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NEW VARIABLE STARS IN THE γ CYGNI REGION

A systematic search for variable stars has been carried out in the region around γ Cygni using the observational material obtained mainly with the 20 in./28 in. Schmidt telescope of the National Astronomical Observatory at Rozhen between September 1979 and November 1983. The whole observational material (with effective coverage of 298^h) is obtained by the method of multiple exposures. In addition to the 3 variable stars published earlier (I.B.V.S. Nos. 1890, 2130), two new variable stars have been discovered. Variable 1. The coordinates of the star are:

$$\alpha_{1950.0} = 20^h 21^m.3$$

$$\delta_{1950.0} = 42^{\circ} 09'$$

Figure 1 presents the identification chart of the variable. This is a very interesting irregular variable with sudden increases and decreases in the brightness sometimes within a little more than 1 hour. The observed maximum amplitude in U-light is $1^m.5$ (between $16^m.8$ and $15^m.3$). This star is situated very near ν 1515 Cyg, which is a member of the group of FU Orionis stars.

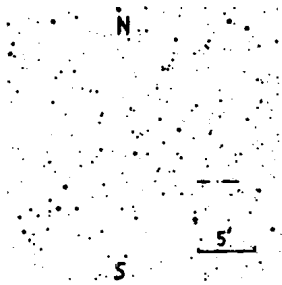


Figure 1

Variable 2. Figure 2 presents the identification chart of this variable with coordinates:

2

$$\alpha_{1950.0} = 20^{\text{h}}28^{\text{m}}.8$$

$$\delta_{1950.0} = 41^{\circ}03'$$

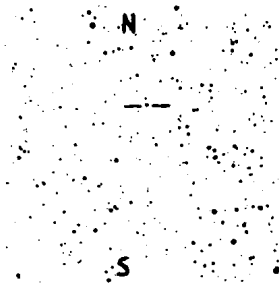


Figure 2

The star varies from $16^{\text{m}}.1$ to $17^{\text{m}}.0$ in U-light. The observations suggest that the variable may belong to the irregular variables with small and relatively rapid (~ 1 day) fluctuations with an amplitude of about $0^{\text{m}}.9$.

A 15 minute exposure V-plate taken with the 40 in./52 in. Schmidt telescope of Byurakan Astrophysical Observatory was used to obtain the identification charts.

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