

NEAR IR-PHOTOMETRY OF SEMIREGULAR VARIABLES

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During the past decade much effort has been spent also on observation and theoretical modelling of AGB stars. However, the Semiregulars have been almost neglected. Kerschbaum & Hron (1992) used GCVS- and IRAS-data to define samples of SRa and SRb stars. These were compared with optical Miras with respect to their pulsational properties, effective temperatures, mass loss rates, luminosities, scale heights and galactic volume densities.

260 stars of their sample have now new NIR-photometry. In Fig. 1 temperature and chemistry-dependent J-K colour index is plotted versus pulsational period. It confirms the results obtained from V-[12 μ m] in Kerschbaum & Hron (1992). By fitting combinations of two blackbodies to visual, the new JHKLM and IRAS-data estimations of typical temperatures as well as luminosities of photospheres and dustshells were made. The two main results are that the short period O-rich SRb's have relatively high photospheric temperatures and that the relative luminosities of the two fitted blackbodies correlate well with the IRAS-LRS subclasses.

References

Feast, M.W. et al., 1982, MNRAS 201, 439

Kerschbaum, F., Hron, J., 1992, A&A, in press

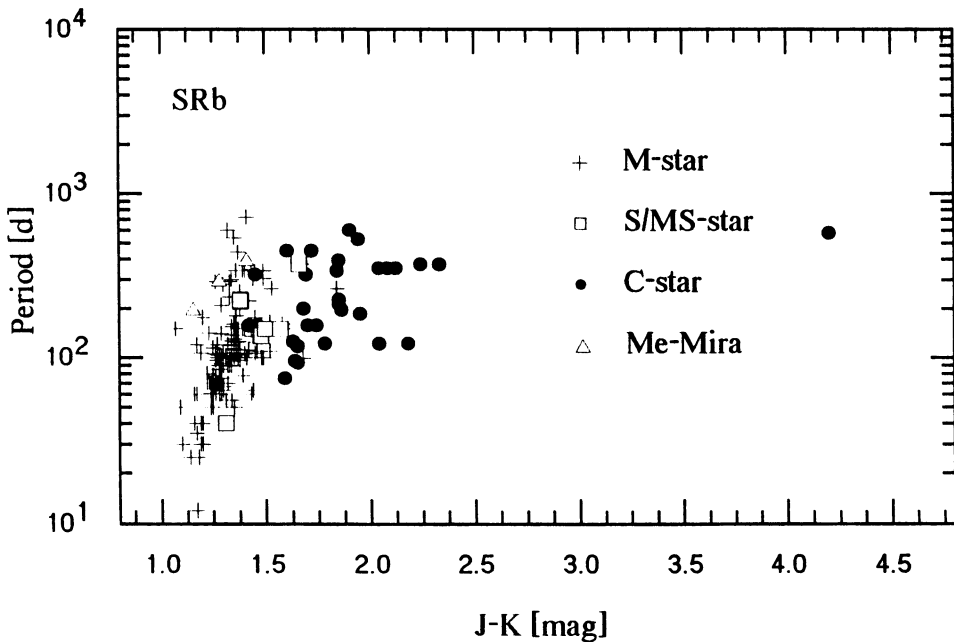


Fig. 1. Distribution of period as function of J-K Colour the SRb's. J-K colours of Me-Miras at periods of 200, 300 and 400 days are indicated (Feast et al. 1982).