

and ongoing development activities:

Ongoing development activities

scheme and the Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks Cloud More ..

Product Summary Data Citation Documentatio

documentation.

New features in Giovanni

Updates on GPM products and data services

Precipitation product and service outreach activities

precipitation estimates from the various precipitation-relevant satellite passive microwave (PMW) sensors comprising the GPM stellation are computed using the 2014 version of the Goddard Profiling Algorithm (GPROF2014), then gridded, intercalibrated to the



The NASA Goddard Earth Sciences Data and Information Services Center (GES)

A variety of data access

methods are available

for users at different

levels and needs

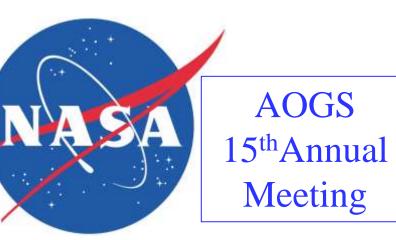
DISC) has been actively and continually engaged in improving the access to and use

of Global Precipitation Measurement (GPM), Tropical Precipitation Measuring

Mission (TRMM), and other precipitation data, including the following new services

# Improving Global Precipitation Product Access at the GES DISC





NASA/Goddard EARTH SCIENCES DATA and INFORMATION SERVICES CENTER (GES DISC)

• Seasonal (Interannual) Time Series with shapefile

support. With this release, users can specify a shape

as their selected region of interest. In addition, a

combination of bounding box and shape is

supported, provided that the intersection of the

shape and bounding box is valid for the data type.

Seasonal (Interannual) Time Series with Comma-

Separated-Variable (CSV) download. This release

supports CSV text download for the values shown

in any interannual time-series plot.

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<sup>1</sup>GES DISC; <sup>2</sup>ADNET Systems, Inc.; <sup>3</sup>CSISS, George Mason University; <sup>4</sup>Telophase Corp; <sup>5</sup>Univ. of Maryland at Baltimore County

Giovanni:

# New Features and Highlights

- New GES DISC Web portal (see below)
- Web content migration (making things searchable and easier to find)
- THREDDS Data Server (Access: OPeNDAP, WCS, WMS, NetcdfSubset, NCML, UDDC, ISO; Viewers: Godiva2, NetCDF-Java ToolsUI, IDV)
- GPM V05 (available now); NOAA NCEP merged IR product (online now); GPCP-3 monthly product (coming soon); TRMM V8 (coming soon)
- Level-2 product subsetting (coming soon; OPeNDAP is available now)
- Datalist capability (released prototype data for Hurricane study)





nterannual time series Precipitation Rate monthly 0.25 deg. [TRMM

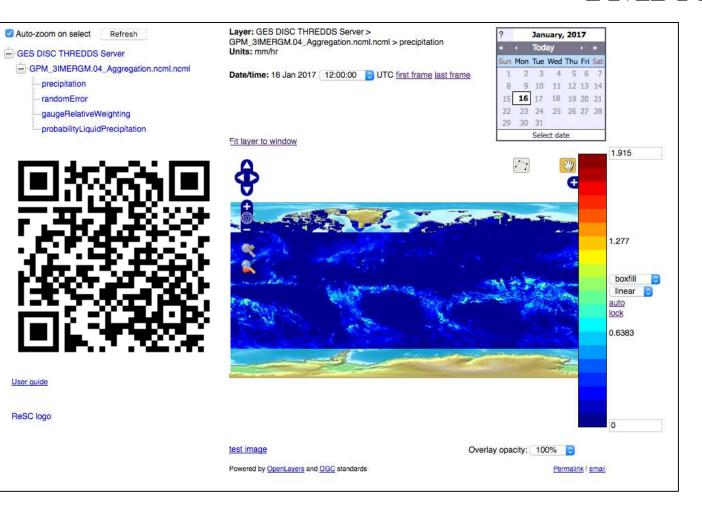
Above: Sample of interannual time series of 3B43 for August with shapefile support in Giovanni, showing a record-breaking rainfall in the state of Louisiana in August 2016. Shapefiles currently available in Giovanni: countries, U.S. states, land/sea masks, and major watersheds around the world.

