GUEST INVESTIGATORS AT THE MOUNT WILSON AND PALOMAR OBSERVATORIES

The Mount Wilson and Palomar Observatories, following a practice of many years, will continue to make observing facilities available to qualified guest investigators from other institutions. The Observatories are operated jointly by the Carnegie Institution of Washington and the California Institute of Technology.

Interested astronomers may obtain a leaflet entitled *Information for Guest Investigators at the Mount Wilson and Palomar Observatories* by addressing the Office of the Director, 813 Santa Barbara Street, Pasadena, California, 91106.

It is requested that an explicit research proposal be submitted by the prospective observer. Approval of observing programs and allotment of time on the telescopes will be made on the basis of scientific merit of the proposal and suitability of the available instruments.

It is desirable that research proposals and requests for guest investigator privileges for a given calendar year be received by October 31 of the preceding year. Demands for observing time are such that allotments can seldom be made on shorter notice.

HORACE W. BABCOCK

PHOTOELECTRIC OBSERVATIONS OF TWO NEW SHORT-PERIOD VARIABLES

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Since early 1964 a program has been under way to determine the frequency of occurrence of short-period variability among the

brighter giants and subgiants in the spectral range A7 to F5. A recent result of this program has been the discovery of short-period variability in β Cassiopeiae (HR 21) and HR 5329 (Millis 1966*a*, *b*). Further work on the program has revealed two more variables: HR 812 and HR 5788/9.

All the observations described below were made with the Lowell Observatory 21-inch reflecting telescope. The measurements were made through a yellow filter (3.6mm Corning 3384) with an unrefrigerated EMI 6256S tube. Mean extinction and transformation coefficients were used to reduce the observations to zero atmosphere and to transform them to the *UBV* system.

Observations of HR 812 (A7 IV) were made on two nights. The resulting light curves are shown in Figure 1. Both nights were of exceptionally fine quality. The probable error in a single observation

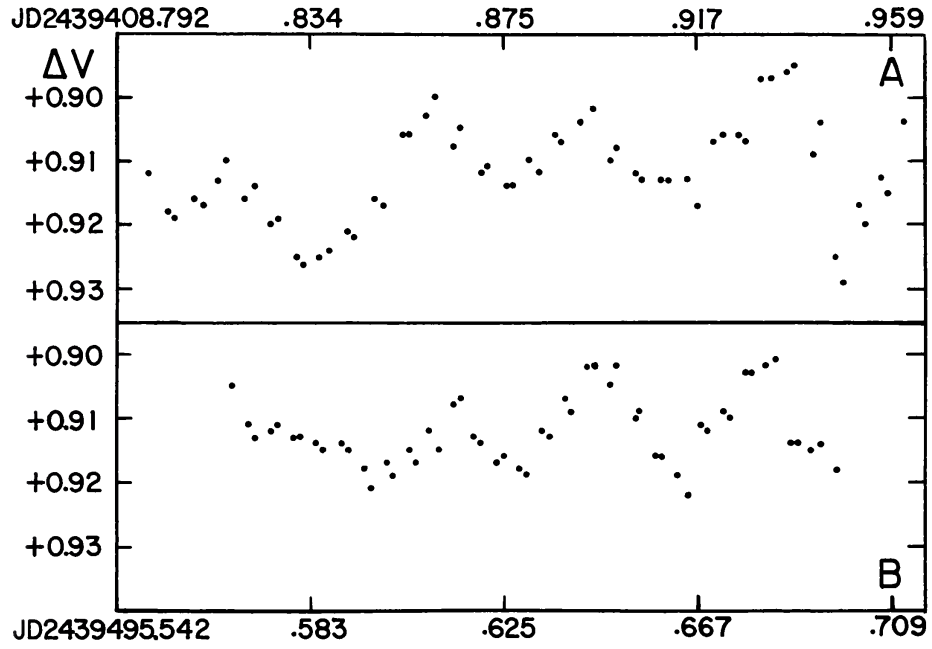

FIG. 1 — Light curves of HR 812 observed on October 10, 1966 (A) and January 5, 1967 (B). ΔV = HR 812 — μ Ceti. Check star was HR 797.

as derived from frequent observations of the comparison stars is $\pm 0^{m}002$. The short period and changing amplitude of the variations of this star make it an interesting object for further study. Although the variations are somewhat irregular and cannot be well described by a single period, the three best-defined peaks in both curves are

separated by time intervals of the order of fifty minutes. This is the most rapid variation yet reported for stars in the δ Scuti region.

Observations of the integrated brightness of the visual binary HR 5788/9 (δ Serpentis) have been made on four nights. The results are shown in Figures 2 and 3. The probable error in a single observation as derived from the comparison stars is about $\pm 0^m004$ to $\pm 0^m005$ on all nights. An accurate value of the period cannot be derived from these observations.

HR 5788/9 is composed of a 5.16 mag. F0 IV–V star and a 4.23 mag. F0 IV star. It is not possible to say with certainty which of the two components is variable. However, since many known δ Scuti

