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Microwave Sensing of the Atmosphere-Ocean System with AMSR and Aqua AMSR-E

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Abstract

Simulation of the brightness temperatures at frequencies of AMSR radiometers and algorithms for retrieval of the integrated atmospheric surface temperature and sea surface wind are described. The developed algorithm is used to process Aqua and ADEOS-II microwave measurements over the North Pacific. The results of satellite microwave sensing in combination with ancillary remote sensing data are demonstrated by analysis of diurnal warming in the Okhotsk Sea and

weather systems. AMSR/AMSR-E data were applied for detection of tropical cyclones and estimation of their central pressure, for investigation of parameters of intense mesoscale vortices and mesoscale convective systems.

Keywords: [remote sensing](#), [microwaves](#), [ADEOS-II AMSR](#), [Aquarius](#), [atmosphere-ocean system](#)

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