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NSV 5598 IS NOT A RAPID VARIABLE STAR

SUMMARY

17 photoelectric measurements performed in six nights do not confirm the short period variability of NSV 5598 (GSC 1989 0108).

RESUME

17 mesures photoélectriques sur six nuits ne confirment pas la variation rapide de NSV 5598 (GSC 1989 0108).

RIASSUNTO

17 misure fotoelettriche in sei notti non confermano la variazione rapida di NSV 5598 (GSC 1989 0108).

RESUMEN

17 medidas fotoeléctricas obtenidas en seis noches no confirman la variación rápida de NSV 5598 (GSC 1989 0108).

INTRODUCTION

Archer (1959) reported the variability of 24 stars in the vicinity of the Coma star cluster, using visual estimates on photographic plates. Most of them were declared rapid eclipsing variables. On these informations, the stars were included in the NSV catalogue (Kukarkin et al, 1982). The identification of these stars is a real problem because Archer published only coordinates and a poor finder chart. Nevertheless, Tan et al. (1984), Faulkner (1986), reported photoelectric observations on 15 of these suspected variables. None of these showed light variations, casting serious doubts on the remaining objects. A new attempt on the identification of these stars is published in another GEOS publication by Boninsegna (1996).

VISUAL OBSERVATIONS

For the star number 6 (NSV 5598), Archer proposed the type EA? and a period around 1 day. Dedoch (1992) observed visually the star during more than one year and obtained 27 times of minimum brightness. The period derived, a little less than 0.12d, lead to the conclusion that the star was probably a short period EW. Later, Martignoni et al. (1994) published more visual observations confirming the period.

CCD OBSERVATIONS

Recently, Simon (1995) monitored the star during two nights, using a CCD camera and a Maksutov telescope 180/1800 mm. The observations were reduced in an instrumental system which was similar to the R-band. The star seems to vary on a time scale of several minutes with an amplitude of about 0.25 magnitude not compatible with Dedoch's elements..

PHOTOELECTRIC OBSERVATIONS

A group of GEOS members used the photometer attached to the Jungfraujoch observatory 76-cm telescope, equipped with filters of the Geneva system, to verify the variability of the star. During six nights on two years, 17 measurements in B and V showed no variation at all (standard deviation around 0.01 magnitude). The mean magnitude of the star is 10.75 in V and the mean Geneva B-V index – 0.39 (Johnson and Morgan B-V index 0.47). The identification of the star was made easy thanks to the charts published by Dedoch and Simon which were compared with the GSC.

HEL.J.D. 2400000 +	V	$B-V_G$	$B-V_J$
48981.7224	10.739	-0.380	.477
48982.6044	10.749	-0.360	.493
48982.6829	10.757	-0.381	.476
48982.7322	10.748	-0.368	.487
48983.5579	10.757	-0.369	.486
48983.6156	10.767	-0.386	.472
48983.7170	10.767	-0.378	.479
48984.6164	10.759	-0.390	.469
49721.7121	10.768	-0.389	.470
49721.7308	10.742	-0.394	.465
49722.5549	10.747	-0.387	.472
49722.5740	10.755	-0.403	.459
49722.6011	10.745	-0.393	.466
49722.6170	10.757	-0.388	.471
49722.6420	10.748	-0.406	.456
49722.6677	10.754	-0.389	.470
49722.7066	10.756	-0.397	.464

CONCLUSION

NSV 5598 (GSC 1989 0108) is surely not a rapid variable star. More observations are needed to confirm the non variability of the star.

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