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THE LIGHT CURVE OF THE Ap VARIABLE HD 153947 \equiv V974 Sco*

The variability of HD 153947 \equiv NGC 6281-9 \equiv V974 Sco was pointed out by North et al. (1988); Feinstein & Forte (1974) did not support its membership to NGC 6281, while Bolton & Herbst (1976) and North et al. (1988) considered it an open question. The latter authors also reported a photometric period of 2.662 ± 0.003 d; from their Fig. 1 a time of maximum light at HJD 2446966.96 \pm 0.05 can be derived.

In April and May 1992 we observed the δ Scuti star V922 Sco, located near NGC 6281, with the ESO 50-cm telescope and we decided to include V974 Sco in the observing cycle. On each night, 5-8 measurements were collected and grouped into the 11 normal points listed in the table. The V standard magnitudes were calculated assuming $V=7.444$ for the comparison star HD 153426, as obtained from the observation of some nearby standard stars. V974 Sco has a faint companion star, located about 18 arcsec further east and not previously reported: we measured a difference of 3.8 mag in V -light.

The period search was performed using a least-squares method and we were able to confirm the photometric period reported by North et al. (1988). The figure shows the normal points with the interpolating light curve, calculated by including also the first harmonic $2f$. The V light amplitude is 0.06 mag, in good agreement with the 0.07 mag amplitude reported by North et al. (1988). The derived time of maximum is HJD 2448740.72 \pm 0.03; the elapsed cycles from North et al.'s maximum should be 666, giving a period of 2.6633 ± 0.0001 d, but 665 or 667 cycles are also possible. The standard deviation of the fit is 0.0055 mag: this value is 2-3 times greater than the expected one. This discrepancy can be due to the contaminating light from the close companion, only a few arcseconds outside the diaphragm field, or to a slight variability of HD 153426 \equiv NSV 08104.

* Based on observations collected at European Southern Observatory, La Silla, Chile

Table I

Hel. J.D.	<i>V</i>	Hel. J.D.	<i>V</i>	Hel. J.D.	<i>V</i>
2448732.88	8.759	2448743.83	8.780	2448746.80	8.804
8734.73	8.797	8743.91	8.789	8746.87	8.805
8735.89	8.796	8745.82	8.779	8746.91	8.807
8736.87	8.826	8745.91	8.762		

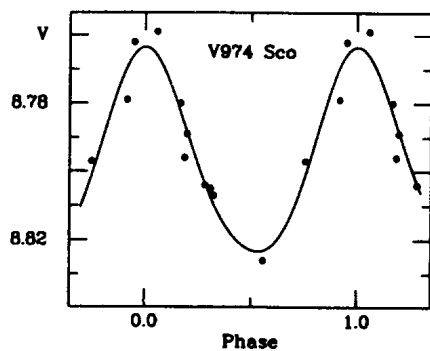


Figure 1

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