

VERIFICATION OF GPCP-1DD GLOBAL SATELLITE PRECIPITATION PRODUCTS USING MAP SURFACE OBSERVATIONS

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Quite recently one of the actual precipitation estimates of the Global Precipitation Climatology Project, the GPCP-1DD product, was introduced. The NASA provides the research community with these GPCP 1degree (latitude/longitude gridded) daily precipitation fields based on a combination of different satellite estimates. In the 40° N-S belt IR estimates from geostationary satellites calibrated with SSM/I data have been used. Outside this region the rain estimates are based on TOVS data from the polar orbiting satellites NOAA-12 and NOAA-14. These two satellites, with 0130/1330 and 0730/1930 local time equator crossing times, are flying simultaneously and provide global precipitation estimates based on an empirical relationship between rain gauge observations and a function of the cloud-top pressure, fractional cloud cover and relative humidity profile (Susskind et al., 1997).

At the conference the question will be discussed whether the TOVS based GPCP-1DD rain rates could be used for verification of climate model results or not. To do this, high resolution observations from the MAP data archive will be used to evaluate the reliability of the GPCP-1DD products. Therefore the rain gauge measurements will be analyzed on the grid of the GPCP-1DD products as basis for further calculations. Difference fields as well as some commonly used accuracy and skill scores will be presented and discussed at the conference.