Social Media

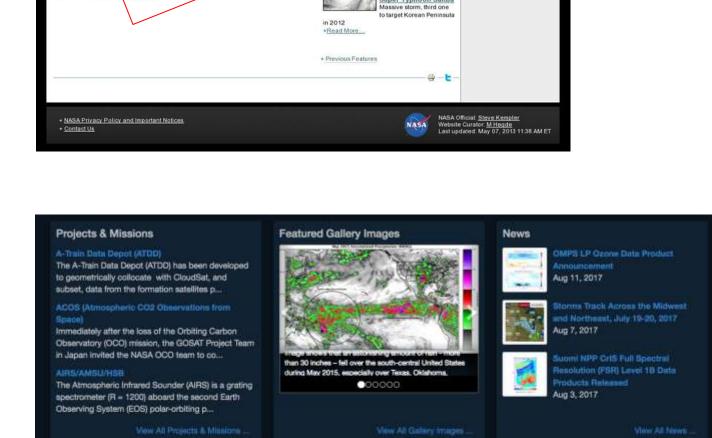
### **Data Set and Service Updates:**

- GrADS Data Server (GDS) available for both IMERG and TMPA products

- TMPA and IMERG in YouTube (coming soon)



A screenshot of Godiva2, showing a map of the IMERG monthly product. THREDDS Data Server supports interoperability through WMS, OPeNDAP, WCS. NetcdfSubset, NCML, UDDC, ISO, viewers (Godiva2, as NetCDF-Java ToolsUI, and IDV).



Above: The GES DISC Web portal has been completely redesigned to facilitate data and information discovery and access. Left: Project and mission information; featured gallery images; news; science focus areas; tools; and resources.

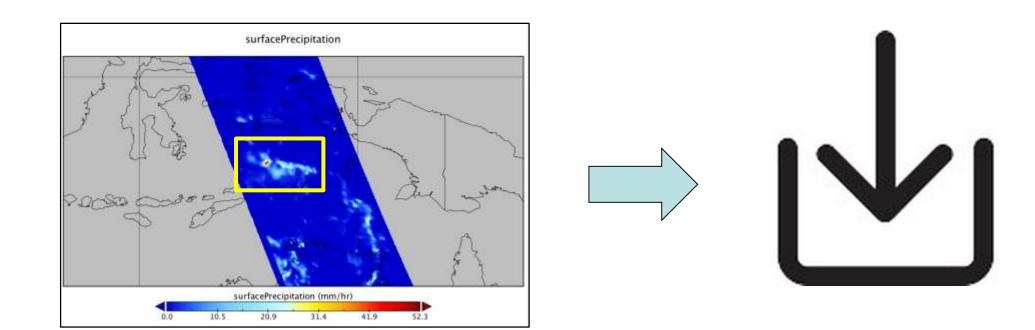
# Ongoing Development Activities

The data set landing page provides a one-stop shop for data

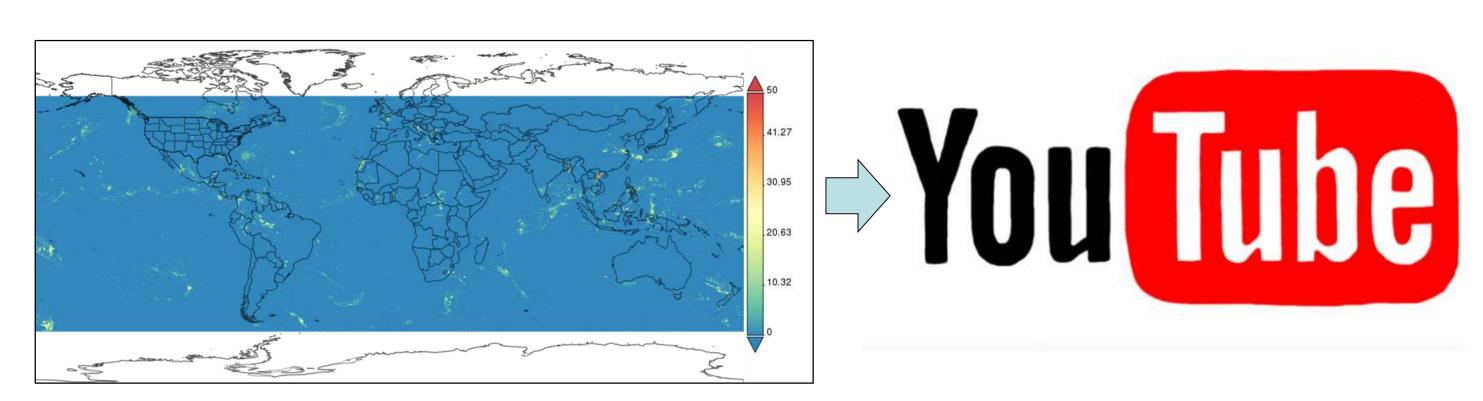
services and information. Data set-related services are

