

## **The SWARM Swarm's Absolute Scalar Magnetometer metrological performances**

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The Absolute Scalar Magnetometer (ASM) has been developed for the ESA Earth Observation Swarm mission, planned for launch in November 2012. As its Overhauser magnetometers forerunners flown on Ørsted and Champ satellites, it will deliver high resolution scalar measurements for the in-flight calibration of the Vector Field Magnetometer manufactured by the Danish Technical University. Latest results of the ground tests carried out to fully characterize all parameters that may affect its accuracy, both at instrument and satellite level, will be presented. In addition to its baseline function, the ASM can be operated either at a much higher sampling rate (burst mode at 250 Hz) or in a dual mode where it also delivers vector field measurements as a by-product. The calibration procedure and the relevant vector performances will be discussed.