

MICROSCOPE: a test of Equivalence Principle on the way to final results

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Abstract

MICROSCOPE aims at testing the Equivalence Principle (EP) in space with an accuracy 10^{-15} . Launched in April 2016, the satellite have been successfully operating for more than 2 years.

The first results were released in December 2017 on the basis of only 7% of the today available data. They led to improve the EP test by one order of magnitude. The main contributor to the systematics error comes from the thermal variations that were upper bounded in this first analysis. The presentation will show the strategy elaborated by the CNES/OCA/ONERA team to better characterise the thermal model of the satellite and the thermal variations at μK level. The operations performed in orbit during 2018 brought a lot of useful data that could help going beyond the first results. In addition to the status of the data analysis, some results will be presented that should lead at end of 2019 to the final Equivalence Principle comparison of Titanium and Platinum alloys .