Rev. Mexicana Astron. Astrof., **14**, 416 (1987)

LZ HER: AN ECLIPSING BINARY STAR

R. Garrido[1], T. Gómez[2], R. Peniche[2], and J.H. Peña[2]

1. Instituto de Astrofísica de Andalucía, España.
2. Instituto de Astronomía, Universidad Nacional Autónoma de México.

ABSTRACT. During a systematic study of SX Phe stars which is being carried out at the National Observatory at San Pedro Mártir, B.C. México, it has been discovered that the star, LZ Her, previously reported as a class SX Phe star (Frolov and Irkaev 1984), with the following characteristics: V = 14.3 mag, P = 0.199 d, and ΔV = 0.5 mag, is not a star of that class. The light curve (Figure 2) obtained through differential photometry which was performed at the 1.5-m telescope and with the Danish Photometer (which permits simultaneous obtention of data in the *uvby* Strömgren filters), indicates that this is a binary star in contact of the W Ursa Majoris type whose light curves show maxima with great curvature, and minima which are almost as deep. The period determined for LZ Her was 0.3338 d with a temporal coverage of three cycles.

Key words: STARS-BINARY — STARS-SX PHE — STARS- W UMA

REFERENCE

Frolov, M.S.A. and Irkaev, B.N. 1984, *I.B.V.S. No.* 2462.

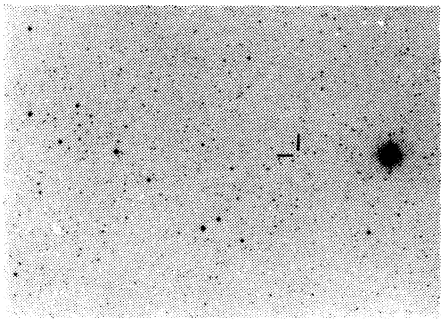

Fig. 1. Identification chart of LZ Her taken from the Palomar charts. North goes down, East to the left.

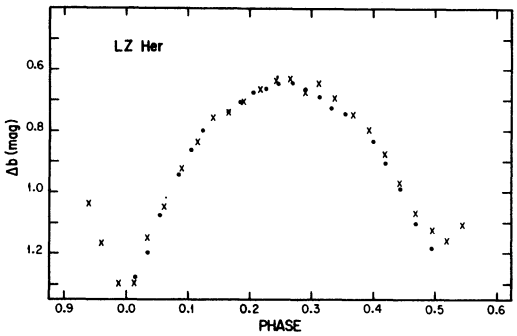

Fig. 2. Light curve in the Strömgren's b filter of the eclipsing binary star LZ Her. The observations were carried out on HJD 2446641 (dots) and HJD 2446642 (crosses).

R. Garrido: Instituto de Astrofísica de Andalucía, Apartado Postal 2144, Granada, Spain.
T. Gómez, R. Peniche and J.H. Peña: Instituto de Astronomía, UNAM, Apartado Postal 70-264,04510 México, D.F., México.