MULTI-SAT - GPCP - Surface Rainrate - 2.5

General information

Dataset name:	MULTI-SAT - GPCP - Surface Rainrate - 2.5
Created on:	2016-03-14
Useful in the framework of:	OPERATIONAL-DATA > Satellite products
Purpose:	The Global Precipitation Climatology Project (GPCP) was established by the World Climate Research Program (WCRP) to address the problem of quantifying the distribution of precipitation around the globe over many years. The general approach is to combine the precipitation information available from each of several sources into a final merged product, taking advantage of the strengths of each data type. The microwave estimates are based on Special Sensor Microwave/Imager (SSM/I) data from the Defense Meteorological Satellite Program (DMSP, United States) satellites that fly in sun-synchronous low-earth orbits. The infrared (IR) precipitation estimates are computed primarily from geostationary satellites (United States, Europe, Japan), and secondarily from polar-orbiting satellites (United States). Additional low-Earth orbit estimates include the Atmospheric Infrared Sounder (AIRS data from the NASA Aqua, and Television Infrared Observation Satellite Program (TIROS) Operational Vertical Sounder (TOVS) and Outgoing Longwave Radiation Precipitation Index (OPI) data from the NOAA series satellites. The gauge data are assembled and analyzed by the Global Precipitation Climatology Centre (GPCC) of the Deutscher Wetterdienst and by the Climate Prediction Center of NOAA. The GPCP has promoted the development of an analysis procedure for blending the various estimates together to produce the necessary global gridded precipitation fields. The currently operational procedure is described in Adler et al (2003) and has been used to produce the GPCP Version 2.1 Combined Precipitation Data Set, covering the period January 1979 through the present (with some delay). The primary product in the Version 2.1 dataset is a combined observation-only dataset, that is, a gridded analysis based on gauge measurements and satellite estimates of rainfall. There are a total of 27 fields in the data set providing information from the individual and intermediate estimates, including estimates of RMS random error. The data set archive consists of yearly unformatted REAL*4 binary files with ASCII headers, each of which holds 12 monthly fields. Each file occupies almost 0.5 MB. The grid on which each field of values is presented is a 2.5°x2.5° latitude--longitude (Cylindrical Equal Distance) global array of points.

It is size 144x72, with X (longitude) incrementing most rapidly West to East from the Prime Meridian, and then Y (latitude) incrementing North to South. Grid edges are placed on whole- and half-degree values:

First point center = (88.75°N,1.25°E)

Second point center = (88.75°N,3.75°E)

Last point center = (88.75°S,1.25°W)

Missing values are denoted by the value -99999., and the units on the fields depend on the variable. For example, rainfall is carried as mm/day.

Contact(s)

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Instrument

Satellite:	MULTI-SAT
Instrument:	GPCP

Parameter

Surface Rainrate

Parameter name:	Surface Rainrate
Parameter keyword:	Atmosphere > Precipitation

Coverage

Temporal coverage

Date begin (yyyy-mm-jj):	1979-01-01
Date end (yyyy-mm-jj):	2014-01-01

Geographic coverage

Data resolution

Temporal resolution:	0000-01-00 00:00:00
Latitude resolution:	2.5
Longitude resolution:	2.5

Data use information

Use constraints:	Public data
Data policy:	AMMA data policy
Original data format(s):	NetCDF