Salinity Science Results from the Gulf of Mexico (GOM)

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Plotting SMAP data in LAS

- Following slides show how to plot SMAP data using one particular tool available from PO.DAAC: *Live Access Server (LAS)*
- LAS can be used to compare SMAP data:
  - RSS 40 km 8-day running mean
  - RSS 70 km 8-day running mean
- It is also capable of generating time series of averaged data (e.g., over an area)

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Live Access Server (LAS)

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Happy Birthday Jason 2 !
Today, June 20, 2018, the OSTM/Jason-2 mission (Ocean Surface Topography Mission) marks its 10th year in orbit. Jason-2 has now completed 47,000 orbital revolutions of our planet, acquiring measurements of unequaled precision from more than 300...

Tuesday, July 3

Upcoming upg… …ime OSI SAF and EARS ASCAT w…
Wednesday, June 13, 2…

Deprecation of FTP at PO.DAAC
Tuesday, June 5, 2018

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Events

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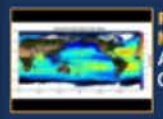
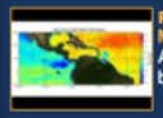


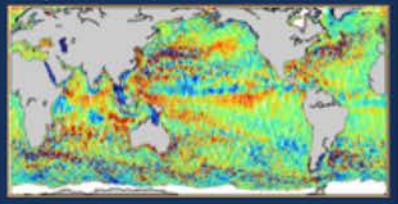
RSS SMAP Sea Surface Salinity 70km 8-Day Global An...
May 4, 2018
Animation of global sea surface salinity (SSS) over the period 27-03-2015 to 16-04-2018 based on the 8-day running mean version 2.0...



RSS SMAP Sea Surface Salinity 70km 8-Day Animation
May 4, 2018
Animation of sea surface salinity (SSS) over the period 27-03-2015 to 16-04-2018 based on the 8-day running mean version 2.0 SMAP...

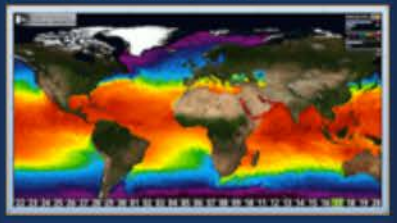
More Animations »

Image of the Day



Sea Surface Height Anomaly: SARAL, Jason-2 and Jason-3 Measurements from 01-Jul-2018 to 11-Jul-2018

State Of the Ocean (SOTO)



A suite of tools presented through an interactive, web-based visualization front end.

