

Exercise: Monitoring a Recent Tropical Cyclone

Amita Mehta

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Exercise Objective

- Monitor an approaching storm using:
 - NHC, CPCH, JTWC, and GDACS Reports
 - MODIS Images
 - GPM Precipitation
 - GEOS-5 Weather Data and Forecast
 - Case Study: Recent Tropical Cyclone Flamboyant



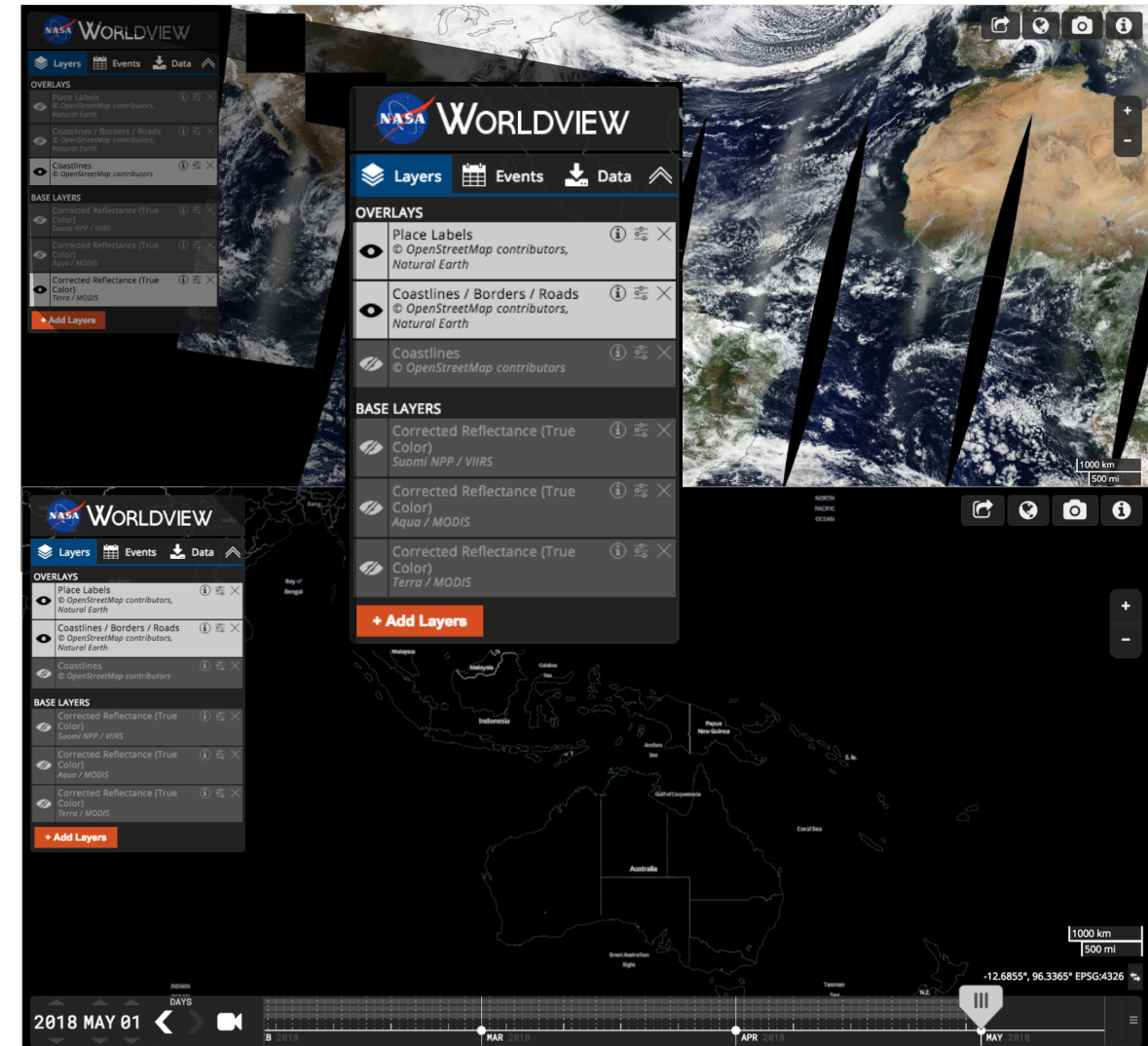
Check for Tropical Disturbance, Depression, or Storm

