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IDENTIFICATION OF VARIABLE STARS IN SAGITTARIUS

In a previous number of this Bulletin, the discovery of six bright variable stars in Sagittarius was reported (Campos and Sanchez, 1987). In view of the many exhaustive surveys for variables which have been carried out over many decades for this region, the discovery of several bright, large amplitude variables is somewhat surprising. I have examined the data given (coordinates and finder charts) to see whether any of the objects have been previously reported as variable, especially with objects listed in the General Catalogue of Variable Stars (Kukarkin et al., 1970).

I found the finder charts for B, D, E, F, K and L of Campos and Sanchez's list to be more accurate and reliable than their published coordinates. In three cases (stars D, E and F) their identity was immediately apparent by comparison with previously published finder charts. The coordinates for the remaining three stars are inaccurate. I have redetermined the coordinates of all the Campos and Sanchez variables, using their finder charts and reference stars from the CPD catalogue. The results of my research are given in Table I.

Table I: coordinates and identifications for six variables

ID LETTER*	R.A. (2000)	DEC.	IDENTIFICATION	HDE CHART
	$h\ m\ s$	$^\circ\ '$		
B	18 41 33	-29 4.8	V915 Sgr	....
D	18 18 46	-36 22.5	LM Sgr	185
E	18 27 56	-33 19.8	RV Sgr = HD 169831 = CoD -33°13234	179
F	18 20 12	-32 13.4	BR Sgr = HDE 319724	179
K	18 11 36	-21 2.3	.....	165
L	18 19 2	-28 6.5	V928 Sgr	174

* Designation according to Campos and Sanchez (1987).

Column 1 gives the identification letter for each variable, as designated by Campos and Sanchez.

Columns 2 and 3 give the equatorial coordinates, for 2000.0. They have been checked against the data given by the GCVS.

Column 4 gives the identification, when found. The official variable star name is given, followed by HD and CoD numbers.

Column 5 gives the chart number in Harvard Annals 112,(Cannon and Mayall, 1949), on which the variable star field may be found.

Star K and its immediate vicinity presented an anomaly. Star K is faintly visible at the limit of HDE chart 165, but is not a known or suspected variable. Robert NcNaught, of Siding Spring Observatory, NSW, examined the field on one UK Schmidt plate, and reported that a star 1' south-following star K (according to the chart of Campos and Sanchez) is missing. This star, which I call K^1, is also missing from HDE chart 165, although the published chart suggests it is one or two magnitudes brighter than K. I have measured the coordinates of both objects, relative to SAO stars, to be as follows:

Object K : (1950) : $18^h\ 8^m\ 36^s.6$ $-21^\circ\ 4'\ 0''$ $\pm$ 4"

Object K^1: (1950) : 18 8 40.7 -21 4 34 $\pm$ 4"

Object K^1 may really be the variable intended, rather than K. It my be a nova or other eruptive variable. This of course assumes that the image corresponds to a real object, and is not a plate defect, error in plotting the chart or other spurious cause. Both objects are shown in Fig. 1.

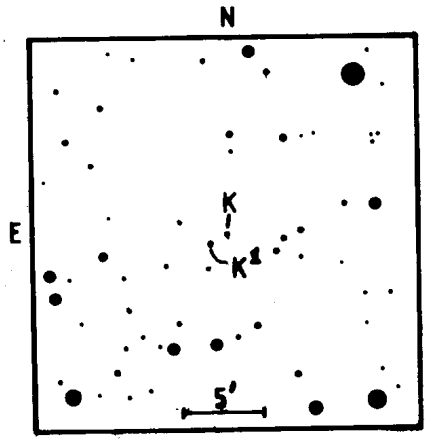

Fig. 1. Identification chart for stars K and K^1.

Of the six variables considered here, five can be definitely identified with previously named stars. The first four are all Mira variables, while the final one ('L') is Nova Sgr 1947 = V928 Sgr. No identification could be made of star 'K'. Better coordinates are presented for all objects.

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