



PRESS RELEASE

Nîmes, April 23, 2021

A Symetrie hexapod will test PLATO mission cameras at the Institute of Space Astrophysics

Symetrie delivered a ZONDA hexapod to IAS (Institut d'Astrophysique Spatiale) in Orsay, France, for the thermal vacuum tests and calibration of some of the cameras of PLATO (PLANetary Transits and Oscillations of stars) mission.

PLATO is an ESA (European Space Agency) mission, which is scheduled to launch in 2026. Its objective is to find and study a large number of extrasolar planetary systems, with emphasis on the properties of terrestrial planets in the habitable zone around solar-like stars.

The 10^{-6} mbar vacuum compatible ZONDA hexapod allows each camera to be positioned according to the six degrees of freedom (Tx, Ty, Tz, Rx, Ry, Rz) with a resolution of $0.1 \mu\text{m}$ and an outstanding angular accuracy of $7 \mu\text{rad}$, or $\sim 0.0004^\circ$, on a displacement of $\pm 23^\circ$! As a reminder, $1 \mu\text{rad}$ corresponds to a variation of 1 mm over 1 kilometer.

The hexapod solution was chosen for its angular precision over long strokes and for its versatility compared to the different camera models. Accuracy, repeatability and stability are the main features of this high-performance system.

10 years after the delivery of a first hexapod to IAS for the calibration of Simbio-SYS (Spectrometer and Imaging for MPO BepiColombo Integrated Observatory SYStem) instrument on the BepiColombo probe dedicated to Mercury exploration, which was recently reused for the calibration of MAJIS instrument (Moons And Jupiter Imaging Spectrometer) on JUICE mission, it was a pleasure to work again with the IAS team on this very demanding project.

SYMETRIE is an innovative company specializing in high precision positioning and motion hexapods of all sizes for 20 years.

SYMETRIE in a few words:

- 6 M€ turnover, an R&D department, 70% of engineers
- Major customers: Airbus Defence and Space, Leonardo, Naval Group, Rio Tinto, Safran, Thales, University of Hawaii, University of Western Australia...
- Large scale technological projects: Megajoule Laser; ground-based telescopes: DAG, DOT, NOEMA, OAJ and Pan STARRS 2; space: BepiColombo, EnMAP, Euclid, Gaia, JWST, MPO, MTG, PLATO, Sentinel 5, synchrotrons: APS, the Australian Synchrotron, DLS, Elettra, ESRF, IHEP, LBL, LNLS, MAX-lab, PAL, PSI, RRCAT, SLAC, SOLEIL, SSRF...

Contact us for more information!

Anne Duget - Tel: +33 4 66 28 87 20 - Email: anne.duget@symetrie.fr