1. Go to the following sites and note if there is any current tropical disturbance, depression, or storm present in any of the tropical storm regions:
 - <https://www.nhc.noaa.gov/>
 - <http://www.prh.noaa.gov/cphc/>
 - <http://www.metoc.navy.mil/jtwc/jtwc.html>
2. Go to GDACS:
<http://www.gdacs.org/>
3. Click on **Flamboyan-18** under Tropical Storms
4. Study the **Event Summary** and mark the following information:
 - Dates for the storm
 - Affected countries
 - Maximum wind speed
 - Storm category
5. If you are looking for a storm that took place in the past:
 - Go to:
<http://www.gdacs.org/Alerts/>
 - Click on **Search**
 - Select **Cyclone**
 - Search for the storm by date



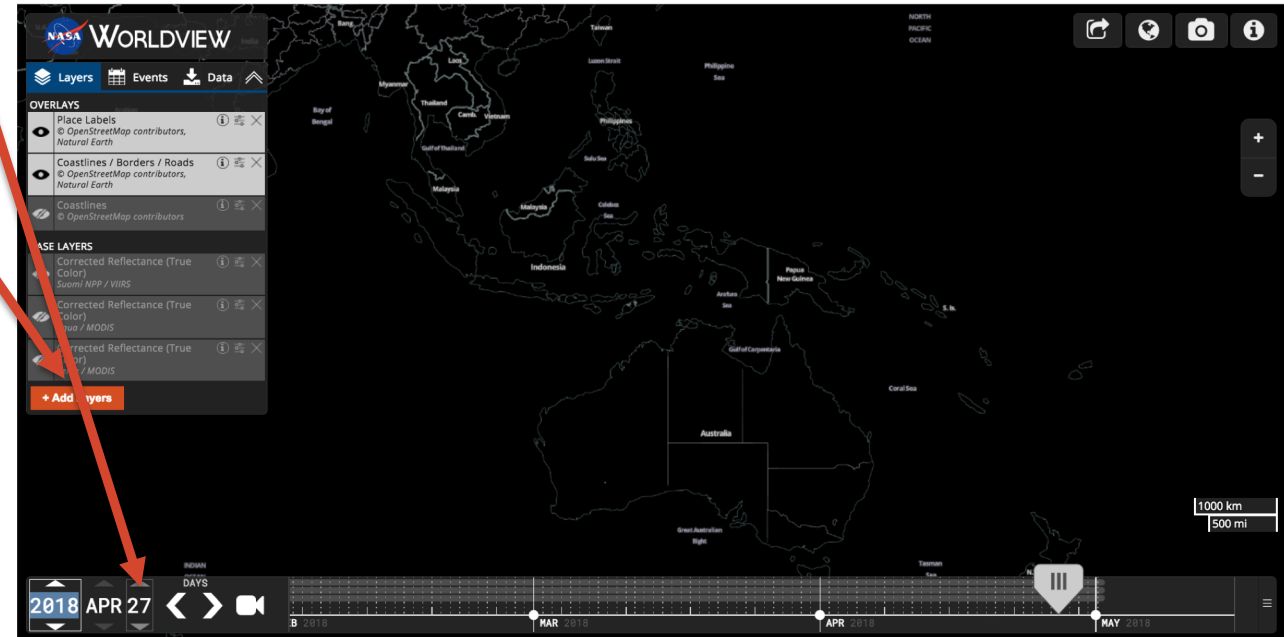
Monitor Tropical Cyclone Flamboyant-18 Using MODIS Imagery

1. Go to <https://worldview.earthdata.nasa.gov/>
2. Turn off all layers, but keep the **Place Labels** and **Coastlines/Borders/Roads** layers on
3. Zoom to the ocean where Flamboyant-18 formed



