Validation of the GSMaP Gauge NRT

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Information of real time precipitation is important for water disaster management. However real-time observation does not cover the whole world. Satellite observes global precipitation, although a satellite observation is limited overpass time. Global Satellite Mapping of Precipitation (GSMaP) is hourly rainfall map using combined passive microwave and infrared radiometric data from multi satellite. GSMaP in near-real-time (NRT) is providing data 4-hour after observation. Precipitation retrieval from the passive microwave radiometer underestimate over land. Gauge adjusted GSMaP (GSMaP Gauge) achived to compensate GSMaP MVK precipitation by gauge data. The method is not applied to GSMaP NRT, because we do not get global rain gauge data in 4 hour. We developed new GSMaP Gauge adjusted GSMaP NRT (GSMaP Gauge NRT). The new method estimate adjustment parameters for GSMaP NRT using previous GSMaP Gauge and GSMaP MVK. The method modify precipitation of the GSMaP NRT with these parameters. Distribution of monthly precipitation of GSMaP Gauge NRT is close to that of GSMaP Gauge. We will introduce GSMaP Gauge NRT algorithm and present validation of the GSMaP Gauge NRT.

Keywords: precipitation, microwave radiometer, GSMaP