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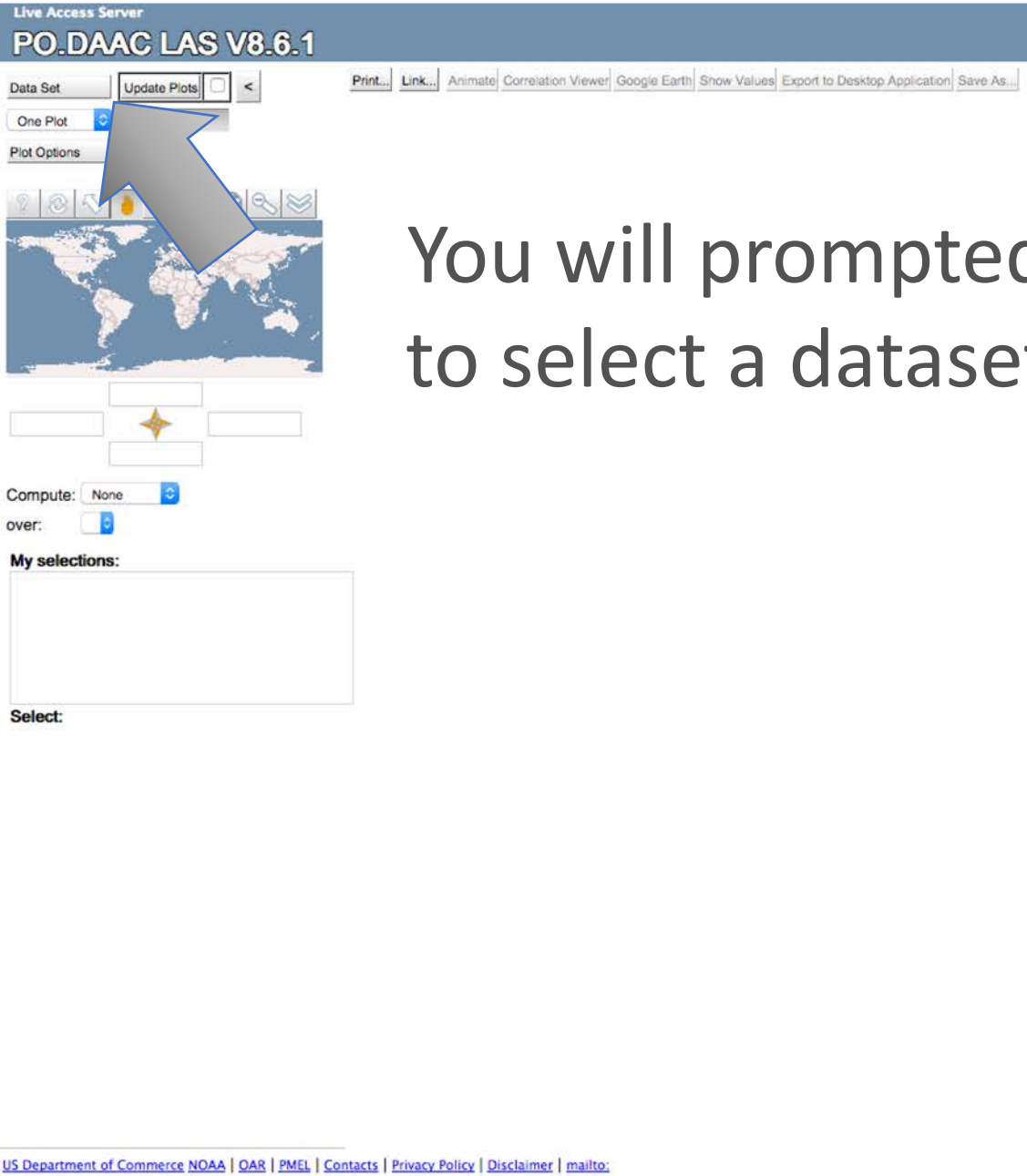


