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A FAINT FLARE STAR IN VELA *

In a survey for flare stars in the young, sparse cluster IC 2391 (o Vel), we have found a strong flare of a very faint star not reported previously to have flared. The star is 1.7° from the cluster center, however, and is unlikely to be a member.

It was found on two plates taken in the direct, multiple, ultraviolet-image manner with the Curtis Schmidt telescope at Cerro Tololo on 3 March 1984. The flare commenced between 1:45 and 1:55 UT during the ninth (last) 10 minute exposure on one plate, and the star is seen fading during all nine exposures on the following plate which cover the time interval 2:11-3:33 UT. (See Figs. 1 and 2 ; time increases to the right.) We estimate that the star was about 4 mag above the plate limit at maximum. Four other U plates exposed for a total of 5.5 hours in early March fail to show any trace of it. Its position relative to a grid of six nearby SAO stars is :

$8^{\text{h}}39^{\text{m}}23.6^{\text{s}}$, $-54^{\circ}27'09''$ (1950).

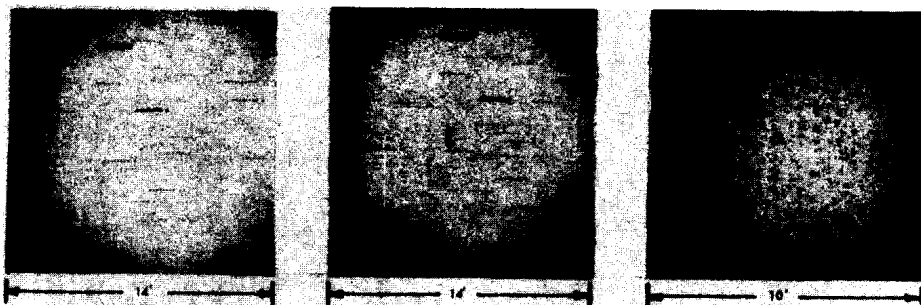


Figure 1

Figure 2

Figure 3

* Based on observations obtained at the Cerro Tololo Inter-American Observatory, National Optical Astronomy Observatories, operated by the Association of Universities for Research in Astronomy, Inc. under contract with the U.S. National Science Foundation.

It is not listed in the variable, proper motion, or nearby star literature.
Fig. 3 is a finding chart copied from the SRC-J plate ; we judge the star to
be about 1.5 mag above the plate limit or $B \sim 21$ when quiescent.

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