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THE PERIOD OF THE A0p Si PROBABLE
BLUE STRAGGLER NGC 6281-9

The star HD 153947=DM-37°11215=NGC 6281-9 is listed as a probable blue straggler in the cluster NGC 6281 by Mermilliod (1982). Like several other blue stragglers, it is classified as A0p Si, so that it could be considered as potentially variable, like all magnetic peculiar stars. It was included in our programme of determination of periods of Ap stars in clusters, although its membership is not firmly established: proper motions and radial velocity are still lacking, and the star lies at 1.5 cluster radii from the cluster centre, in projection on the sky. Pending confirmation of its membership of NGC 6281, this star may be considered a most interesting object.

The first measurements, made in 1987 at La Silla with the 70-cm Swiss telescope, in the seven filters of the Geneva photometric system, show a large amplitude but were insufficient to disentangle the two possible periods $p=2.7$ or $P=0.73$ days. More measurements have been made from La Silla in May 1988, which clearly show that the longer period should be preferred. The most probable

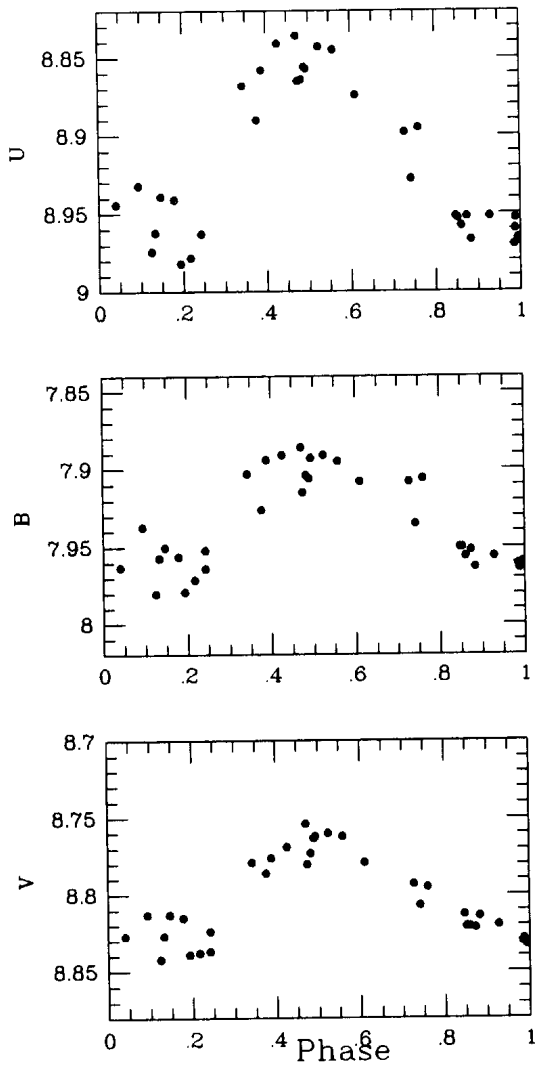


Figure 1. Lightcurves of the star NGC 6281-9 in three Geneva passbands

period is thus

$$P = 2.662 \pm 0.003 \text{ days}$$

although some other nearby periods may be possible too, such as $P=2.640$ or 2.686 , the latter being less satisfactory. This ambiguity is due to the almost one-year gap between the observations of 1987 and those of 1988. It should be suppressed by future measurements later in the season.

Fig. 1 shows the lightcurves of NGC 6281-9 in the three Geneva bandpasses [U], [B] and V. The zero phase corresponds to the first 1987 observation, i.e. HJD 2446965.645. We see that the amplitude increases from about $0^m.07$ in V to 0.12 in [U], which is rather typical of Si stars. The period, too, is rather typical of old Si stars (NGC 6281 has a $\log(\text{age}) \approx 8.35$): it is only slightly greater than the value (about 1.8) corresponding to the maximum of the period distribution of these stars (North, 1987).

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