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**NEW BRIGHT FLARE STAR IN THE SOLAR VICINITY,
 COU 14 = SAO 107425**

N.D. MELIKIAN¹, M.A. ERITSIAN¹, A.A. KARAPETIAN¹, V.S. TAMAZIAN², J.A. DOCOBO²

¹ Byurakan Astrophysical Observatory, Armenia, e-mail: nmelikia@helios.sci.am

² Astronomical Observatory “Ramon Maria Aller”, University of Santiago de Compostela, Spain, e-mail: oatamaz@usc.es

During the photometric and polarimetric monitoring of double and multiple stars two flares have been detected on COU 14 = SAO 107425, which is known as a bright variable binary with the spectral type F2 III-IV (Mermilliod, 1987). The separation between the two components is 0".3 (Holden, 1976).

The observations have been carried out with the photopolarimeter attached to the AZT-14 50cm telescope of Byurakan Observatory. This photopolarimeter operates in the regime of intensification of the direct current. It can be used as a photoelectric photometer if the polaroid is removed. A more detailed description of the method and instruments has already been given by Eritsian and Nersisian (1984).

Table 1: U, B, V, R photometry of COU 14

Date	m			
	U	B	V	R
13 June 1997	5.65	5.69	5.36	5.48
25 July 1997	5.75	5.75	5.42	5.70
27 July 1997	5.77	5.75	5.36	5.60
28 July 1997	5.75	5.75	5.40	5.71
31 July 1997	5.78	5.74	5.37	5.61
22 August 1997	5.78	5.74	5.53	5.71

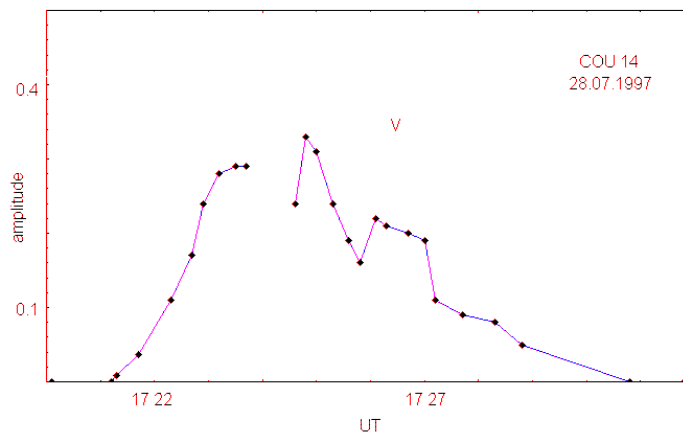


Figure 1.

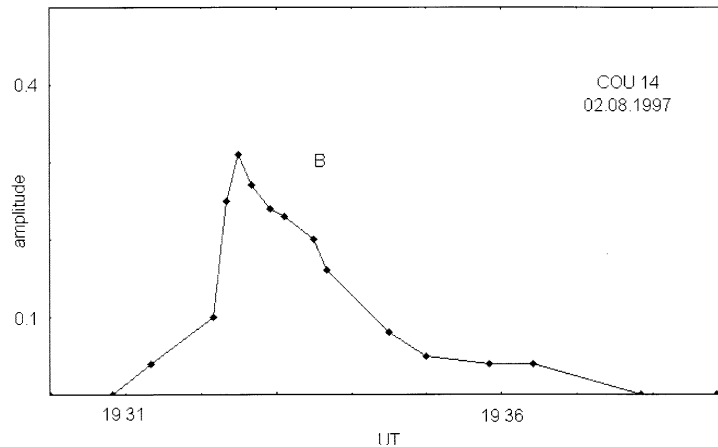


Figure 2.

Two flares have been detected on COU 14 on 28 July and 2 August in V and B bands, respectively. In Figures 1 and 2 the light curves of these flares are presented where their amplitudes and dates of observations are shown.

In Table 1 results of UBVR photometry of the star out of flares are presented: (i) the date of measurement and (ii) observed magnitudes in UBVR bands. As the accuracy of our photometric measurements in UBVR bands is 0^m01 , from these data the slow variation in brightness can be suspected as well.

It is worth to point out that polarimetric observations have not shown light polarization for COU 14.

As one can see the star shows UV Ceti type brightness variation. However UV Ceti type stars in solar neighbourhood and in stellar aggregates have spectral types Ke – Me. The earliest spectral type among known flare stars is K1 found in Orion region (Natsvlishvili, 1987).

The flares detected on COU 14 can serve as a good evidence that UV Ceti stage occurs for stars of much earlier spectral types.

Further photometric and polarimetric investigation to study flare activity of COU 14 in more detail would be worth.

References:

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 Mermilliod, J.-C., 1987, *A&ASS*, **71**, 119.
 Natsvlishvili, R.Sh., 1987, Ph.D Thesis, “Flare Stars in the Orion and Pleiades Regions”