

Analysis of global precipitation patterns with regard to annual cycle and anomalies.

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The Global Precipitation Climatology Project (GPCP) supplies gridded global precipitation data sets based on observations to the international climate research community. The GPCP has been established by the World Climate Research Programme (WCRP) and is a component of the Global Energy and Water Cycle Experiment (GEWEX). The resulting global data sets are based on multi-sensor satellite observations and on conventional surface-based gauge-measured data. The monthly GPCP Satellite/Gauge Combination Version 2 (“GPCP-V2”) contains gridded precipitation totals for the period 1979 to near-present (i.e. for totally 262 individual months so far) on gridcells of 2.5 by 2.5 latitude/longitude. In this product, gauge data from about 7000 meteorological stations are included for adjustment of satellite observations. In addition, a monthly product for the land-surface has been published, which is based on gauge-observations from 30,000 to 40,000 stations, of 0.5 resolution and covers the period 1986-1995. Furthermore, a global 1 -resolution daily data set (“GPCP-1DD”) (primarily based on satellite observations) is available for the period 1997 to near-present.

This contribution will describe the data base and the features of these products, and present comparison results for the observational products and predicted precipitations from the on-going European Re-Analysis Project ERA-40.

The time-series of gridded data are very valuable to study the spatial and temporal structure global precipitation. Some exemplary applications related to Indian Monsoon and El Nino Southern Oscillation will be presented.

Thursday III (Talk)