GPM Data Training
March 15, 2016
Select, Access, Visualize, and Download GPM L-2 and L-3 Data from PPS

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Objective: Learn to access orbital and gridded data access through PPS STORM

Note: PPS is currently undergoing transition from GPM V03 to V04. Certain products and orders may be delayed or temporarily unavailable during this period.

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Complete the User Registration for PPS
Go to (**http://registration.pps.eosdis.nasa.gov/registration/**)
You will receive a confirmation link in your email to verify your email address
Your email will be your username and password to access data from PPS

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Part 1: Near-real Time IMERG Data Access

- Go to (ftp://jsimpson.pps.eosdis.nasa.gov/)
- **(you will have to login with your email address as username and password)**
- Go to data folder
- You will see a number of products listed under Name
- Go to imerg folder
  i) You will see IMERG early and late run release notes for your information
  ii) You will see early, gis, or late folders
- Click on the gis folder
- Go to early folder within gis folder
  You will see the most current tif files (30-minutes, 3-hour, 1-day) at the bottom of the list that can be downloaded the tfw and tif files to use with ArcGIS
- You will also see .zip file – that has tif images for ice, liquid ,and percent of liquid precipitation

- Using the browser's back arrow go back to gis and then back to imerg
- Click on the early folder
- Click on the current month folder (e.g. 201603)

- You will see the half-hourly current files in HDF5 format
- You can download the file by clicking on it
- Using the browser's back arrow go back to gis and then back to imerg
- Click on the late folder
- Click on the current month folder (e.g. 201603)
  You will see the half-hourly files in HDF5 format (~24-hour latency)
  You can download the file by clicking on it

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Part 2: Get Level 2A DPR Data

- Go to (https://storm.pps.eosdis.nasa.gov/storm/)
- Select PPS Data Access
- Enter your email address you used for registration to PPS
  You will see the following window

- Review the Options and choose Subset Geographically for regional selection

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- Go to the Product Type
- In the Table -- under the Data Type select 2A

(You will see available Level 2A products, these are orbital products)

- From the Algorithm column in the Table Select 2ADPR
- Select 2ADPR (by clicking in the box under the column select)
  There are
  You will see the following Table of 2A Data Products
- Select 2ADPR

Product Type ⓘ

⚠ **Required**

Left click on the header to sort rows. Right click to show/hide columns

Check
the boxes
to select →

Select	Data Type ⓘ	Algorithm ⓘ	Start Time ⓘ	Frequency ⓘ	Satellite or Ground Validation Site ⓘ	Instrument ⓘ	Primary Content ⓘ	Format	Spatial Extent ⓘ
☐	2A								
☐	2A	2A12 ⓘ	1997-12-07 23:57:17	ORBIT	TRMM	TMI	Precipitation	hdf4	
☐	2A	2A21 ⓘ	1997-12-07 23:57:17	ORBIT	TRMM	PR	Cross Section	hdf4	
☐	2A	2A23 ⓘ	1997-12-07 23:57:17	ORBIT	TRMM	PR	Rain Type	hdf4	
☐	2A	2A25 ⓘ	1997-12-07 23:57:17	ORBIT	TRMM	PR	Precipitation	hdf4	
☐	2A	2ADPR ⓘ	MULTIPLE	ORBIT	GPM	DPR	Precipitation	hdf5	
☐	2A	2ADPRENV ⓘ	MULTIPLE	ORBIT	GPM	DPR	Environmental Temperature	hdf5	
☐	2A-CLIM	2AGPROFAMSR2 ⓘ	2012-07-02 00:00:00	ORBIT	GCOMW1	AMSR2	Precipitation	hdf5	
☐	2A	2AGPROFAMSR2 ⓘ	2012-07-02 00:00:00	ORBIT	GCOMW1	AMSR2	Precipitation	hdf5	
☐	2A-CLIM	2AGPROFGMI ⓘ	2014-03-04 17:59:32	ORBIT	GPM	GMI	Precipitation	hdf5	
☐	2A	2AGPROFMHS ⓘ	2012-09-24 12:10:00	ORBIT	METOPB	MHS	Precipitation	hdf5	

Total Product Types selected: 0   Note: Some selected Product Types might not be visible if filters are used

→ [Submit Request ▶] [Clear Form]

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- Scroll down to Temporal Criteria

Temporal Criteria

◉ **Date Range** ○ **Orbit Numbers**

⚠ **Required start date**

Valid range is between 20140308 and 20160313

YYYYMMDD [HH:MM]
[ ] = optional fields ⓘ

Start Date/Time [   ] 🔲
Stop Date/Time [   ] 🔲

- Select Start Date/Time from the Calendar   [March 13, 2016 00:00]
- Select Stop Date/Time from the Calendar   [March 13, 2016 23:59]
- Select Spatial Subset (either by drawing over the map or by entering latitude and longitude)

Output
File name

-
- Click on Submit Request
  You will get a list of files for DPR available orbital data
- Click on the *camera icon* to visualize the data
- Selected any orbit file(s) you are interested in downloading and use the *'green arrow'* in the Download/View column – this will give you a prompt for saving the data file on your computer

