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TWO STARS NAMED KY AQUILAE

Dr. W. P. Bidelman recently called to my attention a confusion in the identification of KY Aql. At Harvard in 1932 I had discovered a star provisionally called HV 5429, 14.3 - 15.5pg. This is the star first assigned the designation KY Aql, and the corresponding data were included in the GCVS through the 1958 editions. Then Gessner (1958) discovered another variable close to this one and mistakenly assumed it to be KY Aql, even though she, herself, pointed out that her results did not substantiate mine. Bidelman noted that the position of an infrared source, which does appear to be the star that Gessner discovered, is about 1'.3 north and 2 sec west of the position I gave. Figure 1 shows the relative positions of the two variable stars.

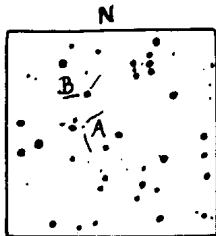


Figure 1. Finder chart, about 10'x 10', for the two stars called KY Aquilae. A = HV 5429; B = variable discussed by Gessner.

In my original publication I had indicated that HV 5429 might be a short period variable; indeed a period of 0.5023 day seemed promising although not quite acceptable. This result, however, must be considered as spurious. Some 50 plates of the MC series (16-inch Metcalf telescope) and only six MF (10-inch Metcalf) and 5 B (8-inch Bache) were available, all within the interval 1926-31. The basis for the assumption of the short period was that

a maximum on an MC plate fell between two minima on the MF. Later I established that the color transmission of the MF is different from that of most of the other Harvard lenses: there is a sharp cut-off to the red of H β for the MF. Thus, if either the variable or one of its comparison stars is red, then there may well be systematic errors between the estimates made from the different plate series. Figure 2 shows the bulk of the observations on the MC plates alone. This suggests a probably irregular variable.

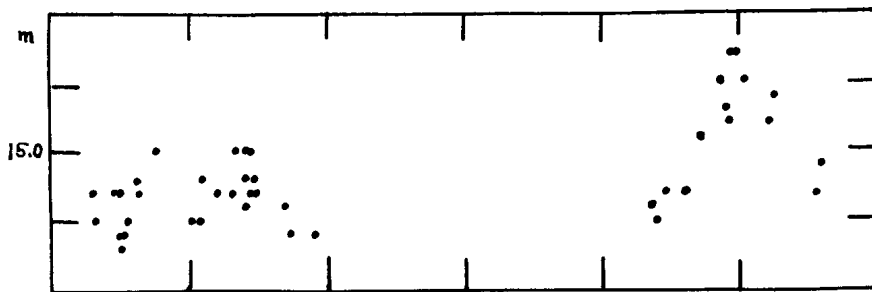


Figure 2. Observations of HV 5429 from JD 26100 to 26700; markers at intervals of 100 days. Ordinates, photographic magnitudes at intervals of 0.5 mag.

According to Bidelman this star does not have a late-type spectral class.

The question now is, which of the two variable stars is to retain the designation, KY Aquilae ?

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 Gessner, H. 1958, Mitt der Veränderlichen Sterne, Sonneberg, Nr.366
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