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Konkoly Observatory  
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HD 169454 : A POSSIBLE ZETA Aur SYSTEM

HD 169454 was observed photoelectrically in B light with the 16 in. reflector of Siding Spring Observatory for 13 nights in August and September 1970 as comparison star for the magnetic variable HD 168814.

Between JD 2440829.9 and 2440832.9 the luminosity of this star decreased by  $0^m.04$ , while before and after these days it stayed approximately constant. This diminution could be explained as due to an eclipse of a long period system. The spectral classification B1Ia+ of HD 169454 by Morgan et al. (1) could support this hypothesis.

In the following table are given Julian days, mean differences of magnitudes  $B(\text{HD } 169454) - B(\text{HD } 168815)$  in the Johnson system, the number (N) of observations for night and the standard error

$$\text{s.e.} = (\sum (\Delta B - \overline{\Delta B}) / N (N-1))^{1/2} \text{ if } N > 3.$$

JD	$\overline{\Delta B}$	N	s.e.
2440 811.97	-0.690	1	
812.93	-0.678	4	.002
813.97	-0.679	4	.001
815.97	-0.682	3	.003
817.89	-0.678	4	.001
818.91	-0.673	4	.001
819.89	-0.682	1	
829.90	-0.678	6	.003
832.93	-0.637	3	.002
834.93	-0.645	5	.001
835.96	-0.634	2	
836.96	-0.626	2	
840.94	-0.646	2	

According to our observations the totality should continue at least for 8 days.

(1) Morgan, W.W., Code, A.D., Whitford, A.E., 1955, Astrophys.Journ. Suppl. 2, 41.