Contribution ID: **37**   Type: **Oral contribution**

Expectations from PLATO (invited talk)

Friday 27 March 2026 09:00 (20 minutes)

PLATO, the 3rd Medium class ESA's mission, is being built to detect and characterize extrasolar planets by photometrically monitoring a large number of stars. PLATO will detect small planets around bright stars, including terrestrial planets in the habitable zone of Sun-like stars. PLATO will also study the (host) stars using asteroseismology, allowing us to determine the stellar properties with high accuracy (radius, mass, age), substantially enhancing our knowledge of stellar structure and evolution. Radial velocity observations from ground will allow characterizing planets for their radius and mass (hence density), and age with high accuracy. The mission will provide a catalogue of well-characterized exoplanets up to intermediate orbital periods, relevant for a meaningful comparison to planet formation theories and to better understand planet evolution. In addition, PLATO´s Guest Observer program will allow for a large number of complementary science cases, based on proposals from the community. PLATO is scheduled for a launch date not earlier than end 2026 on an Ariane 6 rocket. The payload instrument consists of 26 cameras with 12cm aperture each. For at least four years, the mission will perform high-precision photometric measurements of about 150.000 stars per field, with 2 long pointings foreseen. In this talk we will present the current status of the mission and review the expected science performance for the project, with focus on the planet yield.

Presenter: Dr CABRERA, Juan (German Aerospace Center, Germany)

Session Classification: Future prospects and instruments