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# PLATO Spacecraft: status and overview

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## Abstract

The PLANetary Transits and Oscillations of stars (PLATO) spacecraft is currently in preparation to complete the Spacecraft Critical Design Review by Q1 2024.

This presentation introduces the Spacecraft design, which was consolidated at the Critical Milestone Review in January 2022, and the extensive qualification test campaigns of the Spacecraft Structural Model. The PLATO Spacecraft design is based on a modular concept consisting of the Service Module (SVM) and the Payload Module (PLM) allowing for a high thermal and mechanical decoupling of the two modules and a parallel design and manufacturing approach.

The SVM design is based on standard technologies, while the PLM design is aimed for high thermo-elastic stability. The PLM has been mechanically and thermally qualified, including thermo-elastic deformations measured by multi-channel interferometers. This has demonstrated the satellite performance to be compliant to the challenging pointing stability requirements needed for the PLATO scientific purpose. Along Q2 and Q3 2023, the complete spacecraft structural model (SVM+PLM) will undergo the mechanical qualification test campaign and model correlation activities.

The spacecraft design summary and test results of the qualification test campaigns to date will be included in this presentation.

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