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**IDENTIFICATION OF DAHLMARK VARIABLES: I**

The amateur observer Lennart Dahlmark has published a useful series of IBVS notes listing a number of candidate variable stars, most of which were new. Although adequate charts and reliable semi-accurate positions were supplied, no other identifications were usually given. If the stars are to be recovered for further study and linkage within other surveys (IRAS, etc.), then precise positions must be determined to make identification unambiguous within crowded galactic fields.

Table 1 gives precise positions and identifications for the first list of variables published by Dahlmark (1982). The variable stars were identified independently by the two authors. Skiff compared Dahlmark's charts against the Digitized Sky Survey (DSS) using the Goddard SkyView facility (Scollick, 1995). The identifications were found within SIMBAD (for the GSC) and in the U.S. Naval Observatory's UJ1.0 and A0.9 star catalogues (Monet *et al.*, 1994; Monet *et al.*, 1996). Williams compared Dahlmark's charts against the DSS, maintained as a service at the Center for Astrophysics by the Computation Facility. Positions are taken either from the GSC or (preferably) from the USNO A1.0 (UA 1.0) catalogue. For those objects not found in these catalogues, positions were measured from the DSS, using 12–40 comparison stars from the UA 1.0 catalogue; the r.m.s. residuals of the comparison stars were under 0".3.

Table 1. Dahlmark Variables LD 8 – LD 65

Name	RA (2000)	Dec	s	IRAS	GSC	n	Other ids.
LD 8	19 50 39.58	+50 42 23.3	U	19492+5034			
LD 9	19 52 53.29	+46 21 45.8	G	19513+4613	3558-01549		
LD 10	19 53 47.98	+47 11 43.5	D		3562-01687	*	
LD 11	19 58 28.33	+47 06 10.4	D	19569+4657			
LD 12	19 59 11.98	+48 43 33.3	G	19577+4835	3562-00100		
LD 13	20 00 03.91	+41 00 44.7	U			*	
LD 14	20 03 45.61	+47 42 16.9	D			*	
LD 15	20 09 29.76	+47 57 02.1	G	20079+4748	3563-00128		
LD 16	20 10 20.32	+38 10 48.5	G		3151-02905		
LD 17	20 10 56.68	+40 58 21.1	U				
LD 18	20 11 29.58	+37 01 03.3	U				
LD 19	20 12 08.08	+39 36 49.7	G	20103+3927	3155-02205		V1633 Cyg
LD 20	20 17 17.15	+45 34 42.0	U		3572-00486		
LD 21	20 18 00.34	+43 43 54.9	U				
LD 22	20 20 24.97	+49 42 12.1	U				
LD 23	20 20 55.94	+50 27 29.1	G		3580-00223		V1774 Cyg

Table 1: Dahlmak Variables LD 8 – LD 65 (cont.)

