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UNIVERSITÄT BERN

Seminar über Microwavephysics and Atmospheric Physics

Referent: Dr. Mikko Kotiranta, Institute of Applied Physics, University of Bern

Titel: Development of On-Ground Calibration Targets for the Ice Cloud Imager Instrument of the Meteorological Operational Satellites - Second Generation Programme

The Ice Cloud Imager instrument is a scanning microwave radiometer developed as a part of the Meteorological Operational Satellites - Second Generation (MetOp-SG) Programme of the European Space Agency. It will perform cloud ice measurements in multiple frequency channels between 183 GHz and 664 GHz. In addition to the on-board calibration target that will be used as a brightness temperature reference together with the cold sky during the operational phase of the satellites, on-ground calibration targets are being developed to enable radiometric performance and calibration test measurements of the instrument in a thermal-vacuum chamber prior to the satellite launch. Two temperature controlled targets, both exhibiting a high temperature uniformity and a low reflectivity for electromagnetic waves, are needed to represent the observed Earth scene and the cold sky. These targets will take the form of a wedged cavity, and in this talk we discuss the methods and challenges in their design and analysis as well as present experimental results on the first wedge prototype.

Zeit: Freitag, 07.04.2017, 10:15 Uhr

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