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NEW VARIABLES IN M80

To continue an investigation of Messier 80 (NGC 6093, Cl614-228) begun many years ago (Sawyer, 1942) a new series of plates was taken from 1972 to 1983 with the 60 cm telescope of the University of Toronto at Las Campanas, Chile. Using the blink comparator of the University of Western Ontario three new variables in the cluster have been discovered on these plates.

Table I lists the coordinates and magnitude ranges for these new variables, numbers 8, 9, and 10. In addition, data are listed for the W Virginis star, variable 1, in order to correct an error of one digit in the y coordinate as given in Sawyer Hogg's Second and Third Catalogues of Variable Stars in Globular Clusters (1955, 1973). Magnitudes are based on the sequence of Harris and Racine (1974) but because variables 8, 9 and 10 are closer to the cluster centre their magnitudes may be too bright.

Table I

Variable	x''	y''	B_{\max}	B_{\min}
1	-137	+79	13.7	15.1
8	-24	+17	14.6	16.1
9	+16	+36	15.3	16.4
10	-19	+1	14.4	15.4

Since variable 6, S Sco, and variable 7, R Sco, are field stars, the total number of variables now thought to be members of the cluster is eight, in addition to the nova, T Sco, seen visually in 1860.

At the present time the plates are in the process of measurement with the iris photometer of the University of Western Ontario and it is planned to discuss the magnitudes, periods and light curves of all ten variables in a later paper. With a series of plates taken in 1939 with the 90 cm telescope of the University of Arizona and three other series of University of Toronto

plates beginning in 1946, our observations now extend over four decades into 1983. This should enable us to discuss the long term behaviour of the variables.

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References:

- Harris, W.E. and Racine, R., 1974, *Astron.J.* 79, 472.
Sawyer, Helen B., 1942, *Publ. David Dunlap Obs.* 1, No.12.
Sawyer, Helen B., 1955, *Publ. David Dunlap Obs.* 2, No.2.
Sawyer Hogg, H., 1973, *Publ. David Dunlap Obs.* 3, No.6.