Name	RA (2000)	Dec	s	IRAS	GSC	n	Other ids.
LD 24	20 34 06.09	+49 21 54.4	U	20325+4911			
LD 25	20 35 53.57	+42 58 26.1	G		3161-00327		
LD 26	20 36 57.08	+37 52 33.8	U	20350+3741			V1828 Cyg
LD 27	20 39 59.55	+49 57 49.0	U				
LD 28	20 42 24.57	+42 18 05.2	U			*	
LD 29	20 47 54.43	+45 41 27.0	D		3574-00339		
LD 30	20 48 13.95	+46 33 28.3	U				
LD 31	20 50 04.98	+37 29 59.6	U	20481+3718			V1864 Cyg
LD 32	20 52 27.87	+46 24 51.7	G		3575-04390		
LD 33	20 55 08.00	+38 37 43.7	U				
LD 34	20 57 53.62	+42 45 54.7	G		3175-00313		V1891 Cyg
LD 35	21 00 38.17	+38 38 32.2	D	20586+3826	3168-00004		
LD 36	21 03 04.03	+37 48 30.0	G	21011+3736	3168-00351		V1800 Cyg
LD 37	21 04 17.08	+37 51 06.6	G	21023+3739	3168-00575	*	
LD 38	21 06 33.13	+37 32 51.0	U		3168-00583	*	
LD 39	21 07 29.80	+37 10 44.7	G		2713-00439	*	V1804 Cyg
LD 40	21 07 39.51	+40 40 01.6	G		3172-01009		
LD 41	21 08 10.43	+37 28 16.4	U				
LD 42	21 09 44.00	+37 49 33.4	G		3168-02663		
LD 43	21 14 46.21	+44 17 45.0	G	21128+4404	3181-03797		V1554 Cyg
LD 44	21 15 06.92	+44 42 16.7	D	21132+4429	3181-01373		EM* CGHA 73
LD 45	21 17 17.59	+50 45 10.4	U	21156+5032	3601-00623		
LD 46	21 18 50.64	+39 54 13.2	U				
LD 47	21 19 41.11	+50 40 42.3	U				
LD 48	21 19 45.03	+49 41 59.0	G	21180+4929	3597-01643		EM* VES 391
LD 49	21 21 00.26	+38 13 50.9	G		3182-00035		V1903 Cyg
LD 50	21 23 41.39	+48 11 15.9	D	21219+4758	3594-00490		
LD 51	21 27 29.74	+39 17 11.0	U				
LD 52	21 28 44.83	+38 00 13.8	D		3182-04181	*	V1724 Cyg
LD 53	21 30 45.44	+43 31 58.4	G	21288+4318	3195-01178		V1566 Cyg
LD 54	21 30 49.90	+43 30 15.3	D		3195-01686	*	
LD 55	21 31 15.00	+38 46 32.1	U	21292+3833			
LD 56	21 31 28.58	+40 58 30.9	U	21294+4045		*	V1614 Cyg
LD 57	21 32 31.98	+38 57 54.8	G		3183-01551		V1910 Cyg
LD 58	21 32 50.27	+39 22 08.2	U	21308+3908			
LD 59	21 33 21.47	+38 02 45.6	U			*	V1615 Cyg
LD 60	21 36 21.64	+38 23 23.6	G		3183-01717		
LD 61	21 38 31.79	+45 42 46.7	U	21366+4529			V1568 Cyg
LD 62	21 39 40.62	+43 18 20.4	U	21377+4304			
LD 63	21 42 36.55	+44 56 36.1	G	21406+4442	3196-02133		V1571 Cyg
LD 64	21 43 19.47	+50 39 14.3	U	21415+5025			V1734 Cyg
LD 65	21 43 33.64	+49 08 58.3	G	21417+4855	3599-02290		CGCS 5431

## Notes:

- LD 10 Not visible on POSS-I O print, and R  $\sim$  17 on E print. GSC plate taken when V  $\sim$  15, blended with companion star to N with position end-figures 47<sup>s</sup>84/49<sup>'</sup>9 (D).
- LD 13 SE of two stars.
- LD 14 Not IRAS 20021+4733.
- LD 28 The brighter of two stars on DSS.
- LD 37 Spectral type M5/7 (Dolidze 1975).
- LD 38 Spectral type M5/7 (Dolidze 1975).
- LD 39 Spectral type M7 (Dolidze 1975).
- LD 52 ID verified against chart in Bychkov (1977b); SW star of two.
- LD 54 Very close pair blended in GSC. Position given is for brighter (on DSS) NW component. SE component has end figures 50<sup>s</sup>10/14<sup>'</sup>1 (D).
- LD 56 ID verified against chart in Bartunov (1977).
- LD 59 ID verified against chart in Bychkov (1977a).

The table lists the ‘LD’ name followed by the J2000 position and its source, coded in the table and notes as follows: U = UA 1.0; G = GSC 1.1; D = measurement from DSS using UA 1.0 comparison stars. The next two columns give IRAS point-source and GSC designations. An asterisk in the next column indicates a note at the bottom of the table. The final column contains GCVS designations and other names from SIMBAD.

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Brian A. SKIFF  
 Lowell Observatory  
 1400 West Mars Hill Road  
 Flagstaff AZ 86001-4499  
 U.S.A.  
 e-mail: [bas@lowell.edu](mailto:bas@lowell.edu)

Gareth V. WILLIAMS  
 Harvard-Smithsonian Center  
 for Astrophysics  
 60 Garden Street  
 Cambridge MA 02138-1516  
 U.S.A  
 e-mail: [gwilliams@cfa.harvard.edu](mailto:gwilliams@cfa.harvard.edu)

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