1997) and of Skiff (1999), which includes comparison of the source charts against computer-screen plots of the GSC and/or USNO-A catalogues, and with Digitized Sky Survey (DSS) images via the Goddard ‘SkyView’ server. Identifications in other surveys were sought using SIMBAD and the Strasbourg ‘VizieR’ catalogue-query utility. The tedious work of identifying the stars on the sky and obtaining coordinates was done by Kinnunen, while Skiff examined difficult cases and did sleuthing in the literature.

Although some of the stars have accurate coordinates previously published, we have made the identifications *ab initio* in order to provide a complete list matching the *MVS* chart series. The tables below the ‘Kiel’ (or other) preliminary designation in the first column, followed by the GCVS name. An asterisk here indicates a note following the table.

Next come coordinates and the source for these in column ‘s’, coded as follows: A = USNO-A2.0 (Monet *et al.* 1998), G = GSC-ACT (Gray 1999), S = estimate using large-scale DSS frames from ‘SkyView’ (McGlynn *et al.* 1996), T = Tycho-2 (Høg *et al.* 2000). The three star catalogues were queried through the Strasbourg ‘VizieR’ utility (Ochsenbein *et al.* 2000). The positions were taken in the descending order (also roughly in order of decreasing brightness): Tycho-2, GSC-ACT, USNO-A2.0, ‘SkyView’ estimate. The corresponding uncertainties in the positions (at epoch 2000) are approximately 0^h05, 0^h4, 0^h5, and 2^h, respectively. The Tycho-2 positions are for both epoch and equinox 2000, but the GSC-ACT and USNO-A2.0 positions are for the epoch of the plates involved.

The final columns show GSC and IRAS names as available. Further identifications are given in the Notes. The IRAS and other names are given only if they are “new” in the sense of being not present or not linked in SIMBAD.

Table 1: Variables on *MVS* 254–255

AN	GCVS	RA (2000)	Dec	s	GSC	IRAS
660.1935	DE Pup	7 ^h 48 ^m 41 ^s .17	−20°24′14″.7	G	5989-1439	
661.1935	BV Pup*	7 49 05.26	−23 34 00.1	A		
662.1935	HR Pup	7 52 58.19	−20 52 45.8	G	5994-1340	07507–2044
663.1935	DG Pup	7 54 19.50	−20 31 46.1	G	5990-0683	07521–2023
664.1935	ET Pup*	7 54 37.19	−28 04 58.4	G	6561-1413	
666.1935	DK Pup	7 56 57.76	−25 31 05.4	T	6557-2234	
667.1935	HW Pup	7 57 42.17	−27 36 06.8	G	6562-3505	
668.1935	EX Pup	8 00 38.30	−20 59 34.6	A		07584–2051
669.1935	NSV 3860*	8 00 39.30	−26 56 47.5	T	6562-2125	07585–2648
670.1935	NSV 3862	8 00 58.03	−23 54 45.6	A		
671.1935	IK Pup	8 03 41.76	−23 50 08.2	T	6554-0155	
673.1935	NSV 3898	8 05 32.76	−21 11 47.1	G	6007-1617	08033–2103
674.1935	NSV 3908*	8 07 25.48	−21 49 47.4	G	6007-1592	
675.1935	DO Pup	8 09 05.82	−21 49 26.9	G	6008-2831	
676.1935	NSV 3929*	8 10 06.94	−20 18 28.8	G	6004-1148	08078–2009
677.1935	FL Pup	8 10 21.04	−23 00 47.9	A		08081–2251
679.1935	IT Pup	8 13 02.94	−28 20 32.2	T	6567-1003	
680.1935	CD Pup	8 13 42.79	−24 17 46.9	A		08115–2408
681.1935	FP Pup	8 15 58.63	−23 19 11.9	G	6556-2064	
682.1935	NSV 3978*	8 16 24.07	−21 19 14.3	G	6009-0204	08141–2109
683.1935	FO Pup	8 15 30.32	−24 59 06.1	G	6560-0718	08133–2449
684.1935	NSV 3998	8 18 22.31	−20 32 08.4	A		
685.1935	NSV 3995*	8 17 49.49	−26 00 48.2	G	6560-2934	08156–2551
687.1935	IX Pup	8 19 04.55	−24 02 08.2	G	6556-3742	08169–2352
688.1935	IY Pup	8 19 23.00	−28 15 05.6	A		08172–2805
689.1935	OZ Pup	8 21 53.45	−22 58 12.3	G	6556-5010	08196–2248
690.1935	NSV 4048*	8 23 15.20	−20 58 46.7	G	6009-3815	
691.1935	KM Pup*	8 25 08.90	−22 41 37.9	A		08229–2231
692.1935	NSV 4067*	8 25 23.83	−26 05 04.4	T	6573-4986	

Notes:

- BV Pup apparently in outburst on red plate used for USNO-A2.0 (mr=13.4).
ET Pup also GSC 6561-3808. GSC v1.1 coordinates given by Morel (1994).
KM Pup GCVS 4.1 position 3/3 in error.
NSV 3860 CD−26°5353. GSC v1.1 coordinates given by Lopez (1993).
NSV 3908 GSC v1.1 coordinates given by Lopez (1993).
NSV 3929 GSC v1.1 coordinates given by Lopez (1993).
NSV 3978 CGCS 2133. GSC v1.1 coordinates also given by Lopez (1993).
NSV 3995 GSC v1.1 coordinates given by Lopez (1993).
NSV 4048 GSC v1.1 coordinates given by Lopez (1993).
NSV 4067 GSC v1.1 coordinates given by Lopez (1993).

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