

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

Assignment 2 (due Sept 23 BEFORE CLASS): Exploring Sea Surface Temperature and Hovmuller plots (10 points total)

- 1) Briefly explain what a Hovmuller plot is. Why would we want to use it? (2pts)
- 2) Use NASA Giovanni to analyze and produce a *monthly* sea surface temperature hovmuller from 2003-2018.

Provide the following:

1.5 pts **A)** a latitude averaged Hovmuller from the southern Caribbean up to about 33N

1.5 pts **B)** a longitude averaged Hovmuller from the same spatial dimensions

2pts **C)** Provide a brief interpretation (seasons?, patterns?, regions?) of each plot.

2pts **D)** Provide a brief description comparing and contrasting the two plots.

1pt **E)** What has finer spatial resolution, NASA GPM or the NASA MODIS sea surface temperature data? Support your answer.

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

INCLUDE LAB3 IN SUBJECT LINE!!!

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NO LATE ASSIGNMENTS ACCEPTED

Select Plot

Maps: Select...
 Comparisons: Select...
 Vertical: Select...
 Time Series: Hovmoller, Latitude-Averaged *
 Miscellaneous: Select...

Select Date Range (UTC)

YYYY-MM HH:mm to YYYY-MM HH:mm
 2010 - 01 - 01 00:00 to 2018 - 12 - 31 23:59
 Valid Range: 2002-07-04 to 2019-07-31

- Select Variables**
- Disciplines**
- Aerosols (188)
 - Atmospheric Chemistry (76)
 - Atmospheric Dynamics (424)
 - Cryosphere (13)
 - Hydrology (1209)
 - Ocean Biology (59)
 - Oceanography (62)
 - Water and Energy Cycle (1272)
- Measurements**
- Aerosol Index (6)
 - Aerosol Optical Depth (88)
 - Air Pressure Anomaly (1)
 - Air Pressure (58)
 - Air Temperature Anomaly (2)
 - Air Temperature (105)
 - Albedo (25)
 - Altitude (8)
 - Angstrom Exponent (20)
 - Atmospheric Moisture (122)
 - Black Carbon (5)
 - Buoyancy (2)
 - CH4 (8)
 - CO (22)
 - CO2 (2)
 - Canopy Water Storage (7)
 - Chlorophyll (15)

Number of matching Variables: 0 of 2007

Keyword:

Variable
<input checked="" type="checkbox"/> Sea Surface Temperature at 11 m

Time Series Choices

- Hovmoller, Longitude-Averaged
Longitude-averaged Hovmoller, plotted over the selected time and latitude ranges
[Details...](#)
- Hovmoller, Latitude-Averaged
Latitude-averaged Hovmoller, plotted over the selected time and longitude ranges
[Details...](#)
- Area-Averaged Differences
Time series of area averages of differences between two variables at each spatial grid point
[Details...](#)
- Area-Averaged
Time series of area-averaged values
[Details...](#)
- Seasonal
Seasonal (inter annual) time series
[Details...](#)

Units	Source	Temp.Res.	Spat.Res.	Begin Date	End Date
C	MODIS-Aqua	Monthly	4 km	2002-07-04	2019-07-31