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LIGHT VARIATION OF THE ECLIPSING SYSTEM UV LEONIS

UV Leonis (BD+15°2230) is one of the few short period eclipsing systems which show no complication and whose components are not close to the Roche limiting surface (McCluskey, 1966). The primary star is slightly larger and brighter than the secondary component. It is a double lined spectroscopic binary.

UV Leonis was first announced as a variable star by Hoffmeister (1934). Its light curve was classified as an Algol type by Jensch (1935).

UV Leonis was observed photoelectrically during the last five nights of March 1985 using the one beam photometer attached to the Cassegrain focus (f/18) of the 74" telescope at Kottamia Observatory, Egypt (latitude N 29°55'.9 longitude E 31°49'.5). A total of 213 yellow and 285 blue magnitudes of UV Leo were obtained. The comparison star observed with UV Leonis was BD+ 14° 2777 and during the observations the nights were of good photometric quality.

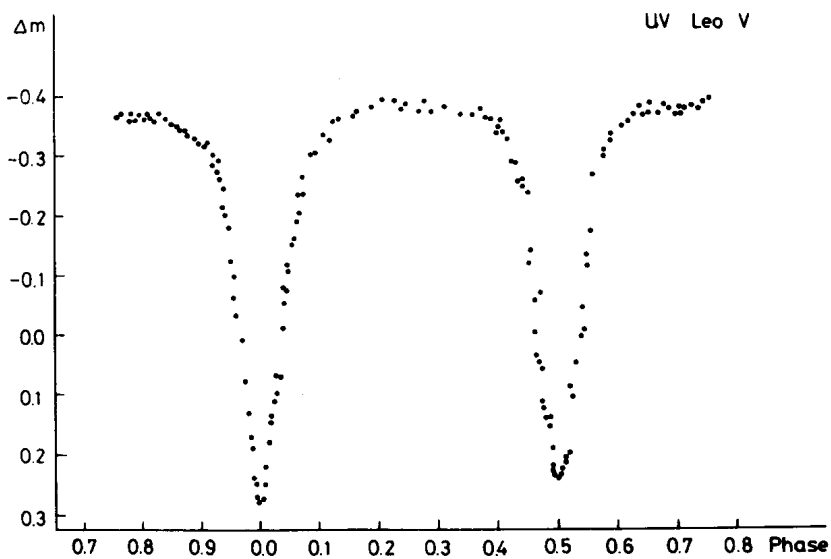


Figure 1

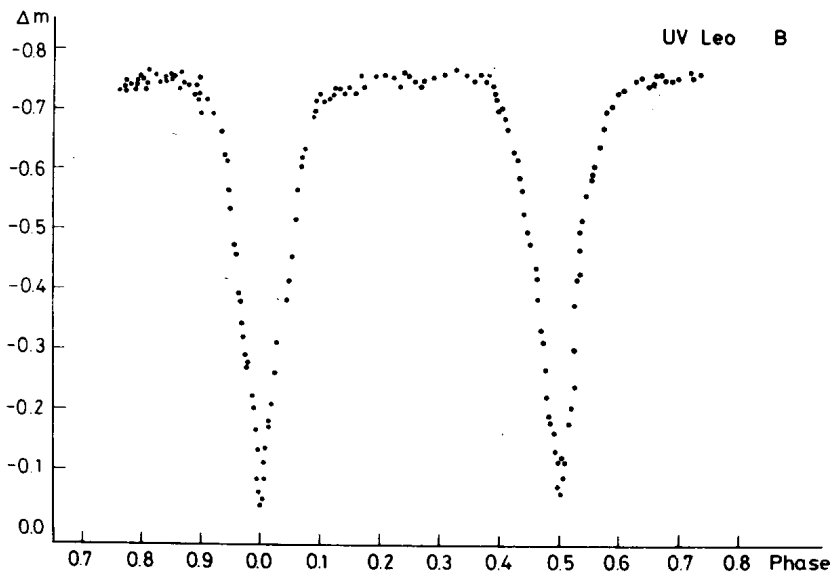


Figure 2

The light curves obtained in yellow and blue colours are shown in Figures 1 and 2 respectively. It is clearly seen that the system has two nearly equal minima.

Four times of minima, two primary and two secondary in both B and V colours were obtained. The residuals were calculated using the following ephemeris:

$$\text{Hel.Min. I} = 2438440.7275 + 0.6000855 E$$

The times of minima are given in Table I.

Table I

Hel.Min.JD.	Min.	Filter	E	O-C
2446152.4263	I	B	12851	0.0000
.4258		V		-0.0004
2446153.3263	II	B	12852.5	-0.0001
.3267		V		+0.0003
2446155.4264	I	B	12856	-0.0003
.4269		V		+0.0002
2446156.3268	II	B	12857.5	+0.0001
.3268		V		0.0000

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References:

- Hoffmeister, C., 1934, Astron. Nachr. 253, 195.
Jensch, A., 1935, Astron. Nachr. 257, 139.
McCluskey, G.E., 1966, Astron. J. vol. 71, No. 6., 536.