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INFORMATION BULLETIN ON VARIABLE STARS

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PHOTOELECTRIC PHOTOMETRY OF SOME Be STARS

P. Harmanec et al. (1980) have recently suggested an observational photometric campaign on Be stars. As a short contribution, we present here the observations we obtained at the Lqiano (Bologna) 60cm telescope, using a three channel photoelectric photometer with a S 11 EMI 9502B photomultiplier tube. The filters are the Schott standard ones for the UBV system.

Because all the observations were made near the meridian, mean seasonal absorption coefficients accounting also for the second order terms were considered in order to correct the differential measurements.

In the following table are reported the nightly means along with the number of individual observations. Each individual observation is the mean of four measurements of ten seconds of integration. Sometimes two nightly points were obtained. The internal scatter of the data is generally small, rarely producing a standard error on the mean amounting to more than some thousands of magnitude, thus the nightly points are accurately defined in the instrumental system. The transformation to the standard UBV system is not as satisfactory. Typical reduction errors are of  $0^m.03$ ,  $0^m.04$ ,  $0^m.05$  in V, B and U color. The comparison and check stars we used are reported in the short notes following the table. Their UBV magnitudes were taken from the references indicated.

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	V	B	U	n
<u>KX And</u>				
2443395.48	6.945	7.273	6.871	3
467.38	6.915	7.263	6.679	5
471.36	6.973	7.246	6.740	7
<u>o And</u>				
2443110.39	3.604	3.514	2.991	9
395.56	3.589	3.499	2.969	3
467.34	3.607	3.514	3.008	3
472.31	3.588	3.478	3.005	5
<u>κ Dra</u>				
2443583.46	4.01	3.84	-4.15 †	3
639.36	3.951	3.803	-4.173 †	3
.51	3.960	3.831	-4.152 †	6
<u>4 Her</u>				
2443631.57	5.753	5.667		3
639.44	5.756	5.682		8
.56	5.757	5.706		6
<u>φ Per</u>				
2443109.44	4.022		3.001	10
467.45	3.958	3.938	2.803	3
471.43	3.963	3.937	2.810	8
472.35	3.963	3.938	2.808	2
<u>BU Tau</u>				
2443472.45	5.215		4.969	2
483.45	5.222	5.185	4.979	4
<u>HR 894</u>				
2443395.39	6.114	6.047	5.716	4
.55	6.116	6.056	5.726	2
399.55	6.116	6.043	5.713	2
471.41	6.117	6.046	5.716	4

KX And

= HD218393 - Comparison star: 5 And = HD218470 (Harmanec et al. 1977); check: HD218674 (Harris, 1955) and HD 218393. The object which is probably a spectroscopic binary with strong mass transfer (Harmanec et al. 1980), shows small variations in v and B colors and greater in U along with larger variations of U-B index.

o And

Comparison stars: HD217227 (Harris, 1955) and 2 And = HD 217782.

κ Dra

Comparison star: HD109551 (Häggkvist and Oja, 1966); because his U magnitude is not available, we have reported in the table the  $\Delta U$  differences ( $\phi$ ) between the variable and the comparison star in the standard system. A little light variation seems to be present during the night 2443639.

## 4 Her

Comparison star: HD142373 (Iriarte et al. 1965). Light fluctuations are absent in the night 2443639 during 3.<sup>h</sup>6 of observations.

## ♦ Per

Comparison star: 2 Per (V magnitude from Bright Star Catalogue, color indices from Crawford, 1963); Check: HD11151. The star is clearly brighter in late 1977 than in late 1976. The brightening is more notable in U color.

## BU Tau

28 Tau (Pleione) - Comparison star: 18 Tau = HD23324 (Iriarte et al. 1965); check: 16 Tau = HD23288. The star is constant during the short period of observation.

## HR 894

Comparison star: HD18950; check: 22 $\pi$  Per = HD18411 (Iriarte et al. 1965) and 28 $\omega$  Per = HD19656. We deduce the following magnitudes for the comparison star:  $V = 6.86 \pm 0.03$ ,  $B = 6.86 \pm 0.03$ ,  $U = 6.53 \pm 0.05$ . During our observations the object remains perfectly constant.

A. DAPERGOLAS  
G. DI COLA  
A. GUARNIERI  
G. MADAMA

Istituto di Astronomia e Osservatorio Astronomico dell'Università di Bologna,  
Italy

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