accessible at the top right. The three tabs provide

information on product summary, data citation, and



Level-2 GPM and TRMM product subsetting (spatial: areal and point). Subsetting through OPeNDAP is available now.



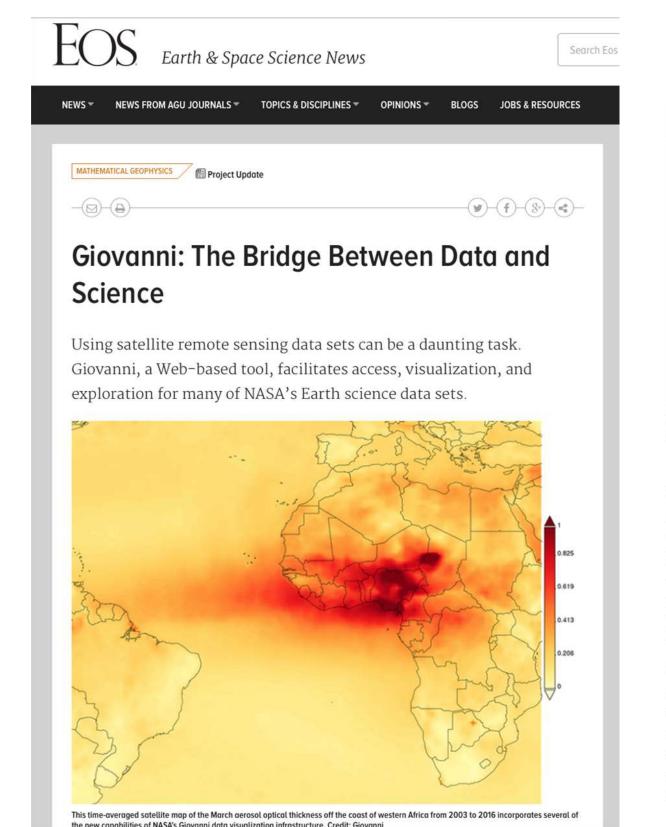
Making a whole data set collection (e.g., IMERG, TMPA 3B42) available on YouTube videos. Users can access animations of product collections without downloading data and software. Links will be included for accessing original data.

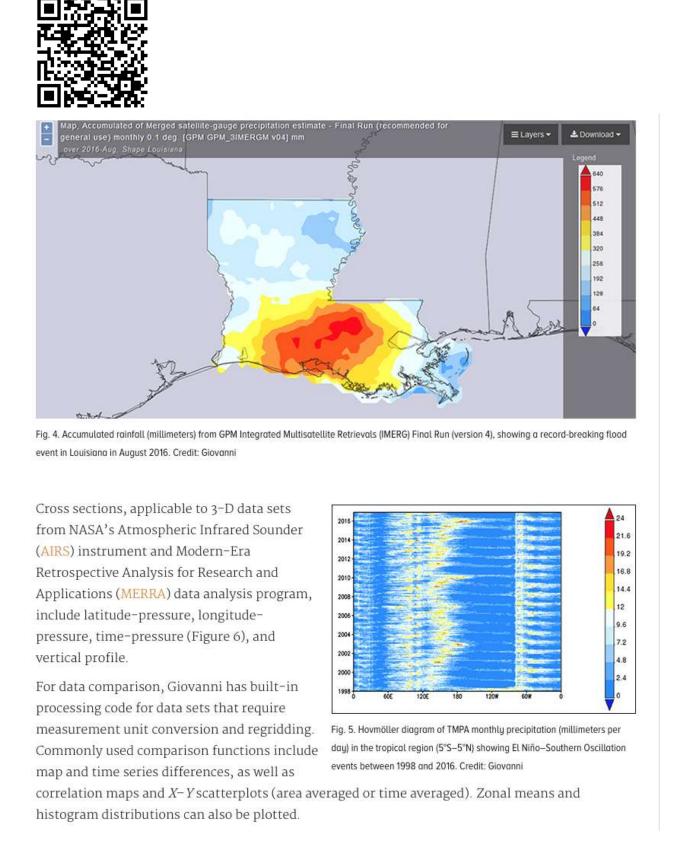
## GPM and TRMM Data Service Outreach Activities

