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PHOTOELECTRIC B, V PHOTOMETRY OF AI Hya

The variability of the system (BD+00<sup>o</sup>2259) was discovered by Hoffmeister (1934). The photographic magnitude of the star varies from 9<sup>m</sup>0 to 9<sup>m</sup>5. The star was classified as a typical Algol type eclipsing variable by Hoffmeister. Later on four minima and light curve of the star were photographically obtained by Lause (1938). His light elements were

$$\text{Hel. Min. I.} = \text{J.D. } 2428\ 935.46 + 8^{\text{d}}29 \cdot \text{E}$$

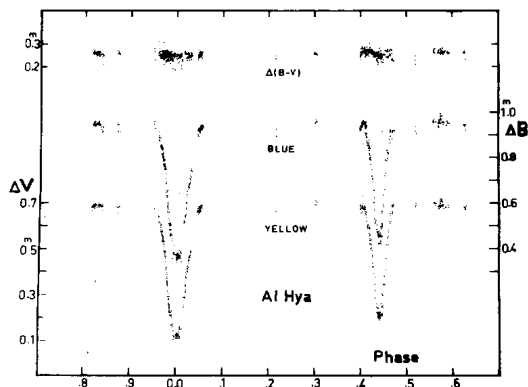
and distance between primary and secondary minimum, in units of time, was 3<sup>d</sup>61. According to Popper (1972) spectroscopic observations do not agree with the above period and the period must be shorter than this value. For this purpose Popper has suggested to obtain the light curve of the system photoelectrically.

The star was photoelectrically observed between February 1972 and February 1973 on 17 nights with the 48 cm Cassegrain telescope of the Ege University Observatory using an RCA 1P21 photomultiplier and B,V filters. BD+00<sup>o</sup>2261 was used as comparison star and 320 observational points were obtained in each colour. The star has a long period and for this reason only a minimum could be obtained on 1972 April 3/4. There is a 13 hours difference between this minimum and the calculated minimum time with Lause's light elements. The new light elements could not be calculated due to the lack of available minima. Then the observed minimum time is taken as T<sub>0</sub> and used the period given by Lause for the calculation of phases:

$$\text{Hel. Min. I.} = \text{JD } 2441\ 411.368 + 8^{\text{d}}29 \cdot \text{E.}$$

The light and colour curves are presented in the Figure, where the magnitude differences between the comparison and the variable star have been plotted against the phases. The star varies about 0<sup>m</sup>590 and 0<sup>m</sup>575 at the primary, 0<sup>m</sup>500 and 0<sup>m</sup>490 at the secondary minimum in blue and yellow light, respectively. The secondary minimum is really displaced from phase 0.5 and the form of the light

curve represents a typical Algol type curve as mentioned by Hoffmeister.



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