NEW! TRMM Version 7 Products

Precipitation datasets (left):
- Standard TRMM products
- Ancillary products (e.g., merged IR)
- Ground based instruments
- Other precipitation products in TOVAS (e.g., WRF, MM5, GPCC)

Other data products:
- Other remote sensing products from different missions (e.g., ARES, A-Train)
- Modeling products (e.g., MERRA, GLDAS)


TRMM Data Services and Applications

Outreach As Service and Collaboration
Our purpose is not to just push data to users, but to make available potential solutions to users’ problems.

Example Applications (Agriculture):
- United Nations World Food Programme
- USDA Foreign Agricultural Service
- Agriculture Information System (AIS)
- Current Conditions Maps

NEW! GPCP Version 2.2 Precipitation Dataset in TOVAS Now

The Global Precipitation Climatology Project (GPCP) has released its latest version, 2.2.

• Temporal Coverage: • Monthly precipitation: Jan. 1979 - Dec. 2010
• Long-term monthly means, derived from the monthly data

• Spatial Coverage: • 2.5 degree latitude x 2.5 degree longitude global grid
• 88.75° N – 88.75° S, 1.25° E – 358.75° E

New in TOVAS: Inter-comparison of V6 and V7 TRMM

Provides application users the ability to inter-compare near-real-time (3B42RT) and research quality (3B42) rainfall products for product adjustments (i.e., biases).

Ongoing: Integrate IPWG Validation Algorithms into TRMM Online Visualization and Analysis System (TOVAS) :
- Inter-comparison of V6 and V7 TRMM (beta versions)
- Integrate products (to be released in 2013)

New in TOVAS: Inter-comparison of 3B42 and 3B42RT

Large differences between 3B42 and 3B42RT exist, particularly over the wet and dry seasons of 2009.

NEW

Above left: The landing page of GPCP 2.2 in TOVAS, allowing interactive analysis and visualization of the GPCP data. Above right: One year average precipitation map.

Ongoing:
- Integration of GPCP validation algorithms into TRMM Online Visualization and Analysis System (TOVAS)
- Inter-comparison of V6 and V7 TRMM

Outreach As Service and Collaboration
- Make available potential solutions to users’ problems
- United Nations World Food Programme
- USDA Foreign Agricultural Service
- Agriculture Information System (AIS)
- Current Conditions Maps

Acknowledgement: "Integrating IPWG Validation Algorithms into TRMM Online Visualization and Analysis System (TOVAS)." This project is part of \"IPWG Validation Algorithms for GPCP.\" This work is supported by NASA.”

ABSTRACT
The NASA Goddard Earth Sciences Data and Information Services Center (GES DISC) is home of global precipitation product archives. In particular, the Tropical Rainfall Measuring Mission (TRMM) products, TRMM is a joint U.S.-Japan satellite mission to monitor tropical and subtropical (40° S - 40° N) precipitation and to estimate its associated latent heating. The TRMM satellite provides the first detailed and comprehensive dataset on the four dimensional distribution of rainfall and latent heating over vastly undersampled tropical and subtropical oceans and continents. The TRMM satellite was launched on November 27, 1997. TRMM data products are archived at and distributed by GES DISC.

The newly released TRMM Version 7 consists of several changes including new parameters, new products, meta data, data structures, etc. For example, hydrometeor profiles in 2A12 now have 28 layers (14 in V6). New parameters have been added to several popular Level-3 products, such as, 3B42, 3B43.

Version 2.2 of the Global Precipitation Climatology Project (GPCP) dataset has been added to the TRMM Online Visualization and Analysis System (TOVAS). http://disc2.nasa.gov/Giovanni/tovas/ allowing online analysis and visualization without downloading data and software. The GPCP dataset extends back to 1979.

Version 3 of the Global Precipitation Climatology Centre (GPCP) monitoring product has been updated in TOVAS as well. The product provides global gauge-based monthly rainfall along with number of gauges per grid. The 30 years of GPCP Version 2.2 data allow time-series analysis.

In addition to TRMM, PDISC provides current and past 24 hours precipitation data for the entire globe in near-real-time. Other GES DISC products include precipitation data for large regions and the entire globe. The PDISC products are available in NetCDF and gridded formats. PDISC also provides near-real-time operational satellite data products, termed "short-term products," for the Tropical Rainfall Measuring Mission (TRMM) (beta versions) and other missions. In contrast to TRMM, PDISC is designed to be fast and easy to learn; the output format is either NetCDF or gzipped NetCDF.

Simple Subset Wizard (SSW) http://disc.gsfc.nasa.gov/SSW/ provides a valuable service to routine data download and software. The GPCP dataset extends back to 1979.

Other capabilities include: 1) Mirador (http://mirador.gsfc.nasa.gov/), a simplified interface for searching, browsing, and ordering Earth science data at NASA Goddard Earth Sciences Data and Information Services Center (GES DISC). Mirador is designed to be fast and easy to learn; 2) TOVAS; 3) NetCDF data download for the GIS community; 4) Data via OPeNDAP (http://disc.sci.gsfc.nasa.gov/services/opendap/). The OPeNDAP provides remote access to a wide variety of activities, including case studies, model evaluation, uncertainty investigation, etc. To support Earth science applications, PDISC provides users near-real-time precipitation products over the internet. At PDISC, users can access tools and software. Documentation, FAQ and assistance are also available.

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