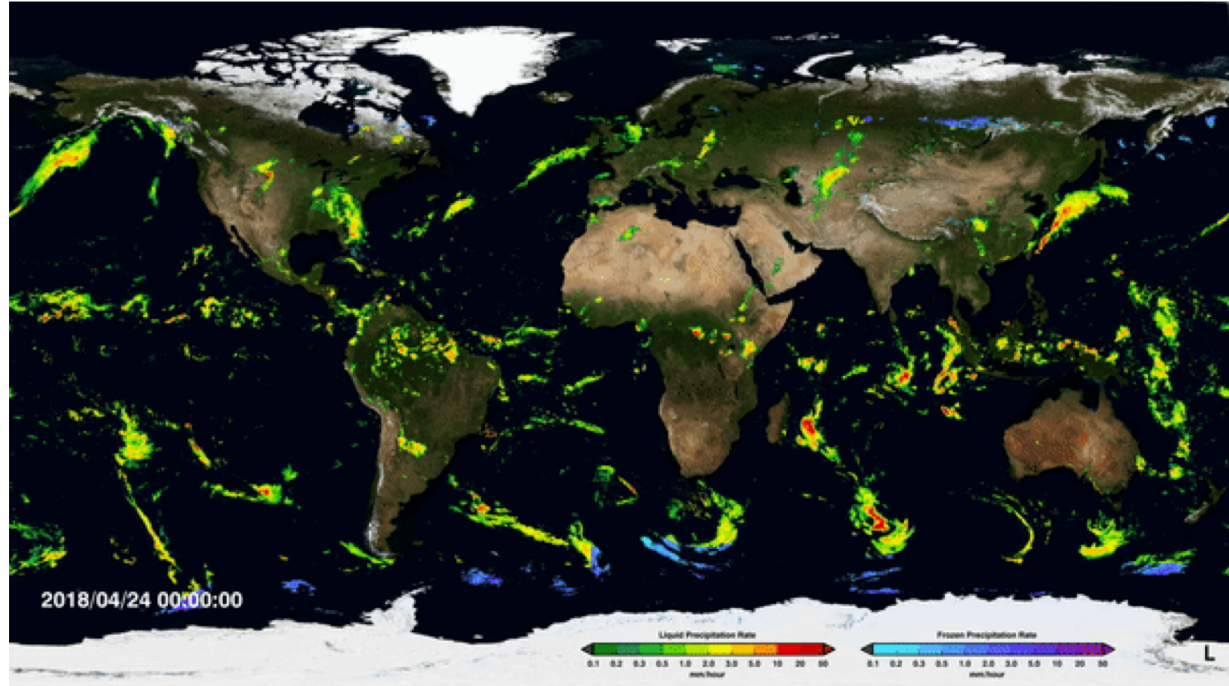
Monitor Tropical Cyclone Flamboyant-18 Using MODIS Imagery

4. Go to the year-month-date section and select 2018 Apr 27
 5. Turn on the **Corrected Reflectance (true color)** layer for Terra/MODIS
 6. Using the arrows by the dates, loop through April 27, 28, 29, 30, & May 1
 7. Repeat step 6 for the Aqua/MODIS and Suomi NPP/VIIRS Layers
- Can you see Flamboyant-18?
 - Which direction did it move after April 27?



Monitor Tropical Cyclone Flamboyant-18 Using Precipitation Data

8. Go to <https://svs.gsfc.nasa.gov/cgi-bin/details.cgi?aid=4285>
 - This will show you an animation of global precipitation for the last seven days
9. Click on the map to start the animation
10. Examine the precipitation data associated with Flamboyant-18 between April 27 – May 1
11. Watch how a tropical disturbance becomes Flamboyant-18



Explore GEOS-5 Weather Data

11. Go to

https://fluid.nccs.nasa.gov/weather/wxmaps//?one_click=1&tau=000&stream=G5FPFC&level=850®ion=sevseas&fcst=20180428T120000&field=wspd

