



## **The PLATO Mission**

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PLATO (PLANetary Transits and Oscillations of stars) has been selected for ESA's M3 launch opportunity end 2025. PLATO will carry out high-precision, long-term photometric and asteroseismic monitoring of a large number of stars. It will provide a large sample of small planets around bright stars, including terrestrial planets in the habitable zone of solar-like stars. PLATO will characterize planets for their radius, mass, and age with high accuracy. PLATO will provide the first large-scale catalogue of well-characterized small planets at intermediate orbital periods, which will be an important constraint to planet formation theories and will provide targets for future atmosphere spectroscopy follow-up observations. This data base of bulk characterized small planets will form a solid basis to put the Solar System into a wider context and allow for comparative exo-planetology.

In addition, the precise stellar parameters obtained by asteroseismic studies will open new doors to better understand stellar interiors and allow us to constrain poorly-understood physical processes, like convection, improve our understanding of stellar evolution, and determine precise ages of stars and planetary systems.

The talk will provide an overview of the current status of the PLATO mission and focus on its science goals.