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A. R. HOGG'S UB_v OBSERVATIONS OF U PEGASI

The late Dr. A. R. Hogg left a series of ub_v observations of the W UMa star U Peg which he had made at Kitt Peak National Observatory in October 1964 with the 91 cm reflector. I have completed the reductions from the chart recordings and have made the corrections for differential extinction and heliocentric time. Using a 1P21 photomultiplier and standard Johnson filters he obtained about 250 observations in each color on October 21, 23, 24, 25, 27, 1964. In addition, on October 24 Hogg monitored U Peg between 0^m.84 and 0^m.92 for ultraviolet flares and found none. Owing partly to clouds, coverage of the minima was such that only one time of primary minimum and two times of secondary minimum could be determined by the least squares method described by Kwee and van Woerden:

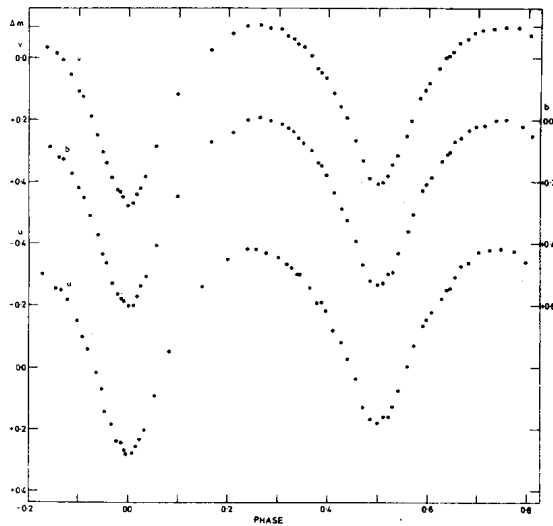
| Minimum | JD hel | standard error |
|---------|-----------------------|----------------|
| II | 2438 689.7081±0.00023 | |
| I | 691.7693 0.00018 | |
| II | 692.7072 0.00018 | |

Min I occurred 0^d.0023 earlier than predicted by Rigterink (A.J. 77, 319, 1972). Phases for the present series were computed from Hogg's epoch and Rigterink's period:

$$\text{Min I} = \text{JD } 2438\ 691.7693 + 0^d.37478133 \text{ E.}$$

The observations have been put on punched cards at the Mt. Stromlo Observatory, and print-outs have been prepared for the R.A.S. repository in London with a copy for the file in Odessa in accordance with IBVS No. 510. Fig. 1 gives the normal points of four observations each of the relative brightness of U Peg minus the comparison star BD+15^o4912. In 1964 the two maxima were of nearly equal brightness. Max I appeared to be slightly brighter in b and v and the same in u, whereas it was fainter in 1949-50 and brighter in 1958, 1961, and 1970. By reflecting the phases of the normal points for secondary minimum, I find its midpoint to be 0^d.001 after P/2, compared to 0^d.002 found by Binnendijk in 1958 and Rigterink in 1970.

Hogg observed standard stars to transform the colors of U Peg and



the comparison star to the UBV system. Mean values and their standard errors are given below.

| Star | u - b | b - v | U - B | B - V | V |
|-------------|-----------------------------|-----------------------------|--------------------|--------------------|------------------------|
| U Peg Max | +1 ^m 082 ± 0.003 | -0 ^m 431 ± 0.006 | +0 ^m 10 | +0 ^m 64 | +9 ^m 23 |
| U Peg Min I | +1.118 | 0.006 | -0.390 | 0.015 | +0.13 +0.68 +9.80 |
| Min II | +1.085 | 0.010 | -0.410 | 0.010 | +0.10 +0.66 +9.74 |
| BD +15°4912 | +0.941 | 0.005 | -0.542 | 0.003 | -0.02 +0.50 +9.85±0.01 |

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