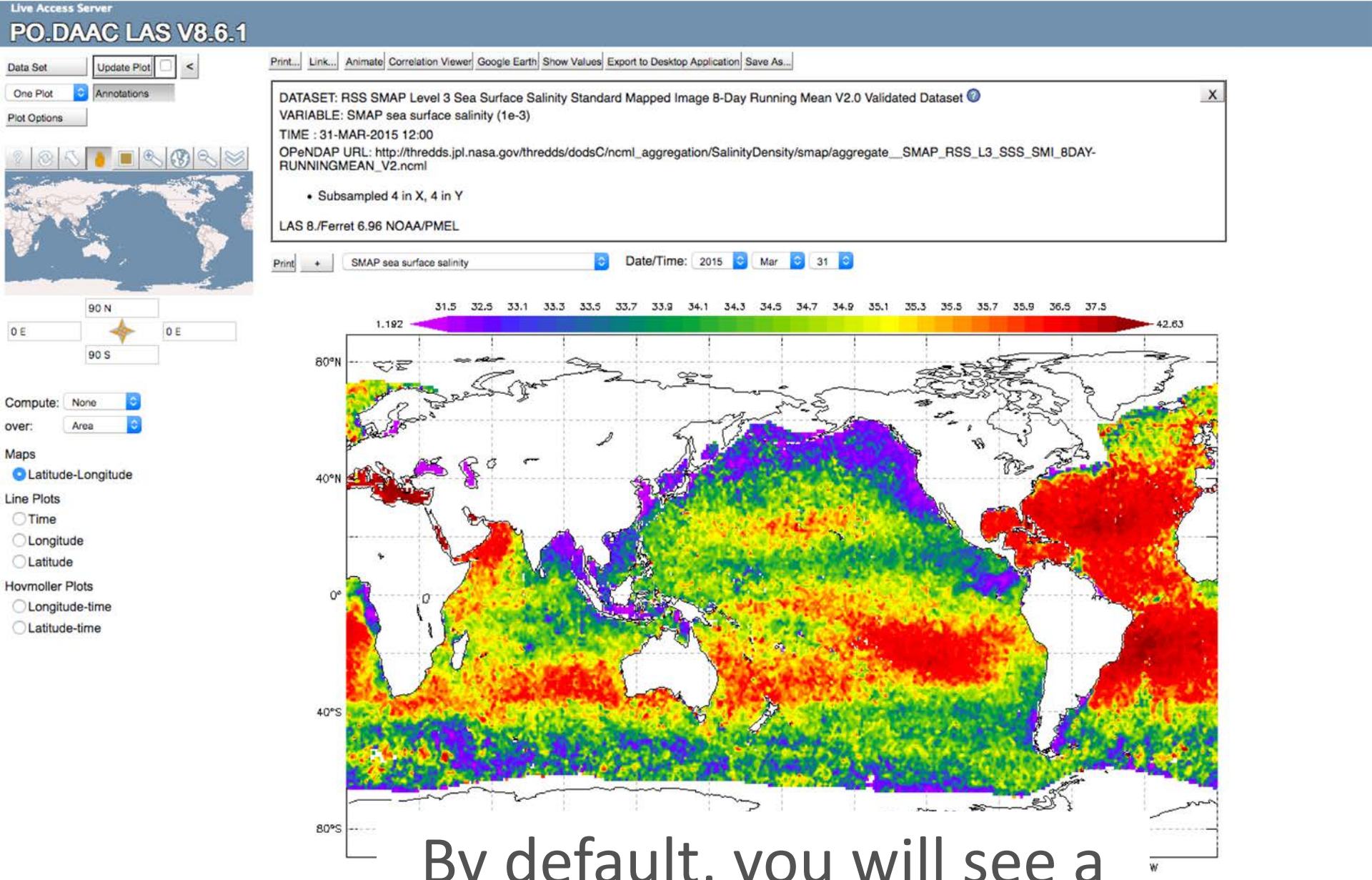
You will prompted to select a dataset

Live Access Server

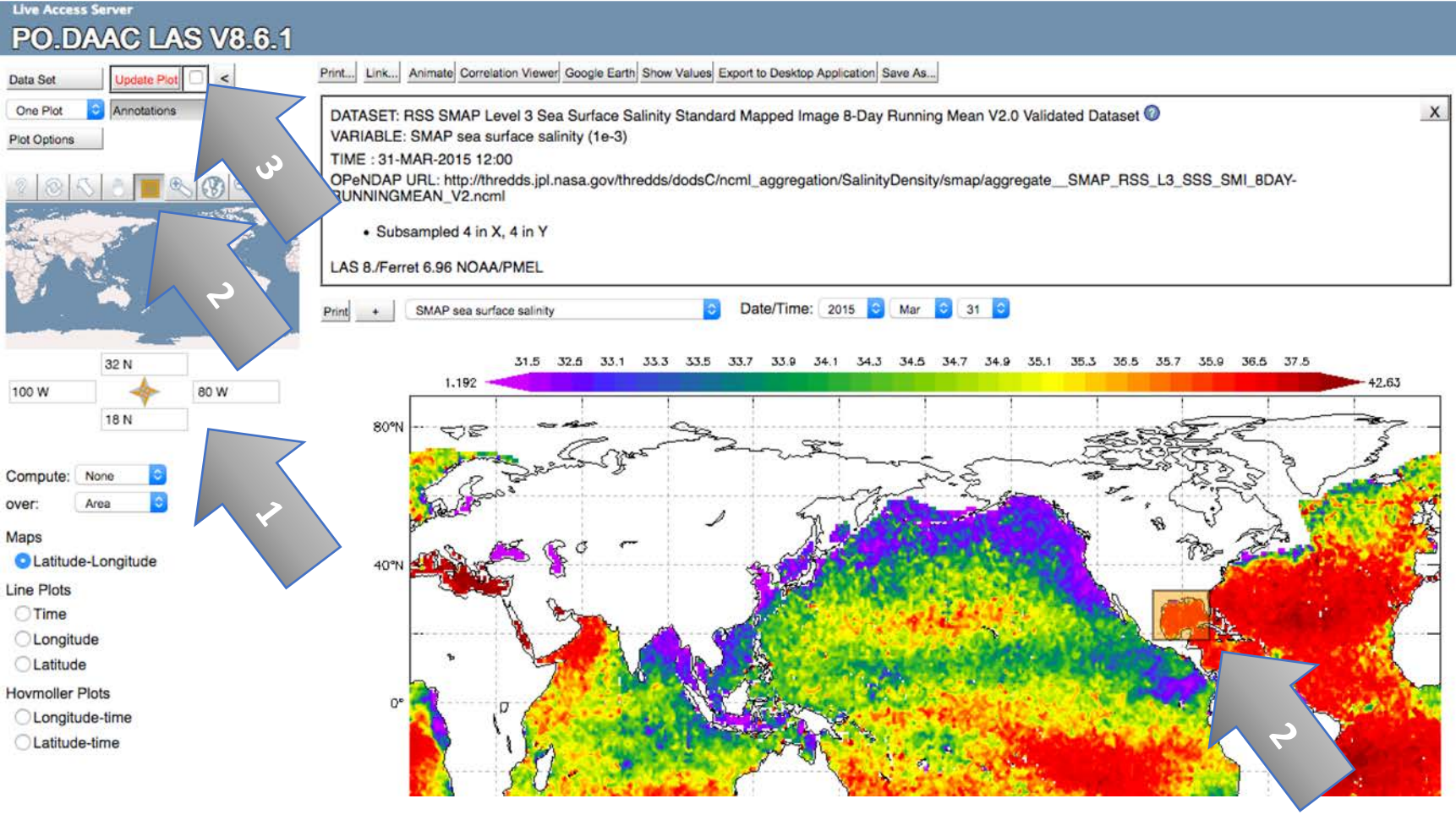
PO.DAAC LAS V8.6.1

close

- MODIS Terra Level 3 SST Thermal IR Daily 4km Nighttime v2014.0
- MODIS Terra Level 3 SST Thermal IR Daily 9km Daytime v2014.0
- MODIS Terra Level 3 SST Thermal IR Daily 9km Nighttime v2014.0
- MODIS Terra Level 3 SST Thermal IR Monthly 4km Daytime v2014.0
- MODIS Terra Level 3 SST Thermal IR Monthly 4km Nighttime v2014.0
- MODIS Terra Level 3 SST Thermal IR Monthly 9km Daytime v2014.0
- MODIS Terra Level 3 SST Thermal IR Monthly 9km Nighttime v2014.0
- NOAA Smith and Reynolds Extended Reconstructed Sea Surface Temperature (ERSST) Level 4 Monthly Version 4 Dataset in netCDF
- NOAA Smith and Reynolds Extended Reconstructed Sea Surface Temperature (ERSST) Level 4 Monthly Version 5 Dataset in netCDF
- OSCAR third degree resolution ocean surface currents
- RSS SMAP Level 3 Sea Surface Salinity Standard Mapped Image 8-Day Running Mean V2.0 70km Validated Dataset
- RSS SMAP Level 3 Sea Surface Salinity Standard Mapped Image 8-Day Running Mean V2.0 Validated Dataset
  - Ancillary sea surface temperature (from CMC)
  - Average land fraction (weighted by antenna gain)
  - Average sea ice fraction (weighted by antenna gain)
  - Number of observations for L3 average
  - Reference sea surface salinity from HYCOM
  - SMAP sea surface salinity
- RSS SMAP Level 3 Sea Sur tandard Mapped Image Monthly V2.0 70km Validated Dataset
- RSS SMAP Level 3 Sea Su Standard Mapped Image Monthly V2.0 Validated Dataset
- SeaWiFS Global Daily Mapped 9 vll a
- SeaWiFS Global Monthly Mapped 9 nlyll a
- SeaWinds on QuikSCAT Arctic Sea Ice Age Classification (BYU/SCP)



By default, you will see a global data map



Pick a specific area by (1) entering coordinates or (2) drawing a box.

Click Update Plot (3) to see your results.

