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THE POSITION OF RZ NORMAE

RZ Nor was first studied by Gaposchkin (1952) and it is a typical R Coronae Borealis type variable star (i.e., an RCB star). Accurate positions of it as well as other southern RCB stars were published by Villada (1980); identification charts may be found elsewhere (Milone, 1990).

Unfortunately, the position as given by Villada is incorrect (I assume responsibility for the misidentification). The reason is that we had originally identified RZ Nor correctly, but an erroneous identification was passed on to us afterwards which was accepted as correct (star 1 in Fig. 1); it is actually the position of star 1 which was published by Villada.

Two plates were obtained at Córdoba with the 33-cm "Carte du Ciel" astrophotograph (plate scale 1 mm = 1') in 1975, June 8 (# 75016), and 1988, August 8 (# 88004) and were used here for determining the position of RZ Nor. The plates were measured with a manual Repsold machine in direct and reversed position to allow for bisection errors.

Reductions were made by the least-squares method using linear terms only, and positions and proper motion from the SAO Star Catalogue were used for eleven reference stars. As this star catalogue is on the FK4 system, so are our derived positions (note that Villada's positions are on the FK3 system).

Table I contains the measured (X,Y) coordinates for the reference stars (SAO Catalogue numbers in column 2) and for the stars of interest. As very little is known about the spatial motions of the RCB-stars, these (X,Y) values may be found useful in the future, when better positions and pm for the reference stars used here become available. An improved position for the present epoch could then be obtained for RZ Nor, and comparison with a future accurate position would allow a reliable pm determination.

Star No. 2 in Fig. 1 is a new suspected variable. Small brightness variations seem to be present on our plates. Further details will be given elsewhere.

Reductions were performed using all eleven reference stars and, alter-

TABLE I

Reference Star No.	Identification	Pl.#75016		Pl.#88004	
		X	Y	X	Y
1'	243858	-65.898	-41.283	-70.750	-36.923
2'	243882	-47.937	21.664	-54.328	26.412
3'	243892	-41.528	18.062	-47.831	22.987
4'	243898	-31.958	-28.957	-37.132	-23.770
5'	243935	10.651	23.562	4.149	29.774
6'	243937	10.857	13.487	4.604	19.684
7'	243942	17.114	- 3.693	11.276	2.662
8'	243956	32.175	-30.908	26.983	-24.153
9'	243971	53.816	29.007	47.180	36.266
10'	243975	57.994	-54.736	53.306	-47.433
11'	243977	61.527	20.729	55.058	28.175
	RZ Nor	1.903	6.126	- 4.152	12.106
	RZ Nor close companion	2.170	6.214	- 3.908	12.207
	Star No. 1	1.916	2.939	- 4.062	8.936
	Star No. 2	- 5.084	4.841	-11.112	10.662
	Plate center	AO=16 <sup>h</sup> 28 <sup>m</sup> 37.13 <sup>s</sup>		16 <sup>h</sup> 28 <sup>m</sup> 56.87 <sup>s</sup>	
	(1950.0)	DO=-53°12' 23.2"		-53°15' 42.7"	
	Epoch	1975.4		1988.6	

TABLE II

	R.A.	(1950.0)	DEC.
RZ Nor	16 <sup>h</sup> 28 <sup>m</sup>	45.076 <sup>s</sup>	-53°09'11.58"
RZ Nor close companion	16 28	45.924	-53 09 08.88
Star No. 1	16 28	45.100	-53 10 46.13
Star No. 2	16 28	22.005	-53 09 49.13

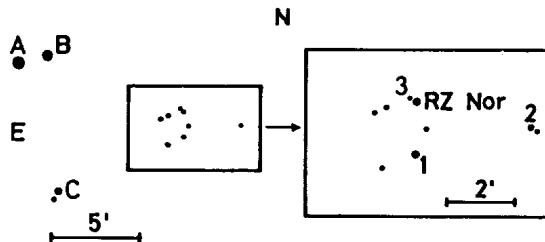


Figure 1. Some details in the region around RZ Nor are shown in this Figure. A, B and C, are SAO stars number 243947, 243945 and 243942, respectively. Star No. 1 was repeatedly confused with RZ Nor (Villada, 1980; Feast and Glass, 1973 and Glass, 1978), star No. 2 is a new suspected variable star, star No. 3 is RZ Nor close companion.

natively, employing stars No. 1', 3', 4', 6', 7', 8' and 11'. Positions derived are for the mean epoch 1982.0 and we estimate that they are accurate to  $\pm 0.4''$  in both coordinates (see Table II).

The separation and position angle between RZ Nor and its close companion (optical?) are:

1975.4	Rho = 8.34" ,	Theta = 71.8°
1988.6	Rho = 7.83" ,	Theta = 69.0°.

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