Geophysical Research Abstracts
Vol. 21, EGU2019-12046, 2019
EGU General Assembly 2019

Comparison of a compact rain radar data with ground rainfall measurement

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Recently, a small rain radar in the 24GHz band is under development in Korea. This instrument is intended for the measurement of quantitative rainfall within a radius of 1 Km. Quantitative rainfall measurements for small watersheds are predicated on flood forecasting. The purpose of this device development was focused on the amount of rainfall reaching the ground rather than the amount of rainfall in the atmosphere. The device is currently being developed as a prototype and is undergoing various performance verification with the aim of commercialization.
In this presentation, we show the comparison result of performance verification of small rain radar and show the performance superiority. In order to verify the performance of this device, it took a long time from the selection of the comparative verification site to the design and installation of a pit gauge. The comparative site was equipped with 2 parsivels, one pit gauge(composed of one weighing type of rain gauge and 12 tipping bucket type rain gauges) and 17 tipping bucket type gauges. The comparative analysis method of the measurement result converts the scanning result of this device into the reflectance and compares it with the verification device.