New Data Products and Capabilities in TRMM Online Visualization and Analysis System (TOVAS)

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INTRODUCTION

The Goddard Earth Sciences Data Information Services Center (GES DISC) is home of Tropical Rainfall Measuring Mission (TRMM) data archive. To facilitate data access and support applications, we have developed the TRMM Online Visualization and Analysis System (TOVAS, URL: http://disc2.nascom.nasa.gov/Giovanni/tovas/) to allow accessing several popular Level-3 TRMM products over the Internet without data and software downloading. Since its debut in 2000, it has been widely used by users from different fields for different research topics and applications. The current TOVAS contains the following products and services:

1) Near-real-time monitoring products:
- Experimental Real-Time TRMM Multi-Satellite Precipitation Analysis (TMPA-RT): 3B42RT
- Daily Global and Regional Rainfall (TMPA-RT 3B42RT derived
- TMPA-RT Intermediate IR Product: 3B41RT (VAR)
- TMPA-RT Intermediate Microwave Product: 3B40RT (HQ)

2) Rainfall archive products:
- Monthly Global Precipitation (GPCP)
- Prototype Interactive Intercomparison of Rainfall Products
- 3-hourly TRMM and Other Rainfall Estimate (3B42 V6)
- Daily TRMM and Other Rainfall Estimate (3B42 V6 derived)
- Monthly TRMM and Other Data Sources Rainfall Estimate (3B43 V6)
- Monthly Rainfall (3B43 V6) Anomaly
- Inter-Comparison of Rainfall Climatology
- Monthly TMI rain, latent heat, cloud liquid water profiles (3A12 V6)
- Monthly Rainfall (3A25 V6)

3) Ground observation products:
- Monthly Willmott and Matsuura Global Precipitation (1950 - 1999)
- Monthly GPCC Rainfall (1986 - Present, Monitoring Product)

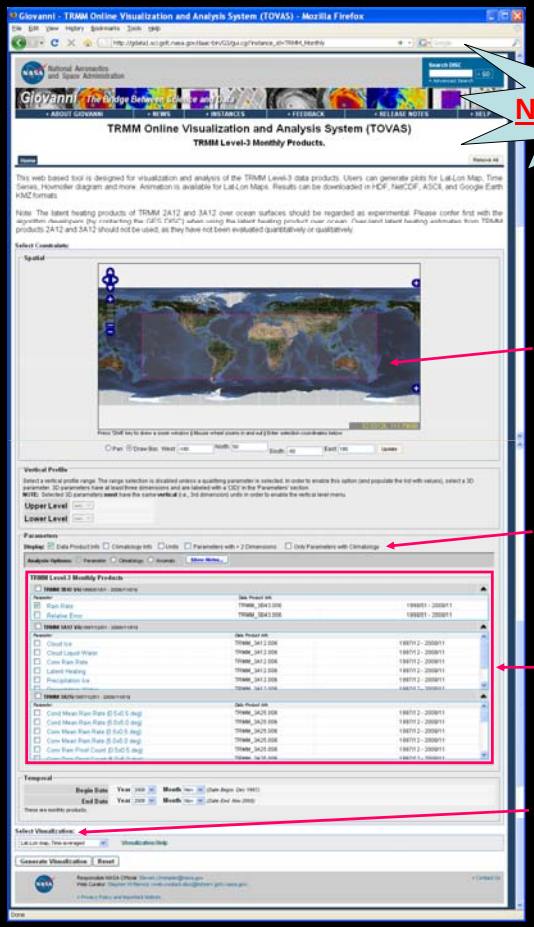
Basic functions include latitude-longitude map, time series, Hovmoller diagrams, scatter plot, anomaly, ASCII output, inter-comparison, etc.

To meet increasing user demands, we are working on adding new capabilities, such as, additional data download formats, KMZ files for Google Earth, etc. Several new parameters are also being added. This presentation describes the new additions.

TOVAS: http://disc2.nascom.nasa.gov/Giovanni/tovas/
TRMM Products: http://disc.sci.gsfc.nasa.gov/data/datapool/TRMM/
Details about TRMM: http://trmm.gsfc.nasa.gov
Questions and comments: hydrology-disc@listserv.gsfc.nasa.gov

TRMM Online Visualization and Analysis System (TOVAS)

http://disc2.nascom.nasa.gov/Giovanni/tovas/



New Features

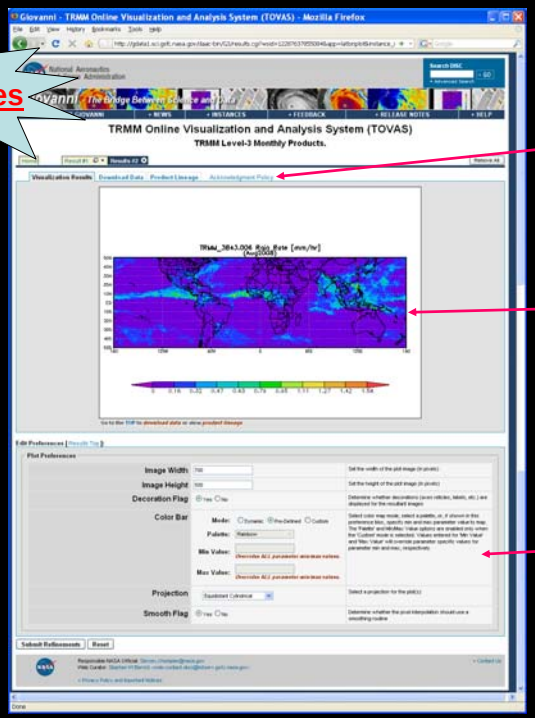
New high resolution world map

Parameters can be sorted

Combined monthly products

More functions are available

Newly designed GUI interface provides a high resolution selection map, parameter sorting, combined products, several new functions and more.



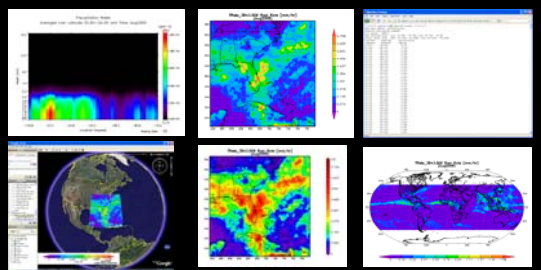
Output pages allow displaying results, downloading data (below), product lineage (below) and more.

Graphic output

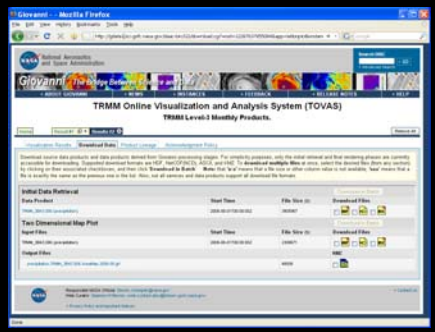
Fine tune graphic output, including adjusting the plot size, color bar palettes, min/max, projections, and more.

The output page allows users to fine tune their plots and download data (below).

Samples:



The product lineage page lists each step in detail, allowing users to understand the behind-the-scene processes.



The data downloading page allows users to download input or output data in HDF, NetCDF and ASCII. For output plots, users can download their GIF or Google Earth KMZ files.