

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1475

Konkoly Observatory
Budapest
1978 September 25

CONCERNING VARIABLE STAR 7 IN M13

Variable star 7 in the globular cluster M13 = NGC 6205 was suggested not to be a physical member of the cluster by Kadla (1966, Iz. Pulkova Observ. 24, 93) based on her proper motion study of M13. Non-membership seemed to be supported by the rather short period of 0.2388^d found for the star by Arp (1955, Astron.J. 60, 317). However, Ibanez and Osborn (1973, IBVS 769) found that the associated period of 0.312393^d apparently satisfied the available observational data somewhat better.

New B and V photographic observations have been obtained at the Michigan State University Observatory and the U.S. Naval Observatory, Flagstaff Station. These new observations confirm that the longer period is superior. Combining all the observational material for Variable 7, a best value for the period of 0.3126626^d was found. There was no evidence for a period change during the time covered by the observations.

Furthermore, the new observations allow the B and V characteristics of the variable to be determined. The results are:

	B	V	B-V
Mean magnitude	15.14	14.86	0.28
Total amplitude	0.31	0.26	0.05

These values make the star somewhat redder and fainter than found by Demers (1971, Astron.J. 76, 445) and place it just redward of the red edge of the horizontal branch in Sandage's (1970, Astrophys.J. 162, 841) HR diagram for M13. This strongly suggests cluster membership. In addition, Cudworth 1978, (152nd meeting of the AAS in Madison, USA) has recently reported that a new astrometric study yielded a proper motion for the variable consistent with cluster membership. These results make it virtually certain that

Variable 7 is indeed a physical member of M13.

The observational data and a complete discussion of this work will be published elsewhere along with our results for the other RR Lyrae stars of the cluster.

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