

Synergy between asteroseismology and high-resolution spectroscopy

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In the last few years, the synergy between spectroscopy and asteroseismology was key to the improving the precision and accuracy of the inferred stellar properties (surface gravity, effective temperature, chemical composition, radius, mass, age).

For instance, given the difficulties associated with measuring $\log g$ via spectroscopic analyses, large-scale spectroscopic surveys have now systematically included solar-like oscillating stars among their targets, as key calibrators of surface gravity.

A spectroscopic follow-up of targets with asteroseismic constraints by HRMOS (including targets of the ESA M3 mission PLATO) will not only be beneficial to the calibration of spectroscopic analysis procedures but will also allow precise chemical abundance determinations that are key to inferring precise stellar properties (in particular age), to test stellar models, and, notably, for informing models of Galactic chemical evolution and to help identify populations of stars with a common origin.

Type

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