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NO CEPHEID-LIKE VARIABILITY IN SAO 096478 = NSV 03374

SAO 096478 (9.2, KO) is the star designed as "0" in the C4 Harvard Standard Region. Its variability was suspected by Balz Jr. and Vyssotsky (1958) : "Both the photographic and photovisual magnitudes of this star show larger than average residuals (...). The star is probably a Cepheid". The spectrum varies from F5 to KO (Balz Jr. and Vyssotsky and references therein). The star is named NSV 03374 as a suspected variable (Kholopov, 1982).

Taking into account the wide spectral variation, a period longer than 15 d and an amplitude of about 1.0 mag. is expected from a classical Cepheid, but a first contradiction arises from the G5 V spectrum recorded by Nassau and Mac Rae (1955).

Such an amplitude is large enough to allow detection by a visual observer: a tentative visual survey conducted by one of us (Le Borgne, 1983) during 1983 spring failed to show evidence of any significant variation (probable error : 0.2 mag.) discouraging further visual monitoring on larger scale by GEOS observers.

In order to have a definitive answer, NSV 03374 was photoelectrically observed in 7 nights with the 50 cm telescope of Merate Observatory, in a program concerning the study of variable stars of intermediate and late spectral type.

SAO 096482 (8.5, KO) was used as comparison star, SAO 096459 (9.2, G5) as check star. The integration time was set to 20 sec. Table I shows  $\Delta V$  values in the sense 'comparison minus variable' ;  $\sigma$  is the standard error. If any, the variation is smaller than 0.02 mag., but NSV 03374 is probably constant since the same scatter is observed for the check star.

The puzzle of the spectral variation cannot be solved with a simple misidentification, because SAO 096469 (9.1, F5) and SAO 096494 (9.3, F5) are 30' northern to NSV 03374. In any case, the spectral features are not typical of a Cepheid (or SRd) variable or of an RS CVn activity.

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Table I

| JD       | $\Delta V$ values for NSV 03374 |          | $\Delta V$ values for the check star SAO 096459 |          |
|----------|---------------------------------|----------|---|----------|
|          | $\Delta V$                      | $\sigma$ | $\Delta V$                                      | $\sigma$ |
| 46069.44 | -0.867                          | 0.006    | -   |          |
| 46095.50 | -0.872                          | 0.008    | -0.942  | 0.008    |
| 46096.43 | -0.849                          | 0.006    | -0.929  | 0.007    |
| 46116.47 | -0.882                          | 0.007    | -0.951  | 0.006    |
| 46118.34 | -0.854                          | 0.013    | -0.933  | 0.006    |
| 46119.35 | -0.857                          | 0.007    | -0.915  | 0.006    |
| 46144.36 | -0.863                          | 0.006    | -0.936  | 0.007    |

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