



First results of a scientific validation of Swarm ASM data

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The Absolute Scalar Magnetometer (ASM) is an optically pumped helium-4 magnetometer providing scalar measurements of the Earth's magnetic field onboard each of the three Swarm satellites. Its performance (accuracy, noise level, data cleanliness) is expected to be unprecedented among satellite scalar magnetometers. The main function of the ASMs during the Swarm mission will be to calibrate the vector field magnetometers. As part of the commissioning of the ASM instrument, we will compare preliminary ASM data with predictions from various recent geomagnetic models. Special focus will be placed on the DMSP-MAG-1 model, which relies on geomagnetic data from the Defense Meteorological Satellite Program (DMSP) until 2013.