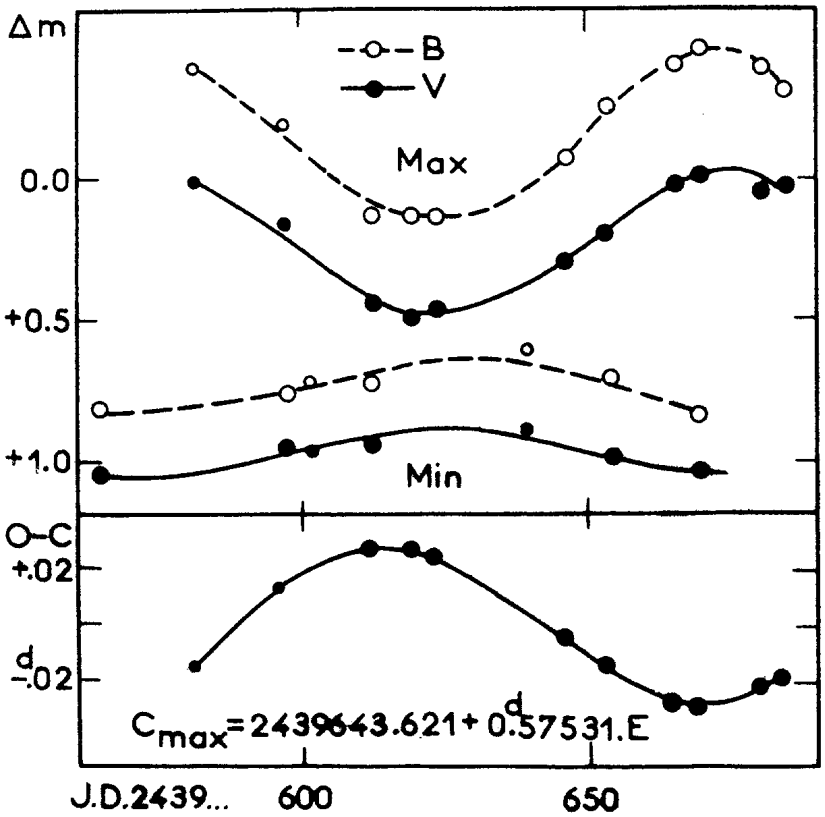
COMMISSION 27 OF THE I. A. U
INFORMATION BULLETIN ON VARIABLE STARS
NUMBER 220

Konkoly Observatory
Budapest
16 August 1967

SECONDARY PERIOD OF THE RRab STAR
AR SERPENTIS

This variable star of RR Lyrae type discovered by C. Hoffmeister was investigated by Tsessevitch, who gave the new elements (Astr. Circ. 353. 3):



$$\text{Max. hel.} = 2430472.469 + 0^{d}.575\,14215 \cdot E$$

and found strong fluctuations in the period suggesting the presence of Blashko-effect.

This year 960 photoelectric observations have been obtained in blue and yellow with the 24" telescope of the Konkoly Observatory. 11 light maxima were observed, which showed large variations in height and phase.

In the upper part of the Figure the variations in the brightness of the light maxima and light minima are plotted against Julian date. The extreme values of the amplitude are 1.32 and 0.49 mag. in blue, 1.09 and 0.41 mag. in yellow, respectively.

In the lower part of the Figure the phase oscillation of the light maxima (in blue) is shown. Both the amplitude and phase oscillations suggest a secondary period of about 105 days, with the same phase-relation as in the RRab star RV UMa ($P_o = 0^{d}.468$, $P_b = 90^{d}.8$; Budapest Mitt. 34, 1957).

Next year the observations will be continued in order to determine a more exact value for the secondary period.

Konkoly Observatory, Budapest

B. SZEIDL