The CloudIce Mission Proposal

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CloudIce is a mission proposal that participated in the European Space Agencies call for Earth Explorer 8. It proposes a passive sub-millimeter wave instrument to measure cloud ice water path and other important cloud variables. The concept is an evolution of the earlier CIWSIR mission proposal, with channels at up to 664 GHz. Quite similar channels have also been suggested for an operational meteorological mission on Post-EPS, the next generation of the MetOp series of satellites. The science background of a sub-millimeter cloud ice mission is discussed, and a strawman mission concept presented. The mission was not selected for Phase A, but several preparatory activities are ongoing. For example, an aircraft demonstrator is currently being developed.