Explore GPM IMERG and Other Global Precipitation Products with GES DISC GIOVANNI

Newly released GIOVANNI facilitates exploration and comparison of GPM IMERG and other global precipitation products

Abstract

New features and capabilities in the newly released GIOVANNI allow exploring GPM IMERG (Integrated Multi-satellite Retrievals for GPM) Early, Late and Final Run global half-hourly and monthly precipitation products as well as other precipitation products distributed by the GES DISC such as TRMM Multi-Satellite Precipitation Analysis (TMPA), MERRA (Modern Era Retrospective-Analysis for Research and Applications), NLDAS (North American Land Data Assimilation Systems), GLDAS (Global Land Data Assimilation Systems), etc. GIOVANNI is a web-based tool developed by the GES DISC (Goddard Earth Sciences and Data Information Services Center) to visualize and analyze Earth science data without having to download data and software. The new interface in GIOVANNI allows searching and filtering precipitation products from different NASA missions and projects and expands the capabilities to inter-compare different precipitation products in one interface. Knowing differences in precipitation products is important to identify issues in retrieval algorithms, biases, uncertainties, etc. Due to different formats, data structures, units and so on, it is not easy to inter-compare precipitation products. Newly added features and capabilities (unit conversion, regridding, etc.) in GIOVANNI make inter-comparisons possible. In this presentation, we will describe these new features and capabilities along with examples.

New Features and Highlights

Highlights:

1. One click URL (can be bookmarked), which simplifies dataset access:
   - Facets: Search results can be filtered based on facets including disciplines, measurements, platform/instrument, spatial resolutions, temporal resolutions, wavelengths, depths, special features, and portals.

2. Unit conversion: Flexibility to choose preferred units such as mm/day or to compare with other similar products (NLDAS, MERRA, etc.) in GIOVANNI.


4. New functions and capabilities (zonal mean, histogram, etc.) are available and more are being added (check back often or subscribe to our mailing list for the latest information).

Explore and compare IMERG and other monthly products

Compare New GPM IMERG Early, Late and Final products

Flooding in Myanmar (Burma) in July 2015

Tropical Storm Komen (see below) and above-normal monsoon rain caused extensive flooding in low lying areas in Myanmar, resulting in over 100 deaths and up to 1 million people affected.

Highlights:

- Time series of the half-hourly IMERG Late product for Myanmar, showing the heavy rain on July 30th during the landfall of Komen.

Related URLs:

- Giovanni: http://giovanni.gsfc.nasa.gov
- GES DISC: http://disc.gsfc.nasa.gov

Suggestions or subscription to our mailing list: gsf-help-disc@lists.nasa.gov

Related Note: Online tools for uncovering data quality (DQ) issues in satellite-based global precipitation products. IN006: Approaches to Improved Collection and Dissemination of Earth Science Data Quality Information. Moscow West: 2020

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