
The first generation grid of stellar models for PLATO's stellar target characterisation

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Abstract

The main goal of the PLATO mission is to detect and characterise exoplanets orbiting around bright solar-like stars, preferably close to the habitable zone. The PSM is committing to providing, thanks to PLATO's observations, determinations of mass, radius and age (MRA) with respectively an accuracy of 15%, 2% and 10% for G0V stars with a magnitude of $m_V = 10$. The WP121 will provide grids of stellar evolution models, used to estimate, through an interpolation, the MRA of each PLATO target. Three generations of grids are foreseen. In this presentation, we present the 1st generation grid: the physics chosen, the parameter space tested; and the stellar evolution code chosen to compute it: Cesam2k20 (formerly known as CESTAM); and the path followed to validate these choices.

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