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MINIMUM TIMES OF THE ECLIPSING VARIABLES AH Cep AND IU Aur

In a paper by one of the present authors (Mayer, 1980) an increasing period was suspected for the early-type eclipsing binary AH Cep, and recently Rafert (1982) suggested an apside-line rotation for this star. In Table I, five new

Table I

J.D.hel.	Error	Minima of AH Cep		Source
		Epoch	O - C	
2443779.813	0. <sup>d</sup> 011	4953	+0. <sup>d</sup> 028	Hartigan and Binzel (1982)
2444010.532	0.002	5083	+0.028	Skalnaté Pleso Observatory
2445200.499	0.002	5753.5	+0.020	Ondřejov Observatory
2445223.570	0.002	5766.5	+0.019	Ondřejov Observatory
2445562.5380	0.0006	5957.5	+0.0073	Ondřejov Observatory <sup>+</sup> )
2445579.398	0.003	5967	+0.008	Skalnaté Pleso Observatory

<sup>+</sup>) Average of measurements in V, B and U colours, individual measurements are 2445562.5383, .5376 and .5381, respectively.

photoelectric times of minima together with a minimum reported by Hartigan and Binzel (1982) are given. Except of the minimum on J.D. 2445562, the minima were only poorly covered by observations, and their estimated mean errors are rather large. The table gives also O-C differences from the ephemeris by Guarnieri et al. (1975):

$$\text{Pri.Min.} = \text{J.D.hel. } 2434989.404 + 1.<sup>d</sup>774759 \cdot E.$$

Together with other photoelectric minima listed by Mayer (1980) the minima from Table I are plotted in Figure 1 (except of the minimum by Huffer and Eggen). Apparently, the new minima do not support any of the mentioned suggestions. The period changes of AH Cep are probably irregular.

An increase of the amplitude of AH Cep light curve was observed by Mayer (1980). Now it seems that the amplitude has risen again to about 0.<sup>m</sup>25 (sec. min.) and 0.<sup>m</sup>28 (pri. min.), in V as well as in B colour.

Two new minima were measured for IU Aur (see Table II). As discussed e.g. by Eaton (1979), Schaefer (1981) or Mayer (1983), a monotonous increase of amplitude of both minima of this variable lasts for several decades. The observed depths of both minima are given in Table II, they are again deeper

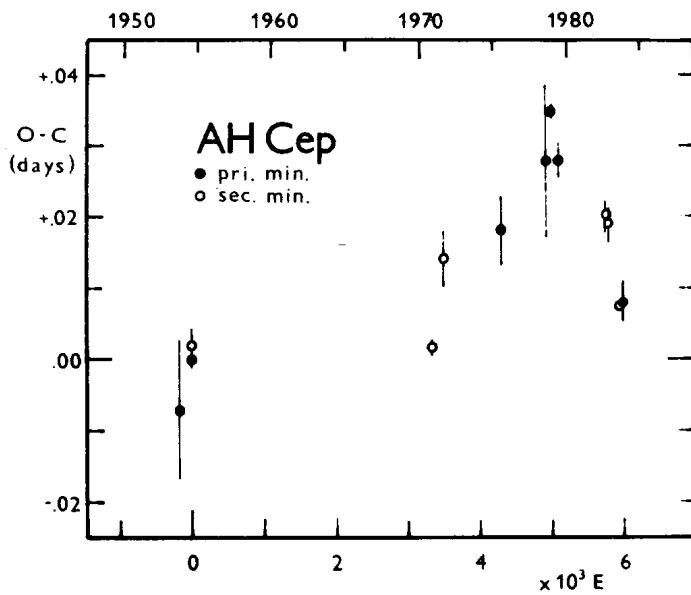


Figure 1

Table II

J.D.hel.	Error	Minima of Epoch	IU Aur O - C	Minima Depth		
				V	B	U
2445240.5271	0. <sup>d</sup> 0010	3749.5	-0. <sup>d</sup> 0018	0. <sup>m</sup> 56	0. <sup>m</sup> 55	0. <sup>m</sup> 57
2445337.4421	0.0006	3803	+0.0007	0.68	0.68	0.74

now than previously. The O-C differences in the table have been calculated from the ephemeris given by Mayer (1983), :

$$\text{Pri.Min.} = \text{J.D.hel.}2438448.4068 + 1.8114748 \cdot E - 0.0066 \cdot \sin(2.208^\circ E + 25^\circ).$$

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