

# Free Fall Tests of the MICROSCOPE Differential Accelerometers

H. Selig (1), M. List (1), S. Grotjan (1), H. Dittus (1)

(1) ZARM, University of Bremen, Bremen, Germany

The French space mission MICROSCOPE (CNES, ONERA) that will be carried out in 2009 aims at a high precision test of the Weak Equivalence Principle with an accuracy of  $\eta = 10^{-15}$ . For the determination of  $\eta$  the differential acceleration of test masses made of different materials will be measured capacitively. The performance and characteristics of the differential capacitive accelerometers that are under development at ONERA will be tested and verified in high quality micro-g conditions at ZARM drop tower. The comparison of the free fall test results with simulated data is important to check the corresponding Accelerometer simulation tools that are under development at ZARM. The free fall test principle, some preliminary results and simulated data will be presented in this contribution.