



The International SubMillimetre Airborne Radiometer (ISMAR) - First results from the STICCS and COSMIC campaigns

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Multispectral millimeter- and submillimeter-wave observations bear the potential to measure properties of non-thin ice clouds like mass content and mean particle size. The next generation of European meteorological satellites, the MetOp-SG series, will carry the first satellite-borne submillimeter sounder, the Ice Cloud Imager (ICI). An airborne demonstrator, the International SubMillimetre Airborne Radiometer (ISMAR), is operated together with other remote sensing instruments and in-situ probes on the FAAM aircraft. Scientific measurements from two campaigns in the North Atlantic region, STICCS and COSMIC, are available so far.

Here we will introduce the ISMAR instrument, present the acquired measurements from the STICCS and COSMIC campaigns and show some first results. This will include estimation of instrument performance, first analysis of clear-sky and cloudy cases and discussion of selected features observed in the measurements (e.g. polarisation signatures).