US Department of

Live Access Server

PO.DAAC LAS V8.6.1

Data Set | Update Plot | < | One Plot | Annotations | Plot Options

Print... | Link... | Animate | Correlation Viewer | Google Earth | Show Values | Export to Desktop Application | Save As...

DATASET: RSS SMAP Level 3 Sea Surface Salinity Standard Mapped Image 8-Day Running Mean V2.0 Validated Dataset

VARIABLE: SMAP sea surface salinity (1e-3)

TIME : 31-MAR-2015 12:00

OPeNDAP URL: http://thredds.jpl.nasa.gov/thredds/dodsC/ncml_aggregation/SalinityDensity/smap/aggregate__SMAP_RSS_L3_SSS_SMI_8DAY-RUNNINGMEAN_V2.ncml

LAS 8./Ferret 6.96 NOAA/PMEL

Print | + | SMAP sea surface salinity | Date/Time: 2015 | Mar | 31

32 N | 100 W | 80 W | 18 N

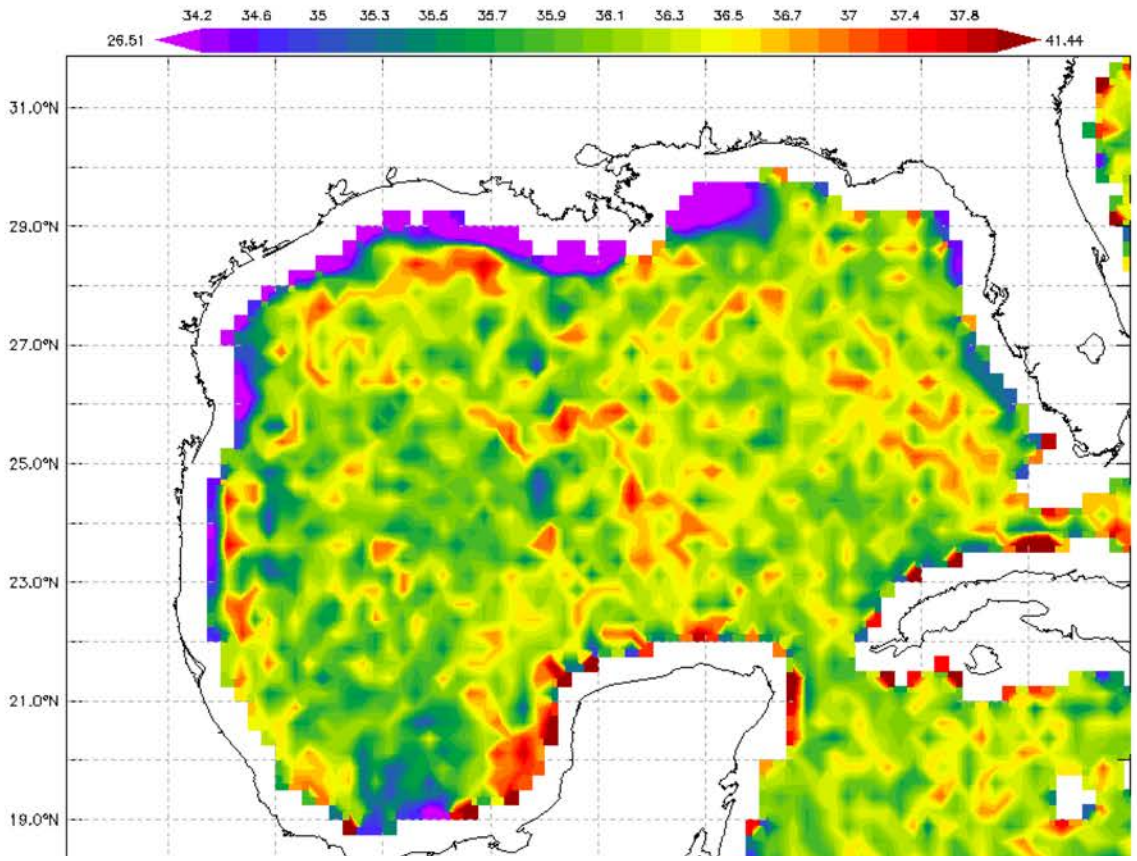
Compute: None

over: Area

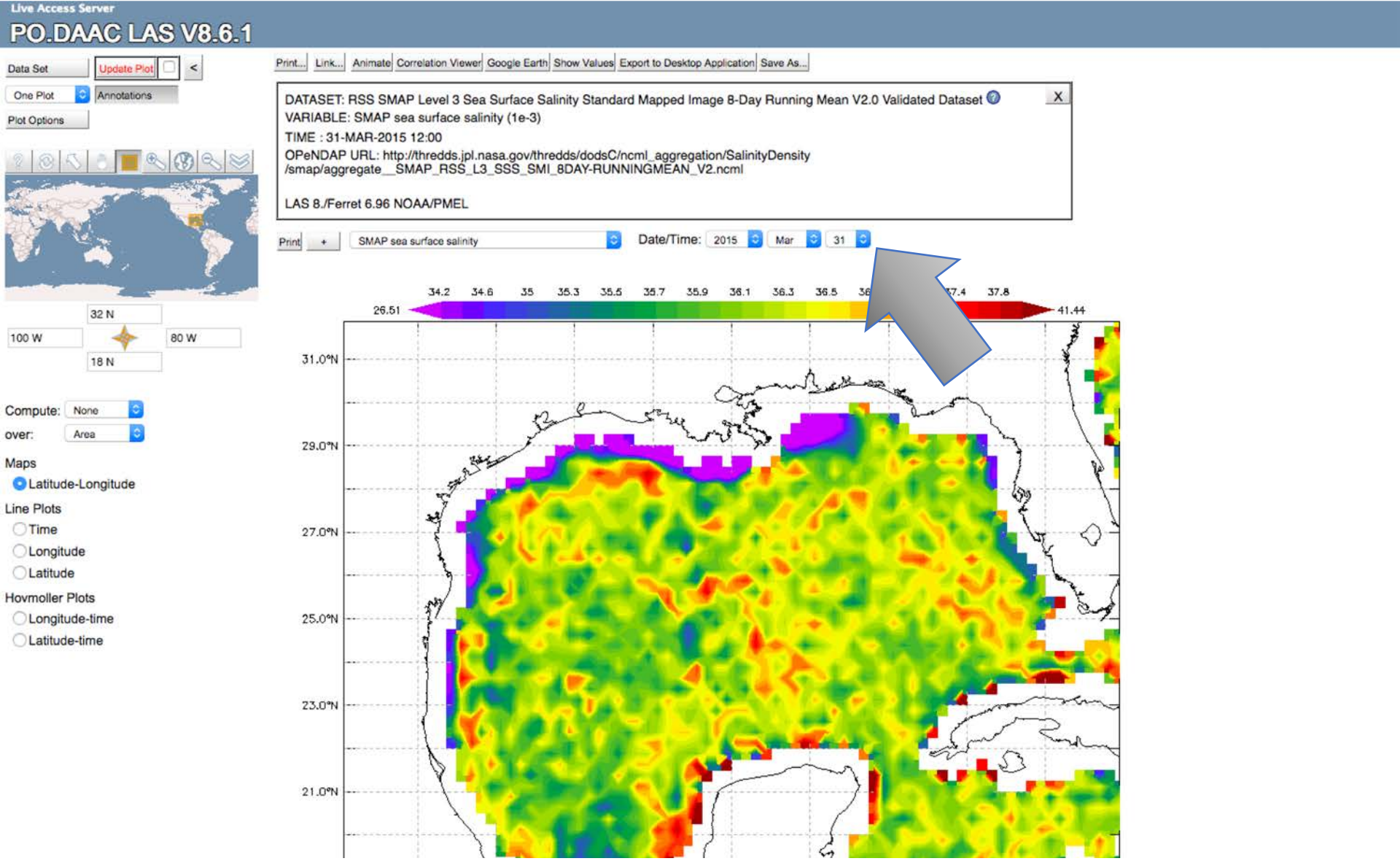
Maps
- Latitude-Longitude

Line Plots
- Time
- Longitude
- Latitude

Hovmoller Plots
- Longitude-time
- Latitude-time



40 km SMAP data for 31-Mar-15



Change the date using pull-down menus

Click Update Plot to see your results.

