

LETTERS TO THE EDITOR

To the Editor:

Yesterday, I got the new AAVSO Journal in which a paper of Richard H. Stanton appeared. I am very astonished about his results. As you may see from the German copy of a paper I send today to the journal Sterne und Weltraum, I get different results from own measurements.

Using the 75-cm reflecting telescope and a 1P21 photomultiplier with the usual Schott filters of the UBV system, I measured 19 comparison stars in the regions of T Cep, R Cyg, W Cyg, Chi Cyg, R Tri and VY UMa and SS Cyg 1978. Assuming that

$$s = \sqrt{\frac{\sum (m_v - m_{AAVSO})^2}{n}}, \quad n = \text{number of differences,}$$

is an expression for the quality of the AAVSO-magnitudes on your charts, I find

$$s(\text{AAVSO}) = 0^m.05$$

The same for the magnitude differences of the SAO star catalogue is

$$s(\text{SAO}) = 0^m.32 .$$

The figure shows the distribution of the individual differences. I think these results are a fine compliment for your AAVSO chart committee. For the different results of Mr. Stanton, I have the following possible explanations:

- i) He used preliminary chart-sequences;
- ii) His color system is not completely corrected to the pv-system of the AAVSO-charts.

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To the Editor:

Ulrich Hopp's astonishment apparently arises from the fact that his measurements agree well with AAVSO chart magnitudes while those presented in my earlier paper do not (JAAVSO, 7, 14). Although his letter and paper give few details of his work (star magnitudes, colors, sign of $m_v - m_{AAVSO}$, etc.) his results do not appear to support this strong conclusion. First, he evidently restricted his attention to fairly bright stars (the SAO catalog has few stars fainter than $v \sim 9^m.5$). This emphasis contrasts with my concentration on stars in the 11 to 16 magnitude range. One would expect smaller chart errors for brighter stars, particularly those which appear in several catalogs.

Secondly, the use of V (of the UBV system) is not appropriate for measuring what the dark adapted eye will actually see (Landis, JAAVSO, 6, 4; Howarth, JAAVSO, 6, 88; Steffey, JAAVSO, 7, 10; Stanton, JAAVSO, 7, 14). The fact that Mr. Hopp's measures agree so well with AAVSO chart values might be interpreted to imply that the latter do not agree with the eye! However, this conclusion is premature since his sample is small and we don't know what range of star colors he observed. The AAVSO magnitudes for comparison stars I observed appeared to be quite well corrected for color differences (ibid, p. 18, Fig. 5).

Finally, Mr. Hopp correctly states that I used preliminary charts, rather than established sequences, for my comparison. The intent was not to look for errors in established charts, but rather to demonstrate that amateurs equipped with modern photon-counting equipment can make significant contributions to comparison-star sequence work, even for very faint stars. The tricky problem of color-response differences between the photometer and human eye received careful attention since this factor, more than any other, has the potential for limiting the utility of photoelectrically measured sequences. I remain confident in the validity of the previously reported results and convinced that the data scatter and accuracy of many AAVSO light curves will improve as more photoelectric sequences are obtained.

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To the Editor:

After the 1977 eclipse, I made available at cost a set of 10 color slides of the various eclipse phenomena. Since I had many inquiries, I would again be willing to make such a set available for the 1979 eclipse if the weather turns out clear for our site in Brandon, Manitoba. Your readers can write me c/o Williams College, Hopkins Observatory, Williamstown, MA 01267.

I am also beginning to plan to lead a group to Hyderabad, India, for the February 16, 1980, total solar eclipse, and would be glad to hear from readers who might be interested in joining us. I could keep them posted as our plans develop.

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To the Editor:

We share the enthusiasm of Percy *et al.* (Journ. AAVSO, 7, 19, 1978) concerning the use of visual data to establish basic trends in the O-C curves of RR stars. In fact, an analysis by one of us (Taylor) using solely visual data obtained by members of the RR Lyrae Committee of the AAVSO during 1974-76 shows excellent agreement with the Percy ephemeris based on photoelectric data (Astronomy and Astrophysics, 43, 469, 1975).

However, we suggest that prospective participants in the program hone their observing skills on variables with a greater range in brightness. We have found that inexperienced observers often encounter a great deal of difficulty monitoring these low-amplitude stars.

Computer listings of the AAVSO data for CY Aquarii, and for one other RR star, SZ Lyncis, are available for postage and reproduction costs, direct from the undersigned.

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