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FS Lup  
VARIABLE STAR TYPE EA OR EB?\*

The star FS Lup was detected by Hoffmeister (1963) and first listed under number S7620. It has been referred to as a variable of type EA, its brightness ranging between 11.5 - 12.5 (photographic).

The equatorial and galactic coordinates of this star are:

$$\begin{array}{ll} \alpha = 14^{\text{h}} 48^{\text{m}} 45^{\text{s}} & l = 321^{\circ}36 \\ (1950.0) & b = + 7^{\circ}07 \\ \delta = -51^{\circ} 13'3 & \end{array}$$

Figure 1 reproduces the identification chart.

Until now FS Lup has not been put under systematic observation so as to confirm or refute its type of variability or determine the graph of its light curve so that the period of variation of its brightness could be defined (Kholopov, 1985).

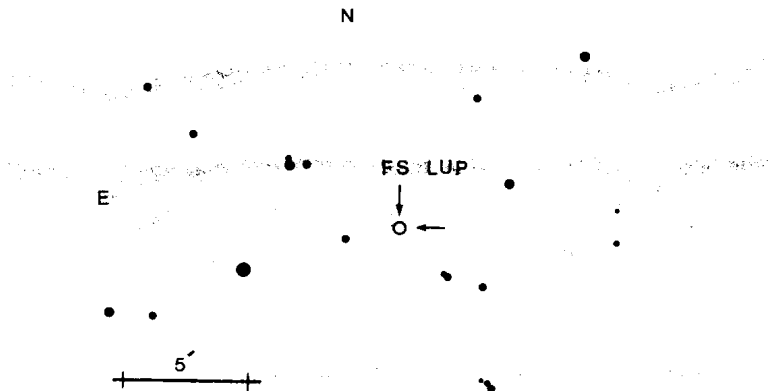


Figure 1. Finding chart (in B) for the variable star FS Lup

\* based on observations collected at ESO/LA SILLA, CHILE.

In Table I we mention the periods of observation and the means of investigation.

Table I

<u>Period</u>	<u>Telescope</u>	<u>No of nights</u>	<u>Photometry</u>	<u>Observer</u>
May 1982	T61cm, Bochum/ESO	5	U.B.V.	TERZAN, A.
May 1983	T61cm, Bochum/ESO	3	U.B.V.	TERZAN, A.
June 1984	T1m / ESO	4	U.B.V.	DIDELON, P.

The light curve in V (Figure 2) resulting from the collection of all the observational data in one single phase seems to point out that star FS Lup is more likely to be an eclipsing variable star of type EB, not EA.

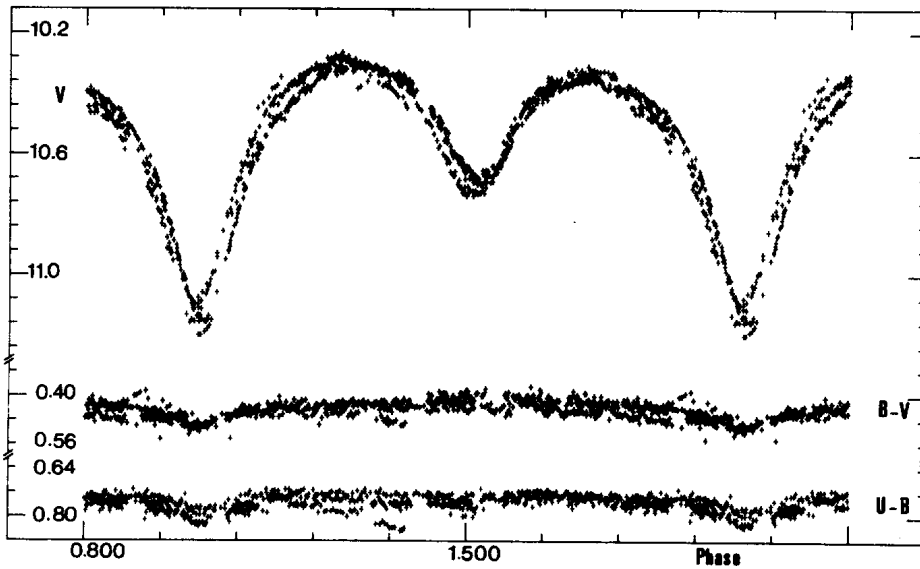


Figure 2. Light curves V, B - V, U - B for the variable star FS Lup

The ephemeris of the variation of its brightness is:

$$P_{JJ_0} = 2\ 445\ 108^d.56035 + 0^d.3813973.E. \\ \pm 5$$

with amplitude about 1 mag<sub>v</sub> and depth of the secondary minimum in the order of 0.5 mag<sub>v</sub>.

Besides, we note that the period  $P_{JJ_0}$ , graphed between two principal maxima varies very little ( $\pm 0.0000005 P$ ). It is relatively short ( $0.3813973$ ) for a star type EB.

In fact, the histogram graphed by Petit(1982) after the data collected from the "General Catalogue of Variable Stars" (Kukarkin et al, 1969) on the eclipsing variable stars type EA and EB points out that the number of EA or EB with a period inferior to  $0.4$  does not exceed 5.

The determination of other different parameters as well as the discussion on the variability of the period of this star will be the aim of our further research.

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