- Click on THOR for this orbit
  This will open an interactive graphical window with two sections
- Click on 2A (Under the File Column)
  You will see a list of data parameters available from this file
- Select PrecipRatESurface2 (using HS – High Sensitivity Scan)
  You will get an image in the right side window
- Click on the orbit to zoom in the area of interest and explore the image

THOR Display
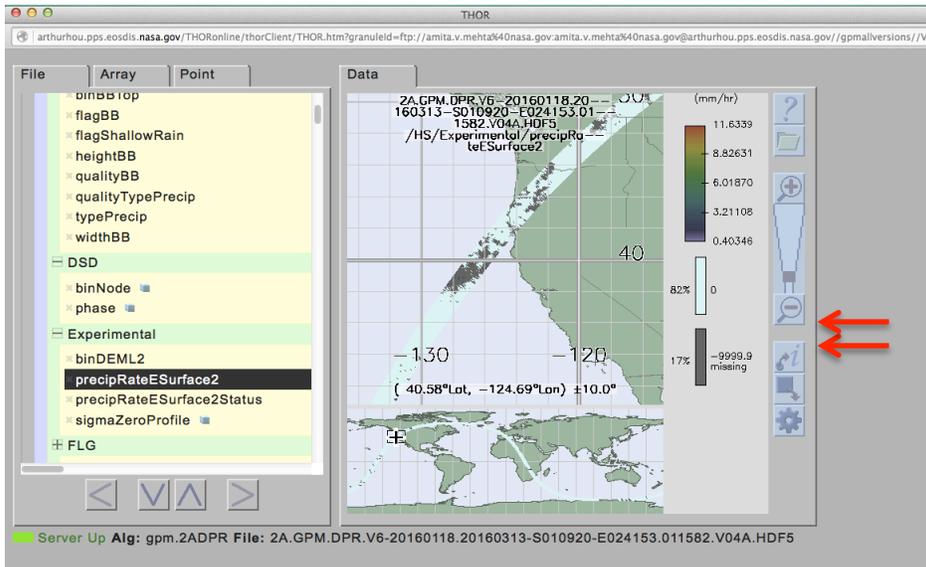
- Explore the area with precipitation rate > 0 (color bar on the right depicts rainfall in mm/hr)
- Click on the rectangle (on the right menu bar above the star and below i) to Save the image on your computer – note that it also allows for file download file option
- Click on the (i) in the menu bar at the right and then click on any point on the image to get the precipitation value at that point
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Part 3: Submit Request for Batch Download

Go to (https://storm.pps.eosdis.nasa.gov/storm/)
- Select PPS Data Access
- Enter your email address you used for registration to PPS
- Under Order Type (right below where you enter the email)
- Select the option **Subscription Yes**
- From the Product Type select a GPM product (for example 2ADPR) for the time period of your choice
- You will get the data file list for the time you chose
- Select all the files you want to get
- Click on Submit Request (this will create an order of your data and you will receive an email about the data request)
- You will get another email when the data are ready to be downloaded with the instruction to download

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Part 4: Access and Visualize IMERG Half-hourly and Monthly Data using STORM (Example: Hurricane Patricia, October 22, 2015; Centered around 100°W and 14°N)

Half-hourly Data

- Go to (https://storm.pps.eosdis.nasa.gov/storm/)
- Select PPS Data Access
- Enter your email address you used for registration to PPS

- Scroll down to
- Product Type
- You will see the data Table
- In the Table -- under the Data Type select 3B
- (You will see available Level 3B products, these are gridded products)
- From the Algorithm column in the Table select 3IMERGHH (Half Hourly Merged Precipitation data)
- Scroll down to Temporal Criteria
- Select Start Date/Time from the Calendar   [October 22, 2015   00:00]
- Select Stop Date/Time from the Calendar   [October 22, 2015   23:59]

- Click on Submit Request
- You will see a l list of half-hourly data files
- Click on the green-colored down arrow next to the product name to save the data file on the desktop
- Select any a file and using the Camera icon examine precipitation map for each time
- Close the map image
- Click on the THOR icon
- Click on Grid (left window) – you will see a list of parameters available in the file
- Select PrecipitationCal
- You will see the map in the right window
- Zoom in by clicking on the map to get a zoom-in sunset of the area you clicked
- Explore the area with the highest precipitation rate (color bar on the right depicts rainfall in mm/hr)
- Click on the rectangle (on the right menu bar above the star and below i) to Save the image on your computer – note that it also allows for file download file option
- Click on the (i) in the menu bar at the right and then click on any point on the image to get the precipitation value at that point

Monthly Data

- **Go Back to the STORM Product Type Table (scroll up or may have start from the STORM main window)**

- Select the product 3IMERGM
- Repeat the above steps and get the image for January and July of 2015
- In addition, in THOR click on probabilityLiquidPrecipitation
- Repeat the same steps for January 2015 and click on probabilityLiquidPrecipitation
- How do the probabilityLiquidPrecipitation compare in the two months? Why?