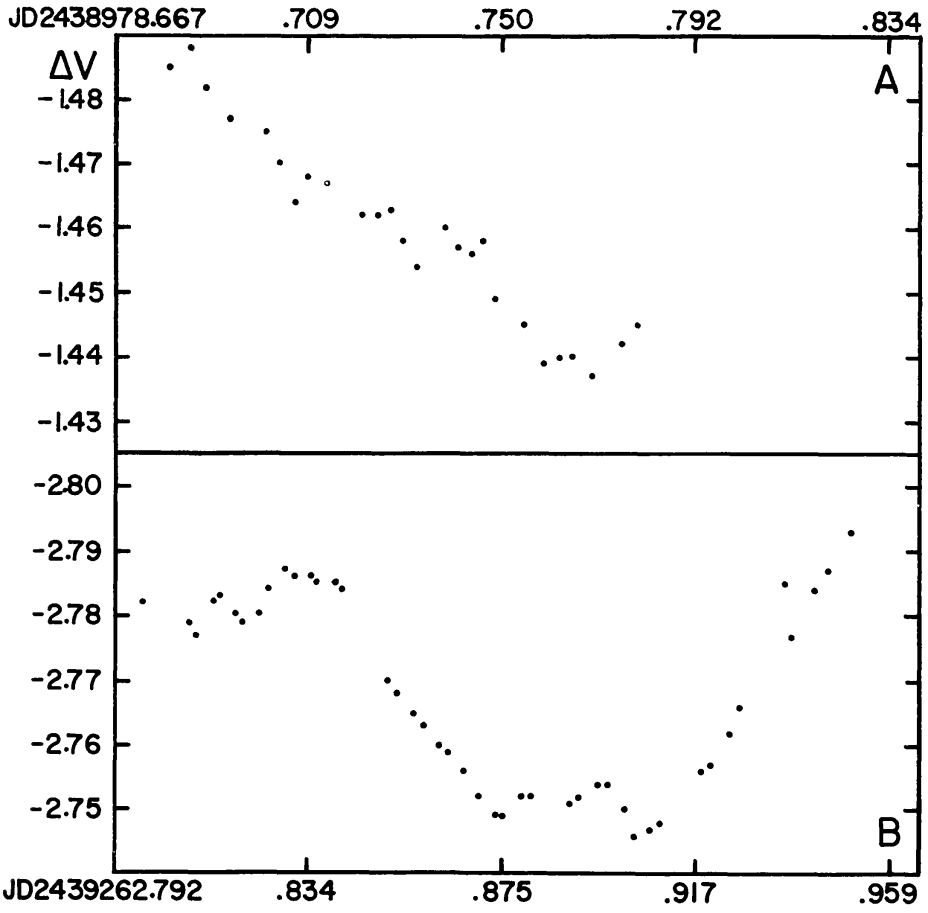

FIG. 2 — (A) Light curve of HR 5788/9 observed on August 6, 1965. ΔV = HR 5788/9 — HR 5802. Check star was HR 5796. (B) Light curve of HR 5788/9 observed on May 17, 1966. ΔV = HR 5788/9 — HR 5758. Check star was HR 5868.

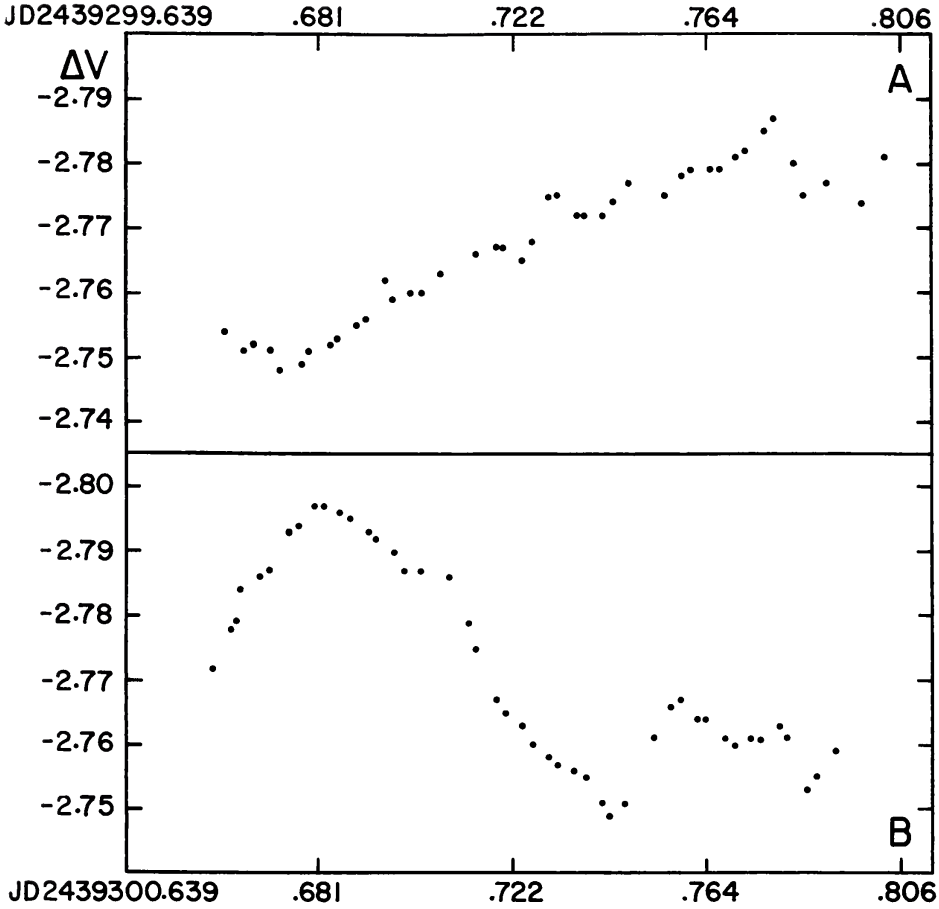

FIG. 3 — Light curves of HR 5788/9 observed on June 23, 1966 (A) and June 24, 1966 (B). Comparison and check stars are the same as in (B) of Figure 2.

stars are giants or subgiants, the brighter component is more likely to be the variable.

The writer wishes to thank the Lowell Observatory for providing the telescope and computer time necessary to make and reduce these observations.

REFERENCES

Millis, R. L. 1966*a*, Comm. 27 IAU *Inf. Bull. Var. Stars* No. 137.
—— 1966*b*, *Pub. A.S.P.* 78, 340.