



Swarm's Absolute Scalar Magnetometers experimental vector field measurements: first conclusions from comparisons with preliminary nominal Swarm Level1b vector data

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Swarm's Absolute Scalar Magnetometers (ASM) provide absolute scalar measurements of the magnetic field with high accuracy and stability on the three satellites of the mission. In addition, and on an experimental basis, these ASM instruments can simultaneously provide vector field measurements. These measurements can be compared with readings from the Vector Field Magnetometer (VFM, located some distance away along the boom and used to produce the nominal Swarm Level1b vector data) for quality crosschecks, possible detection of undesired satellite signals, as well as assessment of the stability of the mechanical link between both instruments. Here, we will describe how such crosschecks and comparisons, which imply using appropriate synchronization and alignment procedures, can be carried out, and present first conclusions from the comparisons that will have been made by then.