

Search for Variables in the Galactic Globular Clusters NGC 6544 and NGC 6642

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A search for variable stars in the globular cluster NGC 6544 has revealed only one possible short period variable within the tidal radius of the cluster. A search in NGC 6642 yielded 16 new RR Lyrae stars within the tidal radius and 5 new field RRs. The previously discovered (Hoffleit 1972) V1 is a slow variable, and V2 is an RR Lyrae star. Photometry of the variables within the tidal radius gives a mean B for the horizontal branch of $\langle B \rangle = 17.0$ mag. With $E(B - V) = 0.37$ mag and $(B - V) = 0.35$ mag for RR Lyraes, a value for $V(\text{HB}) = 16.3$ mag is derived. This is about one mag fainter than previous estimates (Webbink 1985), and places NGC 6642 at a distance of approximately 7.9 kpc.

References:

Hoffleit, D., 1972, IBVS No. 660.

Webbink, R.F., 1985, in: *Dynamics of Star Clusters*, eds. J. Goodman and P. Hut, Reidel, Dordrecht, p 541.