• GES DISC news, Twitter, user forum, GPM product and service training webinars, Giovanni workshops

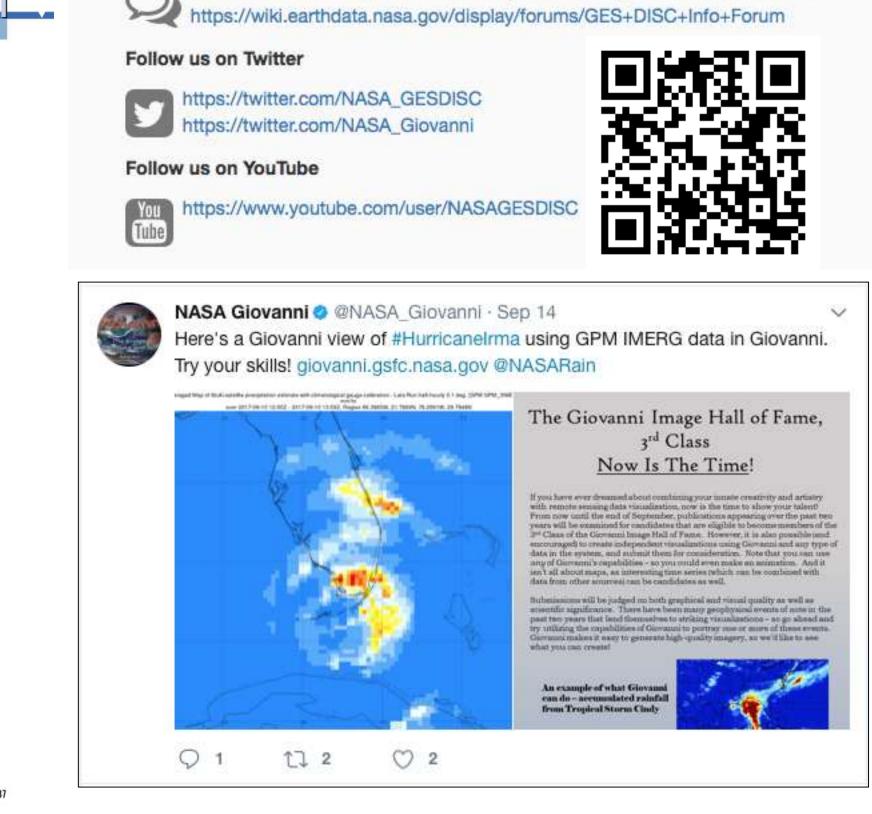
GES DISC

- EOS article on Giovanni with IMERG and TMPA as examples. GPM products and services at the GES DISC in the BAMS (March 2017 issue)
- Posters and talks at AGU Fall Meetings, AMS Annual Meetings, and other conferences









Precipitation products: <a href="https://disc.gsfc.nasa.gov/disc.gsfc.nasa.gov/datasets?keywords=precipitation">https://disc.gsfc.nasa.gov/datasets?keywords=precipitation</a> Giovanni.gsfc.nasa.gov/ GES DISC: <a href="https://disc.gsfc.nasa.gov/datasets?keywords=precipitation">https://disc.gsfc.nasa.gov/datasets?keywords=precipitation</a> Giovanni.gsfc.nasa.gov/ GES DISC: <a href="ht