

VARIABLE STARS AS OBSERVED IN
INFRARED AND VISUAL RADIATION

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ABSTRACT:

Recent sky surveys for discrete sources of infrared radiation in the wavelength region of two to twenty microns have shown that known long period and semi-regular variable stars are well represented. A number of suspected variable stars, eclipsing and spectroscopic binaries of long period where one component is a cool giant or supergiant (Zeta Aurigae type), and some Be and hot peculiar stars, were also found to be associated with infrared sources. Several variable stars not observed in the infrared surveys were considered significant, and possible explanations were suggested. Infrared and visual (AAVSO) observations were compared for several typical variable stars. Infrared radiation excesses could be explained in terms of stars or star systems of large mass, dust shells, cool companions, and H_I and H_{II} regions. The combination of infrared with visual and photographic observations for long period and semi-regular variables could lead to a better understanding of their physical structure and to more effective use of them in galactic structure studies.

EDITOR'S NOTE:

The book Eclipsing Variable Stars, V. P. Tsesevich, Editor, is now available in English as part of the Israel Program for Scientific Translations Astrophysics Library (Halsted Press, John Wiley & Sons, New York). This book was reviewed in JAAVSO Vol. 1, No. 2, p. 64 ff, by Wayne Lowder

ERRATA:

In the paper on β Lyrae in JAAVSO Vol. 2, No. 2, page 67, at the end of the third paragraph the external error should read $\pm 0^m.02$, not $\pm 0^m.2$.

On the chart for SZ Cas, page 53 of JAAVSO Vol. 1, No. 2, the star 'f' should refer to the dim star 1 millimeter below and to the left of the bright star erroneously marked as 'f'.