

Testing asteroseismic ages of red giants in open clusters with isochrones

Thursday, 21 September 2017 11:00 (15 minutes)

Oscillating red giants in open clusters provide tight constraints for testing theories of stellar structure and evolution. Through their oscillation spectra it is possible to deduce their stellar parameters (asteroseismology), while at the same time the stellar properties can also be determined independently through isochrones. We aim to verify the asteroseismic ages, computed using the same set of isochrones (PARSEC) as used for the isochrone fitting, with the optimal isochrone. Additionally, we investigate the impact of the known ages and metallicities on the derived stellar masses. For this work, we use public data from Stetson (NGC 6791) and Hole (NGC 6819) for the isochrone fitting as well as high-precision long-term photometry obtained by the NASA Kepler space mission for the asteroseismic analysis.

Primary author: THEMESSEL, Nathalie (Max Planck Institute for Solar System Research)

Co-author: HEKKER, Saskia (Max Planck Institute for Solar system research)

Presenter: THEMESSEL, Nathalie (Max Planck Institute for Solar System Research)

Session Classification: Evolved stars and the connection to Galactic archaeology