12. Under **REGIONS**, select **Seven Seas**

13. Select **FORECAST INITIAL TIME** and **FORECAST LEAD HOUR**

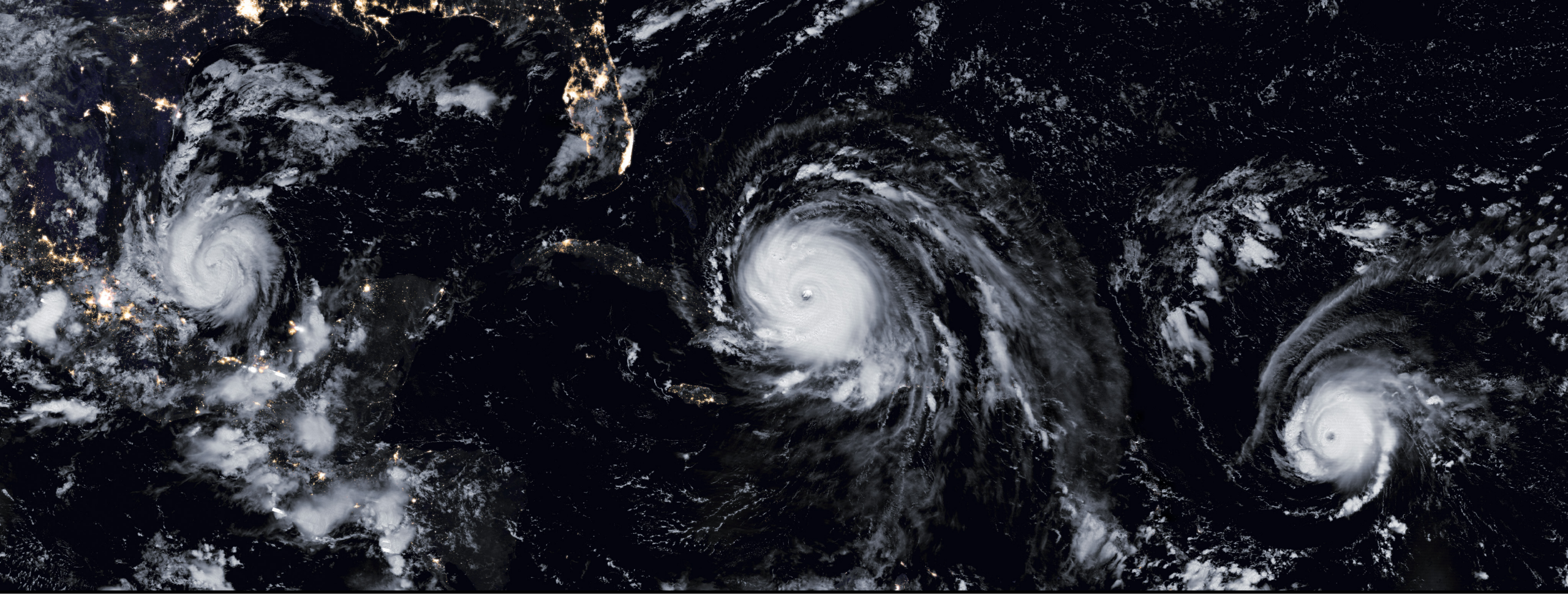
14. Explore **VARIABLES: Precip & SLP** and **Wind Speed**

Note: this portal can provide 10-day forecast data

The screenshot shows the configuration interface for the GEOS-5 Weather Data portal. It is organized into several sections:

- VARIABLES:** A grid of buttons for selecting data variables. The selected variable is **Wind Speed**. Other options include Abs EPV, Humidity, Precip & SLP, Temperature, Vorticity, and Vert Velocity.
- LEVELS:** A grid of buttons for selecting pressure levels. The selected level is **850**. Other options include 10, 30, 50, 100, 200, 300, 500, and 700.
- REGIONS:** A grid of buttons for selecting a geographic region. The selected region is **Seven Seas**. Other options include Atlantic, Australia, Global, Mid Atlantic, North America, N Polar, Pacific, and S Polar.
- FORECAST INITIAL TIME:** A dropdown menu showing the selected time as **28Apr2018 00z**.
- FORECAST LEAD HOUR:** A dropdown menu showing the selected lead time as **054 30Apr2018 06z**.





Discussion and Q/A