

GSMaP RIKEN Nowcast (GSMaP_RNC): an overview

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The Japan Aerospace Exploration Agency (JAXA)'s Global Satellite Mapping of Precipitation (GSMaP) provides hourly precipitation estimates over the world except the polar regions. The near-real-time product (GSMaP_NRT) is distributed about four hours after the nominal observation time, whereas the real-time estimate (GSMaP_NOW) is uploaded 30 minutes after the observation time. However, for disaster prevention, short term forecast will add value if available. Otsuka et al. (2016) developed a GSMaP nowcasting system based on space-time extrapolation. The system employs the cross-correlation method to estimate motion vectors of precipitation features, as well as an ensemble Kalman filter to better estimate motion vectors. The system is running stably for more than a year. This year, RIKEN will make the real-time nowcasting products open to public (GSMaP RIKEN Nowcast, GSMaP_RNC). This presentation will provide an overview of the system design and the latest status.

References:

Otsuka, S., S. Kotsuki, and T. Miyoshi, 2016: Wea. Forecasting, 31, 1409-1416.

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