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## Properties of Pre-main sequence stars in young star cluster NGC 2175

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Young star clusters harbor a large number of stars in pre-main-sequence (PMS) stage of their evolution. Physical properties of these stars can be constrained using various astrophysical techniques (e.g. by plotting them on HR diagram, studying their spectral energy distribution, times series photometric analysis, spectral studies, etc.). In this work we present preliminary time series photometric analysis of stars in young star cluster NGC 2175. Light curve analysis is used to detect variable stars in the cluster. We cross-match the present photometric catalog with young stellar objects (YSOs) catalogue from the literature. We compare the rotation period of variables with their ages and masses and try to understand and interpret the underlying physics.

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