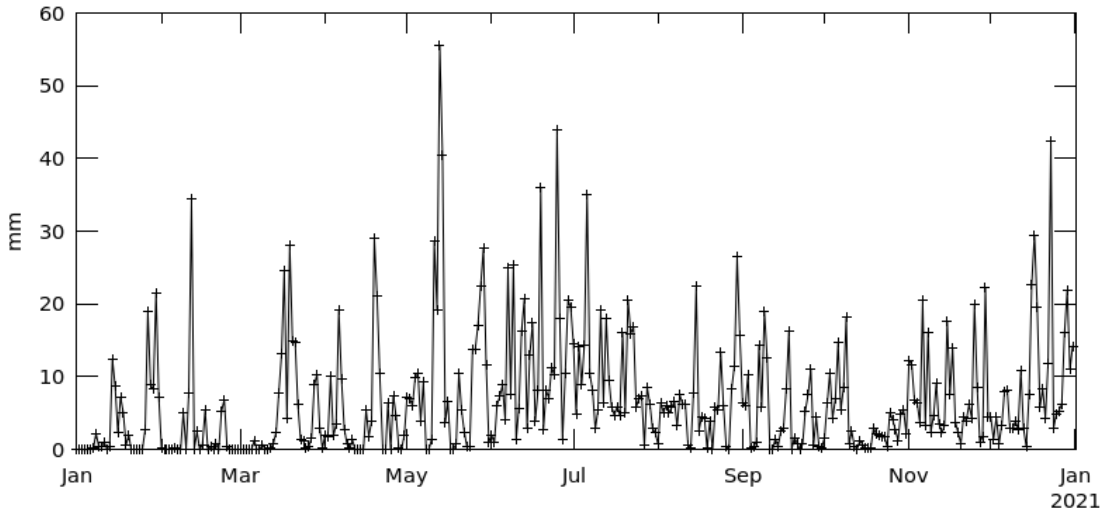
Mapping area average rainfall at daily and monthly time scales.

NASA Giovanni
https://giovanni.gsfc.nasa.gov/giovanni/

GENERAL DIRECTIONS:

1. Select dataset
2. Subset in time (range of dates)
3. Subset in space (area)
4. Calculate area average accumulated rainfall
5. Calculate area average accumulated monthly rainfall
6. Produce plots for both
7. Calculate area average accumulated monthly rainfall for a separate location
8. Subtract the monthly rainfalls from the two locations.
9. Discuss.



STEP 1. Select GPM precipitation dataset from the “Platform / Instrument pull down link.

STEP 2. Select the 5th option for daily accumulated precip:
Daily accumulated precipitation (combined microwave-IR) estimate - Final Run

STEP 3. Select “Time Series, Area-Averaged” from the “Select Plot” option.

STEP 4. Select date range of interest for an entire year.

STEP 5. Select Eastern Caribbean region from map.

STEP 6. PLOT DATA

STEP 7. Download PNG image

STEP 8. Do the above but for MONTHLY ACCUMULATED rainfall for the same location and time. Use the first variable option:
Merged satellite-gauge precipitation estimate - Final Run (recommended for general use) **(**GPM_3IMERGM v06**) BE SURE THAT YOU CHANGE UNITS TO mm/month**

STEP 9. Download PNG image of monthly time series.

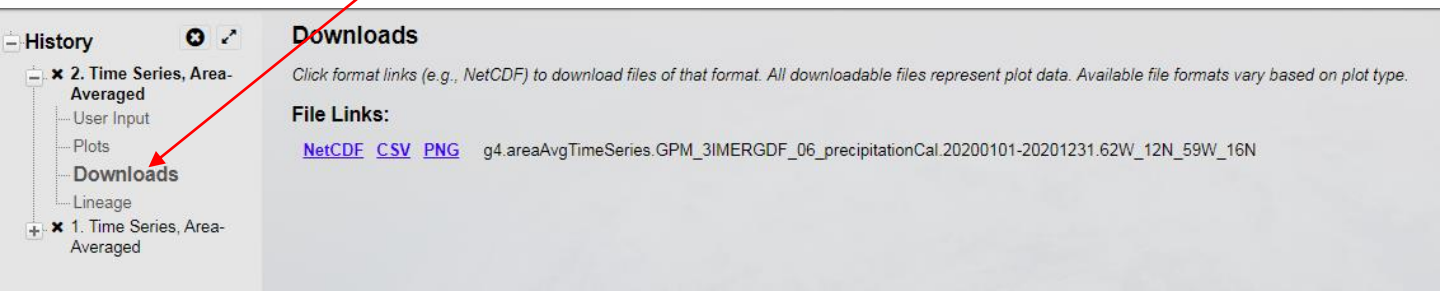
(By now you should have two different time series plots; same location and time, but different time scales.)

STEP 10. Download a CSV file of the monthly data.

STEP 11. Do the exact same to produce a monthly time series for the western Caribbean. Do not repeat for daily time series, only monthly is required.

STEP 12. Now you should have two separate CSV files. Subtract the two and report which area had more rainfall at specific times of the year.

This is where you can access the .csv file for download



STEP 13. Use your preferred spreadsheet software of choice to calculate the differences between the two regions. I use excel.

ASSIGNMENT:

- Turn in 1 time series of daily rainfall from the eastern Caribbean (1pt)
- Turn in 1 time series of monthly rainfall from the eastern Caribbean (1pt)
- Turn in 1 time series of monthly rainfall from the western Caribbean (1pt)
- Provide a spreadsheet showing data and calculations. (2pts)
- Report the differences either in a table or other method of choice (2pts)
- Describe what areas were wetter / drier during that particular year. (3pts)

- DUE BEFORE 11am OCTOBER 4th. Email document and spreadsheet to: tallen@cimh.edu.bb