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IDENTIFICATIONS AND COORDINATES FOR NINETEEN NSV STARS

The New Catalogue of Suspected Variable Stars (Kholopov et al. 1982) contains a number of neglected stars which have been known for many decades. It is clear that for some NSV stars further study is hampered by the scanty nature of the published data, i.e. coordinates of low accuracy; magnitude ranges which may refer to an obsolete magnitude scale; finder charts which are non-existent.

An example of a set of variables which illustrates the above difficulties is the set of twenty six new variables announced by Voûte (1927). Five of these have received official names (MW Cen, TV Hya, RZ Nor, TU Nor, and probably LQ Nor reported in this present work). Two other stars, NSV 5596 and NSV 7789, were known at discovery to be CPD stars. We are left with nineteen variables whose identities are still somewhat obscure - the published coordinates are only approximate, no finder charts exist, and no magnitudes are available at all for many of them.

The purpose of this paper is to establish secure identifications for the nineteen poorly known variables. The remainder of Voûte's stars, mentioned above, are better known and will not be discussed further. I have used Voûte's original discovery paper to determine the position of each variable with greater accuracy. He gave brief descriptive notes for each star, regarding its apparent behaviour and position relative to nearby CPD stars. These offset positions usually (but not always) enabled me to pin down the location of each variable with higher degree of confidence. Small finder charts were plotted for each object using stars extracted from the Guide Star Catalogue (GSC). The limiting magnitude of the GSC charts is generally around 13.5(J) which is very similar to the limit of the original plates used to discover the variables (Voûte 1927). An inspection of each GSC chart generally revealed a suitable candidate. For a few of Voûte's stars no obvious candidate could be found in the GSC, so Robert H. McNaught (Siding Spring Observatory) kindly agreed to search UK Schmidt plates for possible candidates. The results of the research are summarized in Table 1. Additional notes appear below for a small number of stars difficult to identify.

NSV 4897: Has two fainter companions. The first one, of about magnitude 13.0, lies 6s preceding, 17" N. The other is of magnitude 13.5 and lies 54" N; it is known as GSC 8609-1976.

NSV 5060: The probable candidate is an anonymous star of about magnitude 14, located 1.0' N of the position given by Voûte. No star seen at his position on UK Schmidt plate J2237, 1976 April 22. No variable or coloured star in vicinity, according to McNaught (1991).

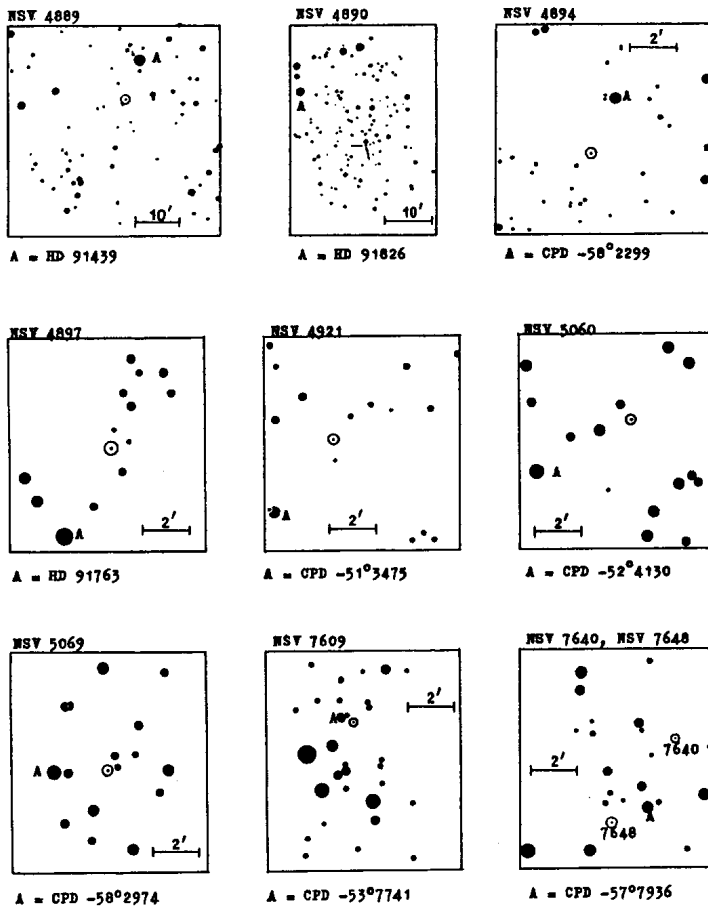


Fig. 1. Finder charts for the NSV stars. North is up, and East is left for each chart. Scale bar in each chart gives the scale in arc minutes.

NSV 7679: Identity a little unclear. UK Schmidt plates show an anonymous red star very close to the position stated by Voûte, but it is rather faint and probably too faint for his plates. No variability found by McNaught (1991). Voûte suggested that his variable is of Algol type, of period 11 days or a submultiple of it, and amplitude 0.6 mag. The nearby star GSC 8320-2049 is the more likely candidate, as it is not particularly coloured (by comparing UK Schmidt J and I plates) and is within the limit of the discovery plates.

