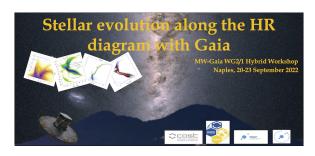
Stellar evolution along the HR diagram with Gaia



Contribution ID: 66 Type: not specified

Accurate masses of Hyades White Dwarfs

Thursday, 22 September 2022 10:00 (20 minutes)

Accurate measurements of white dwarfs masses are needed for determining the amount of gas recycled in the Galaxy, and, when measured through gravitational

redshift, establish a firm comparison between quantum mechanics and general relativity predictions.

We use the accurate ESPRESSO spectrograph at the VLT to determine Doppler shifts and gravitational redshifts for 8 bona fide Hyades white dwarfs, with an

accuracy of better than 1.5%. By comparing the gravitational redshift M/R measurements with those derived by fitting the Gaia color - magnitude

diagram with theoretical models, we find that the models and the observed M/R ratios globally agree extremely well, to better than 1%. By comparing photometric and spectroscopic Teff, we confirm that spectroscopic Teff are systematically larger, producing larger masses and smaller radii than what found in our analysis.

Presenter: PASQUINI, L.

Session Classification: White dwarfs - Asteroseismology - Binaries