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PHOTOELECTRIC OBSERVATIONS OF EX HYDRAE DURING THE
 1986 JULY-AUGUST OUTBURST

EX Hydrae was monitored photoelectrically in July and August 1986 during one of its rare outbursts. As far as the authors are aware this outburst is the first eruption of EX Hydrae to be measured by photoelectric means. Ten second integrations were made predominantly in white light using the photon counting system attached to the 50 cm Zeiss Cassegrain reflector at the Auckland Observatory. Star '96' on AAVSO chart 24728(e) was used as a comparison star with $V=9.62$, $B-V=0.48$ and $U-B=0.08$.

Occasional Johnson U, B and V readings were also taken and the nightly means of these are given in Table I. The existence of two rises in brightness above the normal quiescent level is confirmed by the visual observations of Jones (1986) as can be seen in Figure 1.

Table I: Three colour observations during the 1986 July-August outburst of EX Hydrae

Date 1986	JD-2446000	Number of VBU Observations	Mean Values		
			V	B-V	U-B
July 30	641.91	15	12.46	0.18	-0.91
July 31	642.89	20	13.39	-0.09	-1.10
August 4	646.83	1	12.68	0.09	-0.72
August 5	647.83	16	10.43	0.00	-0.91
August 6	648.86	5	11.13	0.08	-0.73
August 10	652.81	2	13.46	0.04	-1.11

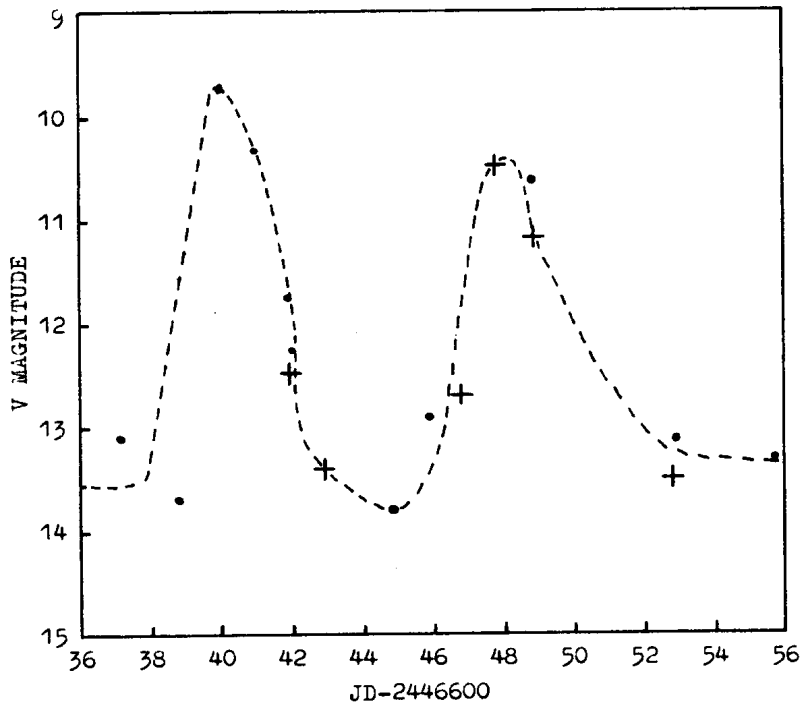


Figure 1. Overall light curve of the 1986 July-August outburst of EX Hydrae. The data shown are the photoelectric V magnitudes (+) and the visual estimates of Jones, 1986.

Continuous monitoring of EX Hydrae on August 6 revealed three hump like features similar to those that characterise the well known 67 minute cycle present in the quiescent state light curve (Vogt et al. 1980, Sterken et al. 1983). However the outburst features are considerably enhanced in intensity compared to the quiescent state features. A graph of the white light magnitude difference from the comparison star clearly shows these features in Figure 2. The heliocentric times of the maxima were found to be HJD 2446648.8037, 2446648.8471 and 2446648.8905.

The light curve shown in Figure 2 indicates that no obvious eclipse-like features occur close to the eclipse times predicted by the ephemeris of Sterken et al. (1983). Dips do appear in the light curve but these may be due to the particularly high level of flickering always present.

Extensive long period monitoring was prevented by inclement weather and the unfavourable position of EX Hydrae at that particular time of year. Further analysis of the data is underway at present and the authors therefore invite others with photoelectric data covering the event to contact them.

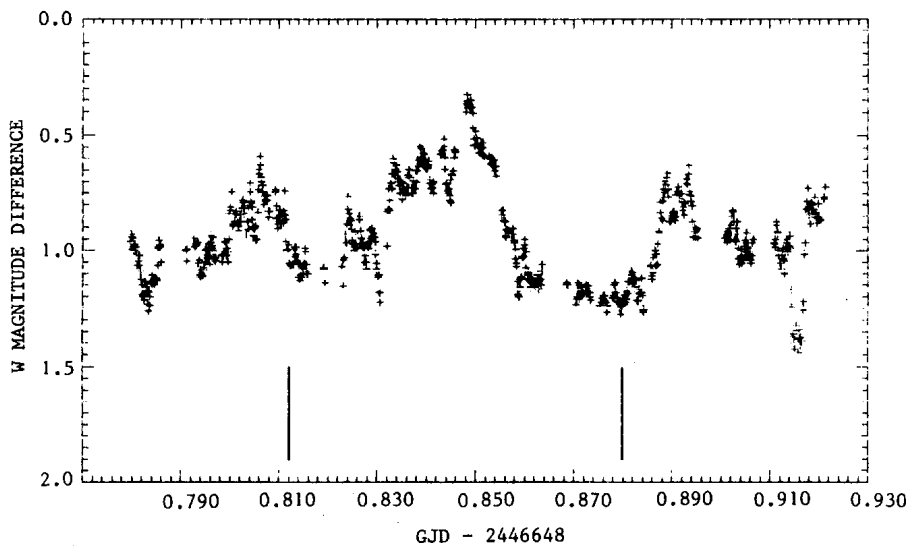


Figure 2. EX Hydrae light curve obtained on August 6. Each point corresponds to one 10 second integration in white light. The timing marks below the data correspond to the eclipse times predicted by the ephemeris of Sterken et al. (1983).

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