

10 - 12 September 2018 – GRK Autumn workshop

Meike List (ZARM, University of Bremen)

Fundamental physics in space - The MICROSCOPE mission

Abstract

On the 25th of April 2016 the French space mission MICROSCOPE was launched. After the successful commissioning phase, scientific measurements started in December 2016 and were continued until spring 2018. The goal of the MICROSCOPE mission is ambitious: The Weak Equivalence Principle is being tested with a precision never achieved before yielding the determination of the Eötvös parameter η with an accuracy of 10 - 15.

In this talk I will present the mission's milestones including a detailed description of the scientific payload as well as the satellite itself. Furthermore, I will show the current result of ongoing data analysis. Additionally, I would like to point out the importance of the ongoing data collection processes for orbit propagation and orbit determination aspects.