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Discussion to the paper of KONDO

BAKOS: What would be the limiting magnitude of HENIZE's objective prism program?

KONDO: With an exposure time of 4.5 minutes, a 6.0 magnitude star of spectral type B0 should be observable with Dr. HENIZE's S019 experiment. This limiting magnitude will depend on the spacecraft stability.

HERCZEG: What is the pointing accuracy of an airplane-borne telescope? Is it possible to study individual stars by this type of instrumentation?

KONDO: The aircraft-borne IR-telescope by Ames should be capable of observing individual stars.

HERCZEG: Can you tell us something about the system of data storage and communication? Especially, what is the way for astronomers not immediately involved into the experiments to get access to these data?

KONDO: Data obtained in space experiments are usually made available through: National Data Center, NASA Goddard Space Flight Center, Greenbelt, Maryland 20771, USA.

NOTE ADDED IN PROOF:

In their recent paper, based on the observations obtained with the UHURU satellite, SCHREIER et al. (Ap. J. 172, L79, 1972) report results that indicate the discovery of an x-ray eclipsing variable system in Cen-X3.

Metal Line-Blanketing and Opacity in the UV of α^2 CVn

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Abstract

Ultraviolet photometric observations by OAO-A2 were made of α^2 CVn covering the entire $5^d.5$ period of this magnetic Ap variable. The light curves ranging from 1250 A to 3330 A indicate the dominant role of rare-earth line-blanketing in redistributing flux. In a broad depression of the continuum covering 2300 A to 2600 A scanner observations identify strong lines of Eu III as major contributors to this feature. At maximum intensity of the rare-earth lines the ultraviolet continuum shortward of 2900 A is greatly diminished while the longer wavelength regions into the visual become brighter. Thus, the light variations in α^2 CVn are due to the variable strong line-blanketing by the abundant rare-earth elements.

In addition, the far ultraviolet light curves indicate an opacity source not in phase with the rare-earths. This is attributed to the photoionization of Si I from the ^{1}D level at 1680 A which is a prominent feature in all scans of α^2 CVn; however, the edge due to the ^{3}P ground level is not identifiable.

These ultraviolet observations suggest the importance of metal line-blanketing and opacity in the redistribution of flux in Ap variables.