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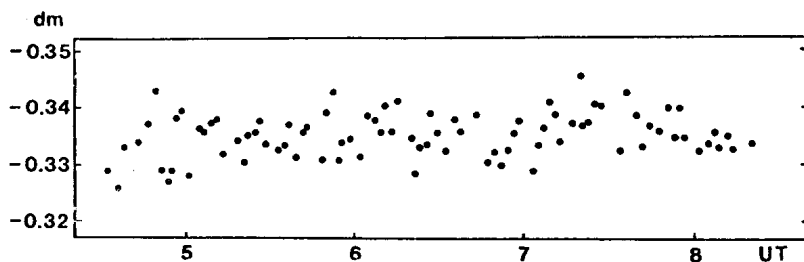
TESTS OF TWO SUSPECTED VARIABLES

During the testing and calibration of the newly installed photoelectric photometer in the Joseph R. Grundy Observatory, two suspected variable stars were monitored and found to show no variation larger than 0.01 magnitudes. The observations were made with a Spitz-Ridell photometer on the 40.5 cm. telescope. The current from the dry ice cooled 1P21 was amplified by a Keithley 416 Picoammeter and recorded on a chart recorder. A 4 mm Schott OG-4 filter approximated the V magnitude of the UBV system. The standard error of a single differential observation was 0.005 magnitudes.

The star Nu Herculis (HD 164136) has been included in a list of probable Delta Scuti stars (Frolov 1970) but observations on 3 nights for a total of 13 hours failed to reveal any variation in excess of 0.01 magnitudes. The comparison star was Rho Herculis.

The star Iota Herculis (HD 160762) has been suggested as a possible Beta Canis Majoris star (Underhill 1966) due to its spectral type B3V (Hoffleit 1964), and its variable radial velocity. The period of the radial velocity variation is 0^d.1434 (Edwards 1937) with an amplitude of about 15 km/sec (Petrie and Petrie 1939). Comparison of this amplitude with the relation between light amplitude and 2K obtained by Leung (1968) indicates that Iota Herculis should have an amplitude of from 0.01 to 0.06 magnitudes in the blue and visual. The star was observed on six nights for a total of 17 hours using Rho Herculis as a comparison star and 88 Herculis as a check star. The data were corrected for differential extinction. No variation was found greater than 0.01 magnitudes.

This must mean that either the star is no longer pulsating, or it is still pulsating but does not display variations in luminosity of the amplitude we would expect for a Beta Canis Majoris star. The latter possibility seems more likely although the radial velocity variation certainly deserves further study. The low amplitude of the radial velocity variation, the short period, and the lack of any light variation above 0.01 magnitudes, are strikingly similar to the behavior of Beta Centauri (Breger 1967), although the stars are of different spectral types. The star Iota Herculis should be classified as a probable Beta Canis Majoris star, or, like Beta Centauri, as an intermediate type between normal B stars and the Beta Canis Majoris stars.



Representative Observations in the Sense Iota Her-Rho Her
from May 19, 1971

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ANNOUNCEMENT

"FLARES OF RED DWARF STARS"
(VSPISHKI KRASNIIKH KARLIKOVIIKH ZVEZD)

by

R. E. GERSHBERG
Crimean Astrophysical Observatory

This book was published by Izdatel'stvo Nauka, Moscow, 1970, 168 pages, 29 figures, 13 tables, 240 bibliographical entries. The Russian edition is now out of print. An English translation has been prepared by D.J.Mullan, Armagh Observatory. The translation has 185 typed quarto pages, and has been edited by R.E.Gershberg.

The book includes a comprehensive summary of all visual, photoelectric, photographic (including searches of plate collections), polarimetric, spectrographic, and radio observations of flare stars up to the autumn of 1969, including world-wide co-operative observations organized by the IAU Working Group on Flare Stars (of which R.E.Gershberg is a member) since the XIII General Assembly of the IAU in 1967. The book also summarizes ten hypotheses for the origin of stellar flares, with a special chapter of 25 pages devoted to the nebular model. Photocopies of the translation (unbound) are available at a price of one pound sterling (£1), or U.S. \$ 2.50. This price covers photocopying and postage. Orders may be sent to

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