

## A NEW VARIABLE IN THE FIELD OF V778 CYGNI

Observations of the V778 field in Cygnus indicate a possible new variable star. The coordinates of this from the Guide Star Catalog are  $\alpha_{2000} = 20^{\text{h}}36^{\text{m}}34^{\text{s}}$ ,  $\delta_{2000} = 60^{\circ}06'45''$ . The star is not listed as a variable in the General Catalog of Variable Stars (Kholopov *et al.*, 1985), the New Catalog of Suspected Variable Stars (Kholopov *et al.*, 1982), the 72nd Name-List of Variable Stars (Kazarovets and Samus, 1995) or SIMBAD; nor has a reference to it appeared in the IBVS bulletins during 1994-1995. Thus, we conclude the star has not previously been noted as a variable. The V magnitude of the star is about 12.9 from the Guide Star Catalog, and the star appears to be redder than V778 Cygni.

In 1993, observers at Wellesley College began observations of V778 Cygni to determine its photometric behavior, using a 0.6 meter telescope with a Photometrics CCD camera. One of the comparison stars used in this analysis exhibits larger variations in its magnitude than other comparisons.

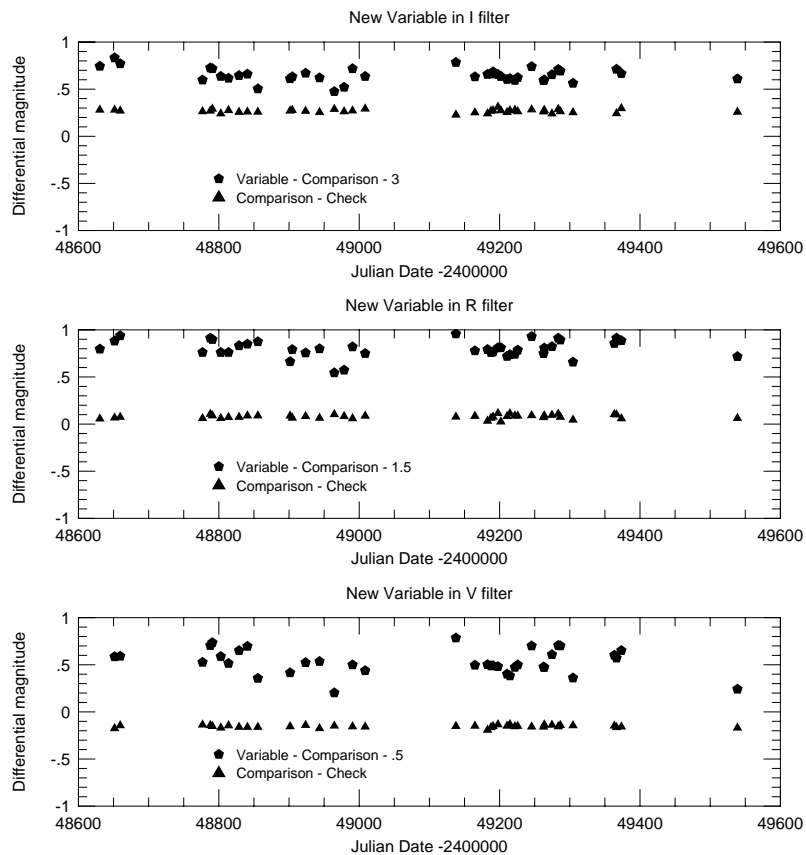


Figure 1: Light curves of a new variable in the V778 Cyg field

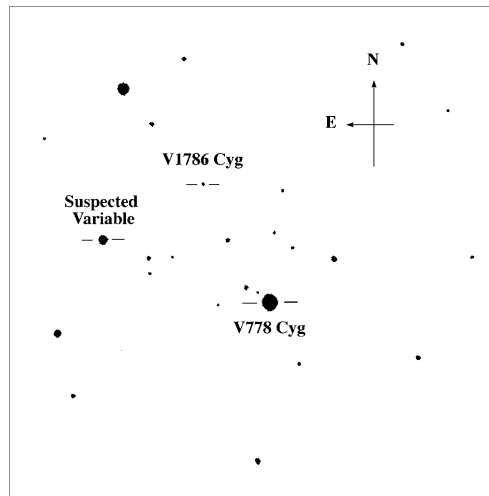


Figure 2: A finder chart for the new suspected variable star. North is up and East is left. The field shown is approximately nine arcminutes per side.

As shown in Figure 1, the amplitude of the variation of the new variable with respect to a comparison is approximately 0.6 magnitudes in V and R and 0.3 magnitudes in I. In contrast, the amplitude of the differential magnitude of the two comparisons in V, R, and I is 0.04 magnitudes, 0.16 magnitudes, and 0.13 magnitudes respectively. Figure 2 identifies the new variable.

Upon discovery of the new variable, we examined the star for periodicity. No significant periodicity for periods between 0.001 and 1000 days was found using a Fourier transform period fitting program written by Charles Prosser at Harvard Center for Astrophysics. Subsequent observations of the star indicate that it does not change in magnitude significantly during one night's observing.

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