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NSV 07109, AN RR LYRAE TYPE STAR IN LIBRA

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| | |
|--|---|
| Name of the object: | |
| NSV 07109 = CSV 002352 | |
| Equatorial coordinates: | Equinox: |
| R.A. = 15 ^h 29 ^m 56 ^s .7 DEC. = -12°53'14" | 2000.0 |
| Observatory and telescope: | |
| Observatorio del Departamento de Física de la Universidad de Extremadura, 0.4-m f/4.5 Newtonian Reflector | |
| Detector: | Starlight Xpress CCD Camera (based in the chip SONY ICX027BL 6.4 × 4.35 mm ² , 500 × 256 pixels) |
| Filter(s): | V (Kron-Cousins system) |
| Comparison star(s): | GSC 5603.63 |
| Check star(s): | GSC 5603.49 |
| Transformed to a standard system: | No |
| Availability of the data: | |
| Upon request | |
| Type of variability: | RR Lyr |
| Remarks: | |
| <p>The results of the observations carried out show that NSV 07109 seems to be an RR Lyrae star with a period close to 9 hours. The star shows an almost symmetric light curve ($(M - m)/P = 0.42$) and a 0.6 magnitude amplitude in the V band. From the timing of four minima (see Table 1) obtained according to the Kwee–Van Woerden (1956) method, the following ephemeris for the maximum was derived:</p> $\text{Max} = \text{HJD } 2451359.4510 + 0^{\text{d}}3811 \times E.$ $\pm 0.0005 \quad \pm 0.0001$ | |

Table 1

| HJD 2451000 + | Epoch | $O - C$ |
|---------------|-------|---------|
| 359.448 | 0 | -0.003 |
| 364.407 | 13 | +0.002 |
| 375.455 | 42 | -0.002 |
| 380.412 | 55 | 0.000 |

Acknowledgements:

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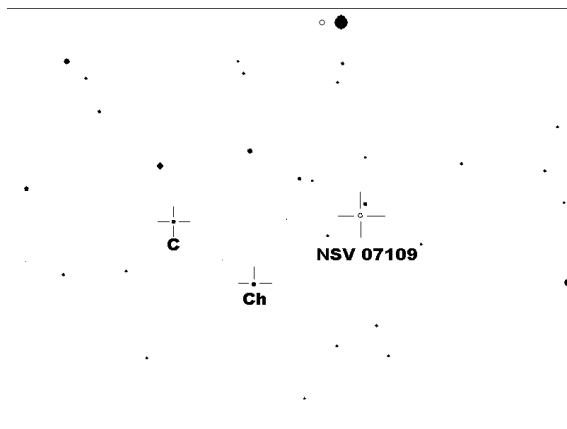


Figure 1. Identification chart of NSV 07109. C = Comparison star, Ch = Check star. North is on the top.

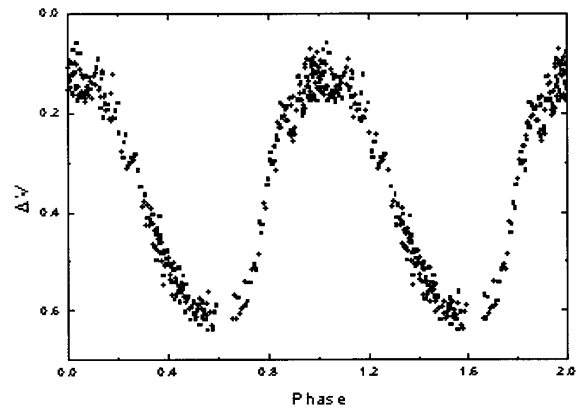


Figure 2. The V light curve obtained for NSV 07109. Magnitude differences (variable minus comparison) are plotted versus phase, where the phases are computed using the ephemeris calculated in this work.

References:

- Kukarkin et al., 1982, New Catalogue of Suspected Variable Stars, Moscow
 Kwee, K.K., Van Woerden, H., 1956, BAN, 12, 327