Multiparametric Airborne Radar observations of the melting layer during the Wakasa Bay Experiment

Simone Tanelli, Jonathan Meagher, Stephen L. Durden and Eastwood Im

Jet Propulsion Laboratory, California Institute of Technology, Pasadena CA, USA

ABSTRACT

The NASA/JPL airborne precipitation radar APR-2 (dual frequency - 14 and 35 GHz, Doppler and dual polarization) was operated on the NASA P-3 aircraft during the Wakasa Bay (Japan) experiment. The experiment conducted jointly by the U.S. AMSR-E and Japanese AMSR teams in Jan/Feb 2003, was designed to (1) validate both the AMSR and AMSR-E shallow rainfall and snowfall retrieval capabilities (2) extend the database of rainfall properties needed to implement a comprehensive physical validation scheme, and (3) extend our understanding of rainfall structures through the use of new remote sensing technology. On 12 flights, more than 30 hours worth of precipitation systems were observed, including rain and snow events, both over ocean and over land.
The statistics of several melting layer parameters derived from the multiparametric radar observations of two stratiform rain events are presented and discussed.

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Keywords: Airborne Radar, Melting Layer