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GT AQUARI: NEW ELEMENTS

GT Aquarii = SVS 2659 = GSC 5226.00945 ($\alpha_{1950.0} : 22^{\text{h}}25^{\text{m}}44^{\text{s}}; \delta_{1950.0} : -01^{\circ}14'8''$) was reported by Kurochkin (1986) as a variable star with a range of variation from $13^{\text{m}}1$ to $14^{\text{m}}1$. He found a possible pulsational variation with an uncertain period of $1^{\text{d}}1901204$. In view of this finding, this star warrants some further investigation as it might be a new member of the AHB1 class of pulsating variables (see Sandage, Diethelm and Tammann, 1994). No other source of data is known to the author.

During the 1995 season, GT Aquarii was observed with the 35cm RC telescope at R. Szafraniec Observatory in Metzerlen, Switzerland, by the author. An unfiltered ST-6 CCD camera was employed. A total of 101 observations in 22 nights could be secured. As comparison star GSC 5226.01225 ($13^{\text{m}}97$), lying very close to the variable, was used. The comparison star showed no variation exceeding the accuracy of the photometry. Due to the proximity of the comparison star to GT Aqr as well as to the limited accuracy of the photometry (see below), no correction for differential extinction was allowed for.

With the period given by Kurochkin (1986) our data do not yield a satisfactory light curve. A coarse period finding algorithm leads to a most likely value of $P = 0^{\text{d}}3516$. In Figure 1, the observations are presented, folded with the elements:

$$\text{Max}_{JD, hel} = 2449898.505 + 0.3516 \times E . \quad (1)$$

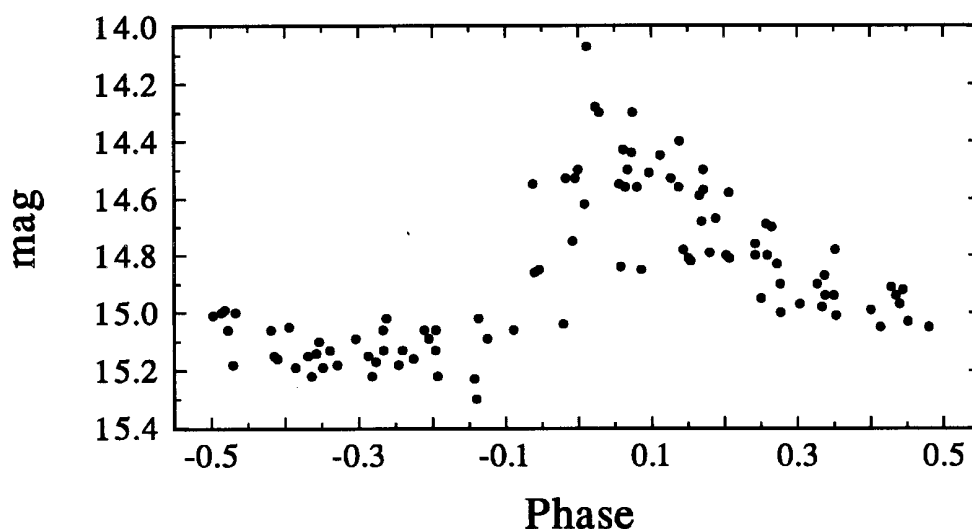


Figure 1. Unfiltered CCD light curve of GT Aqr, folded with the elements given above

The rather large scatter seen in Figure 1 is primarily due to two circumstances. The star is about one magnitude fainter than given by Kurochkin ($14^m.1$ - $15^m.2$). In addition, due to the negative declination of the variable, the air mass was relatively large for an observer at the latitude of Switzerland. Therefore, the signal to noise ratio of our CCD frames was smaller than hoped for. Nevertheless we dare to state that some of the scatter might be caused by some intrinsic variability in the light curve.

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