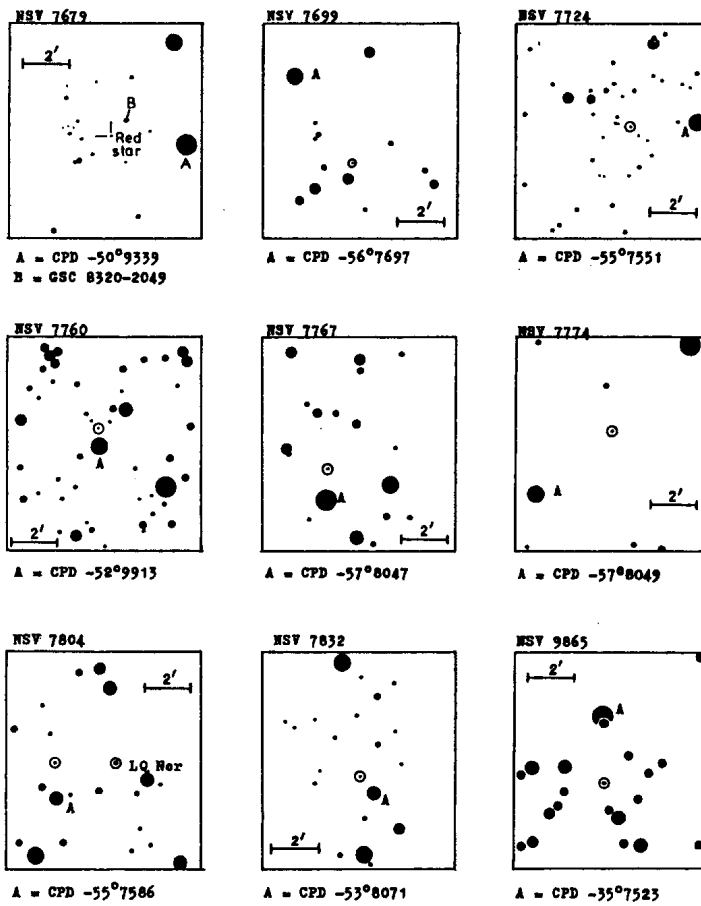


Fig. 1 (contd.). Finder charts for the NSV stars. North is up, and East is left for each chart. Scale bar in each chart gives the scale in arc minutes.

NSV 7724: Identity a little unclear. Candidate listed in Table 1 is the brightest star in the immediate vicinity of Voûte's coordinates. Other, fainter stars lie closer to his position. No variable or coloured star in vicinity, according to McNaught (1991).

Table 1:  
IDENTIFICATIONS AND COORDINATES FOR NINETEEN NSV STARS.

NSV No.	GSC No.	GSC		R.A. (2000) DEC.		Voûte Id. (1875 position)	Remarks
		Mag(J)					
			h	m	s	o	..
4889	8209-266	12.52	10 32 43.9	-50 46 52		10 27.6 -50 8	
4890	8956-2001	11.55	10 32 49.8	-50 27 52		10 28.2 -59 50	
4894	8613-2569	12.99	10 33 45.5	-59 37 33		10 29.1 -58 59	
4897	8609-2859	12.04	10 34 14.9	-56 45 59		10 29.3 -56 7	Two companions.
4921	8209-1199	12.62	10 38 51.5	-52 04 13		10 33.7 -51 25	
5060	-----	(14)	11 01 30.0	-53 34 45		10 56.1 -52 56	Best candidate.
5069	8627-898	11.99	11 02 42.5	-59 36 36		10 57.5 -58 56	
7609	8711-3885	12.62	16 19 43.2	-53 44 38		16 10.0 -53 28	
7640	8719-1115	10.99	16 22 12.3	-57 40 23		16 11.9 -57 22	
7648	8719-1381	11.26	16 22 32.5	-57 43 56		16 12.2 -57 26	Mispriated as 16 22.2.
7679	-----	<14	16 24 22.1	-50 26 17			Doubtful. Red.
7679	8320-2049	12.60	16 24 18.3	-50 25 33		16 14.9 -50 9	Good candidate. White.
7699	8719-818	13.48	16 26 32.9	-57 01 47		16 16.2 -56 44	
7724	-----	(13.5V)	16 28 08.0	-55 38 16		16 18.1 -55 20	Best candidate.
7760	8712-348	11.88	16 30 58.0	-52 49 49		16 21.2 -52 33	
7767	8720-116	12.72	16 31 39.7	-57 40 55		16 21.2 -57 24	
7774	8720-1256	13.37	16 31 59.8	-58 07 17		16 21.6 -57 52	
LQ Nor	8716-295	12.25	16 33 39.4	-56 12 29		16 23.6 -55 56	} Same 1875 coords. given by Voûte.
7804	8716-317	12.71	16 33 57.8	-56 12 31		16 23.6 -55 56	
7832	8712-2444	11.98	16 35 55.5	-53 16 27		16 26.1 -53 0	
9865	7386-1741	11.56	17 56 46.3	-35 14 52		17 48.4 -35 13	=CoD-35 12083 =CPD-35 7524

Table 1: The data found for each NSV star is given here. The columns are as follows :

- Column 1 : Star number in the NSV Catalogue.  
 " 2 : Star number in Guide Star Catalogue (GSC).  
 " 3 : Magnitude from GSC (from UK Schmidt J plates).  
 " 4 : Coordinates (J2000) from GSC.  
 " 5 : The identifier used by Voûte (1927). He did not assign temporary designations, but instead referred to each star by its approximate 1875 coordinates.  
 " 6 : Remarks.

Charts: Fig. 1 gives finder charts for all variables. The scale of each chart is indicated, together with the CPD star used for offsetting by Voûte.

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- \* McNaught, R.H.: 1991, Private Communication.
- \* Voûte, J.: 1927, BAN 4, 16-17.