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NEW MINIMUM TIMES AND PERIOD OF SW LACERTAE

The W UMa-type star SW Lac. (BD+37°4717) is well known to have a variable period (see e.g. Panchatsaram and Abhyankar, 1981). The system was observed on September 30 and October 1-4, 1983, at Kryonerion Observatory, Greece. The observations were made with a 48-inch Cassegrain reflector and a two-beam multi-mode photometer. The two intermediate pass-band filters used were selected to be in close accordance with the standard U,B,V colour system.

Six times of minima observed during this season were calculated by the folding paper method and they are listed in Table I. The successive columns contain the heliocentric times of minima, the differences  $(O-C)_1$  and  $(O-C)_2$ , the filter used and remarks.

Table I

HJD	$(O-C)_1$	$(O-C)_2$	Filter	Rem.
2440000+				
5608.4174	-0.0445	+0.0002	B,V	Min II
5609.3794	-0.0447	+0.0001	B,V	Min II
5611.3038	-0.0446	+0.0001	B,V	Min II
5611.4638	-0.0450	-0.0002	B,V	Min I
5612.2660	-0.0446	+0.0002	B,V	Min II
5612.4259	-0.0450	-0.0003	B,V	Min I

The  $(O-C)_1$  values have been calculated with the ephemeris of Kreiner and Frasincka (1977)

$$\text{Min I} = \text{JD Hel } 2442697.404 + 0.320724716.E \quad (1)$$

while the  $(O-C)_2$  values have been computed with a new ephemeris

$$\text{Min I} = \text{JD Hel } 2444499.5264 \pm 6 + 0.3207204 \pm 2 \text{ E} \quad (2)$$

which has been determined by least squares method and by using the times of minima listed in Table I, the ephemeris given by equation (4) of Mikolajewska and Mikolajewski (1981) and the last three mean minimum times of those given by Hopp et al. (1982).

It results from the above equations (1) and (2) and equation (4) of Mikolajewska and Mikolajewski (1981) that the period of SW Lac is undergoing fluctuations around an average value. A sudden period change in 1977 announced by Mikolajewska and Mikolajewski (1981) and another jump in the period in 1979 was noticed by Evren et al. (1985). Our computations show that the new ephemeris given by equation (2) holds good for the time interval 1980-83. A discussion of the light curves and the determination of the elements of the system will be given elsewhere.

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