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UV CETI OBSERVATIONS AT BOYDEN OBSERVATORY

During September-October 1967 the Boyden Observatory joined in the worldwide program of monitoring the flare star UV Ceti. Observations were made with the Harvard Nishimura 16-inch telescope and photometer. The star was observed with a V filter, using a time constant ~ 1 sec, with the sky checked about every 30 min.

Table 1 gives the amount of time covered each night and a list of the flares definitely and unambiguously observed. Table 2 gives a list of possible small events (those with $\Delta m < 3 \sigma$) together with approximate values for the normal recorder fluctuations. To be regarded as real, these observations should be independently confirmed. Figure 1 shows a chart of the times actually covered by Boyden photometry; Figure 2 shows the light curve of one of the events described here.

Many thanks are due Drs. T. Schmidt and E. S. Schöffel and Mr. J. P. Eksteen for arranging and carrying out the observations at the Boyden Observatory.

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Table 1.
 Boyden Observatory Results
 Definite Flares

Date 1967	Coverage	Time of flare Δm (UT)	Notes
Sept. 27-28	3 ^h 39 ^m		No definite activity.
28-29	0		No photometry.
29-30	0		No photometry.
30- 1	0		No photometry.
Oct. 1- 2	4 46	232240(start) 0. ^m 4	Duration ~3-4 min, $\sigma \sim 0.m1$.
2- 3	4 31		No definite activity.
3- 4	2 14		No significant activity.
4- 5	5 18	234025(start) 1.02	Rise ~10 ^s , 2nd max ~0. ^m 1 at t+3 ^m . Return to normal light at t+5 ^m approx.
5- 6	4 06	234143(start) 0.48	1st max. 10 ^s rise, ~1 ^m 30 ^s decay to (normal light + 0.02).
		234808(start) 0.30	Never returns to normal. 2nd max 8 ^s rise, ~2 ^m 10 ^s decay to near normal. Slow drop from (norm +0.07) at t+4 min to (norm +0.05) at t+9 min.
		000419(start) 0.18	3rd max, decay until next event.
		000545(max) 0.58	4th max, decay until next event.
		000812(max) 0.94	5th max, decay until next event.
		000900(max) 1.19	6th max, decay to normal light 36 ^m . Total duration of event 1 ^h 04 ^m .
Oct. 6- 7	4 ^h 41 ^m	214915(start) 0. ^m 47	Rise 15 ^s , decay to normal +0. ^m 05 in 3-4 min, decay to normal in 15 ^m
7- 8	5 34	001750(start) 0.38	Rise 8 ^s or less. Total duration only 20 ^s .
8- 9	1 45	230200(start) 0.58	1st max. Decay until
		230420(max) 0.17	2nd max. Duration entire event greater than 3 ^m .

Total 36^h34^m Six definite, large ($\Delta m > 3\sigma$) events in V color.

Table 2
 Boyden Observatory Results
 Possible Events

Date 1967	Time (UT)	m	σ of normal light	Notes
Sept. 27-28	010350	0.14	0.10	Duration 50 sec.
Oct. 1-2	012710	0.17	0.10	Duration 20 sec.
	013630	0.18	0.10	Duration 15 sec.
	223500	0.23	0.10	Duration 20 sec. Recording resumed during decay of event (?). Max occurred during sky reading.
2-3	220030	0.18	0.09	Duration 40 sec.
3-4	213200	0.16	0.1+	Duration 1 ^m , cirrus be- fore and after.
4-5	205930	0.17	0.10	Duration 1 ^m 20 ^s
5-6	014910	0.15	0.09	Duration 25 sec.
7-8	203800	0.20	0.08	Duration 60 sec.
	231240	0.20	0.10	Duration 10-15 sec.
	233050	0.25	0.10	Duration 10 sec.

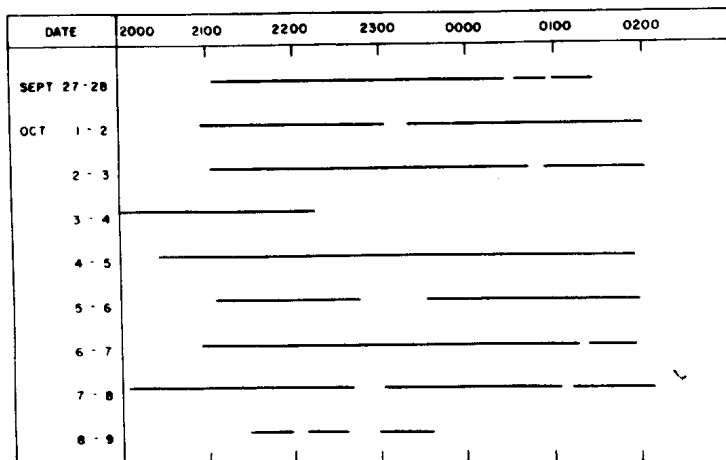


Fig. 1

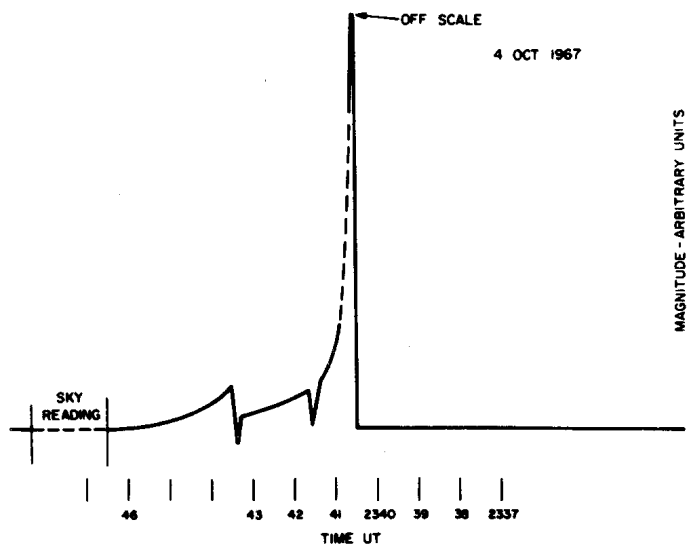


Fig. 2