CURiuos Variables Experiment (CURVE): Variable stars in the metal-poor globular cluster M56

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Abstract

We surveyed a 6.′5×6.′5 field centered on the globular cluster M56 (NGC 6779) in a search for variable stars detecting seven variables, among which two objects are new identifications. One of the new variables is an RR Lyrae star, the third star of that type in M56. Comparison of the new observations and old photometric data for an RV Tauri variable V6 indicates a likely period change in the star. Its slow and negative rate of −0.005±0.003 d/yr would disagree with post-AGB evolution, however this could be a result of blue-loop evolution and/or random fluctuations of the period.