

Data Visualization with NASA Giovanni: <https://giovanni.gsfc.nasa.gov/giovanni/>

Assignment 1 (due Sept 17 BEFORE CLASS): Exploring the NASA GPM rainfall product (10 points total)

1) Explain what GPM is and describe the spatial and temporal resolution of the NASA GPM data (2-4 sentences) (2pts)

https://www.nasa.gov/mission_pages/GPM/main/index.html

2) Use NASA Giovanni to analyze and plot accumulated rainfall related to Hurricane Irma and Hurricane Maria from Sept. 2017

Provide the following:

2pts **A)** Map accumulated rainfall from dates that include both Irma and Maria (you have to figure out when that was). The map will have accumulated rainfall for both storms.

2pts **B)** Describe the differences in words between Irma and Maria in terms of storm track and total rainfall (3-5 sentences)

2pts **C)** Select an area box around Puerto Rico and produce a rainfall time series for the month of Sept 2017.

2pts **D)** Provide a description of the time series (2-5 sentences). Try to be specific. (Don't write, *it rained a lot.*)

ATTACH ALL PARTS TO A DOCUMENT (powerpoint, PDF, word) AND EMAIL TO ME.

INCLUDE LAB2 IN SUBJECT LINE!!!

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NO LATE ASSIGNMENTS ACCEPTED

accumulated rainfall

rainfall time series

map area selection

The screenshot shows the GIOVANNI web interface with the following elements:

- Select Plot:** A dropdown menu with "Maps: Accumulated" selected.
- Select Date Range (UTC):** Two date pickers showing "2017 -09 -01 00:00" and "2017 -09 -27 23:59".
- Select Region (Bounding Box or shape):** A text input field containing "-75.7617,17.2266,-69.6094,20.3906".
- Select Variables:** A sidebar on the left with "Disciplines" and "Measurements" sections. "Precipitation (25)" is expanded.
- Search Results:** A table with one row selected, showing "Daily accumulated precipitation (combined microwave-IR) estimate - Late Run (GPM_3IMERGDL_v06)".

Variable	Units	Source	Temp.Res.	Spat.Res.	Begin Date	End Date
<input checked="" type="checkbox"/> Daily accumulated precipitation (combined microwave-IR) estimate - Late Run (GPM_3IMERGDL_v06)	mm	GPM	Daily	0.1 °	2014-06-01	2019-09-08

begin date

end date

dataset information