

Continuous Estimation of Humidity Profiles with the MU radar-RASS Measurements

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In this study, we aim at developing a radar technique for monitoring the humidity profile in the troposphere (1.5-10 km) with good time resolution from MU radar-RASS measurements. By applying the technique by Tsuda et al. [2001], we estimated a successive estimation of humidity profiles from the MU radar-RASS observation continued from July 29 to August 4, 1999. We refer to simultaneous measurements with complementary instruments, such as a microwave radiometer, GPS, a ceilometer and radiosondes to verify the measurements accuracy of the radar-derived humidity profile.

We are now also developing the new sign determination method for M, aiming for more precise humidity estimation. This paper discuss the new technique and the first result.

Tsuda, T et al., J. Atmos. Ocean. Tech, 2001