GSMaP_MVK

(1) Description of GSMaP_MVK
Grid resolution: 0.1 degree lat/lon
Temporal resolution: 1 hour
Domain: Global (60N - 60S)

(2) Data sets used in the GSMaP_MVK
Passive microwave radiometer data: TRMM/TMI, Aqua/AMSR-E, ADEOS-II/AMSR, DMSP/SSMI(F13, 14, 15)
Infrared radiometer data: Globally-merged (60N-60S) pixel-resolution IR brightness temperature data, merged from all available geostationary satellites (GOES-8/10, METEOSAT-7/5 & GMS) provided by NCEP/CPC

(3) Algorithm overview
GSMaP_MVK product produces global precipitation distribution with high temporal and spatial resolution. The technique uses the Kalman filter to compute the estimates of the current surface rain fall rates at each 0.1 degree pixel of the infrared brightness temperature by the GEO-IR satellites. The filter predict the precipitation rate from the microwave radiometer and its morphed product obtained in a similar way as the Joyce et al. (2004), and then refine the prediction based on the relationship between the IR brightness temperature and surface rainfall rate. In No.3 DVD product, the backward process is introduced to produce the global precipitation map as is the same in No.2. The rain rates from the passive microwave radiometers are generated by Aonashi (2000). See Ushio et al. (2009) for detail.

(6) Reference

(6) Acknowledgments
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