Live Access Server

PO.DAAC LAS V8.6.1

Data Set | Update Plot | < | Print... | Link... | Animate | Correlation Viewer | Google Earth | Show Values | Export to Desktop Application | Save As...

One Plot | Annotations

Plot Options

DATASET: RSS SMAP Level 3 Sea Surface Salinity Standard Mapped Image 8-Day Running Mean V2.0 Validated Dataset

VARIABLE: SMAP sea surface salinity (1e-3)

TIME : 30-JUL-2016 12:00

OPeNDAP URL: http://thredds.jpl.nasa.gov/thredds/dodsC/ncml_aggregation/SalinityDensity/smap/aggregate__SMAP_RSS_L3_SSS_SMI_8DAY-RUNNINGMEAN_V2.ncml

LAS 8./Ferret 6.96 NOAA/PMEL

Print | + | SMAP sea surface salinity | Date/Time: 2016 | Jul | 31

32 N | 100 W | 80 W | 18 N

Compute: None

over: Area

Maps

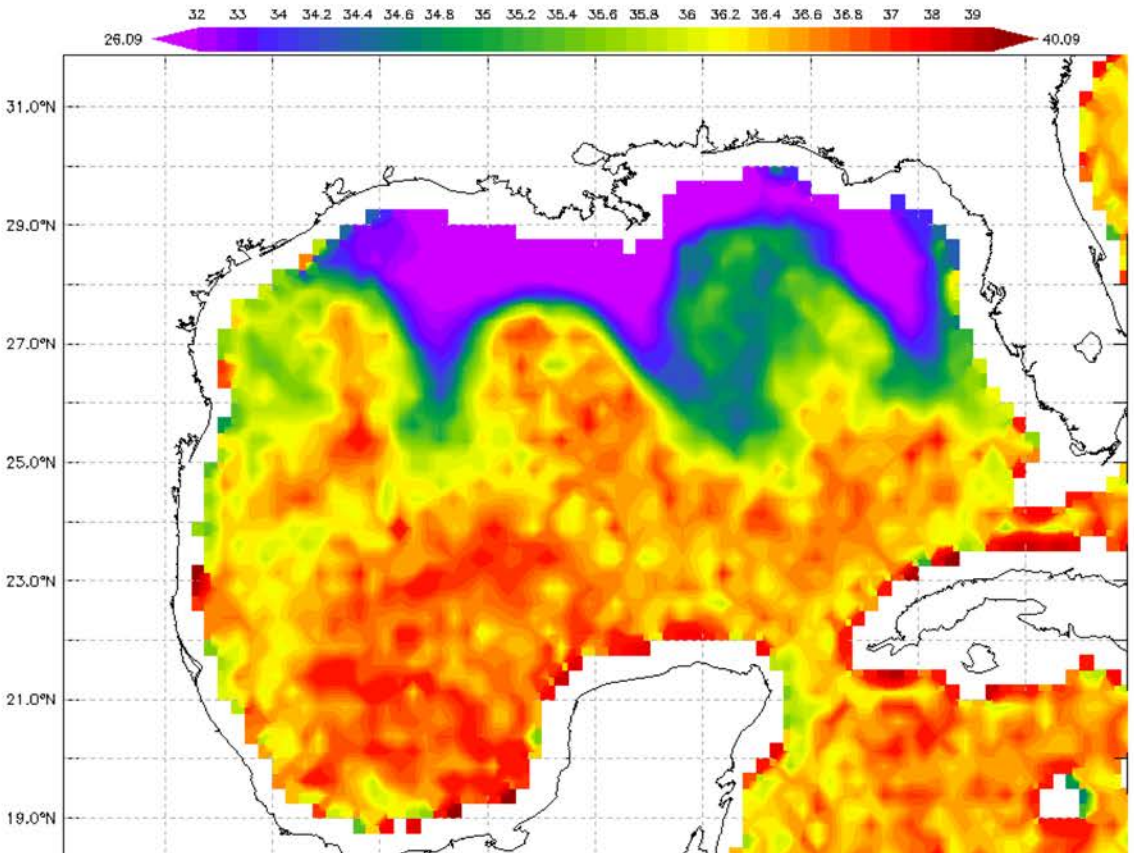
- Latitude-Longitude

Line Plots

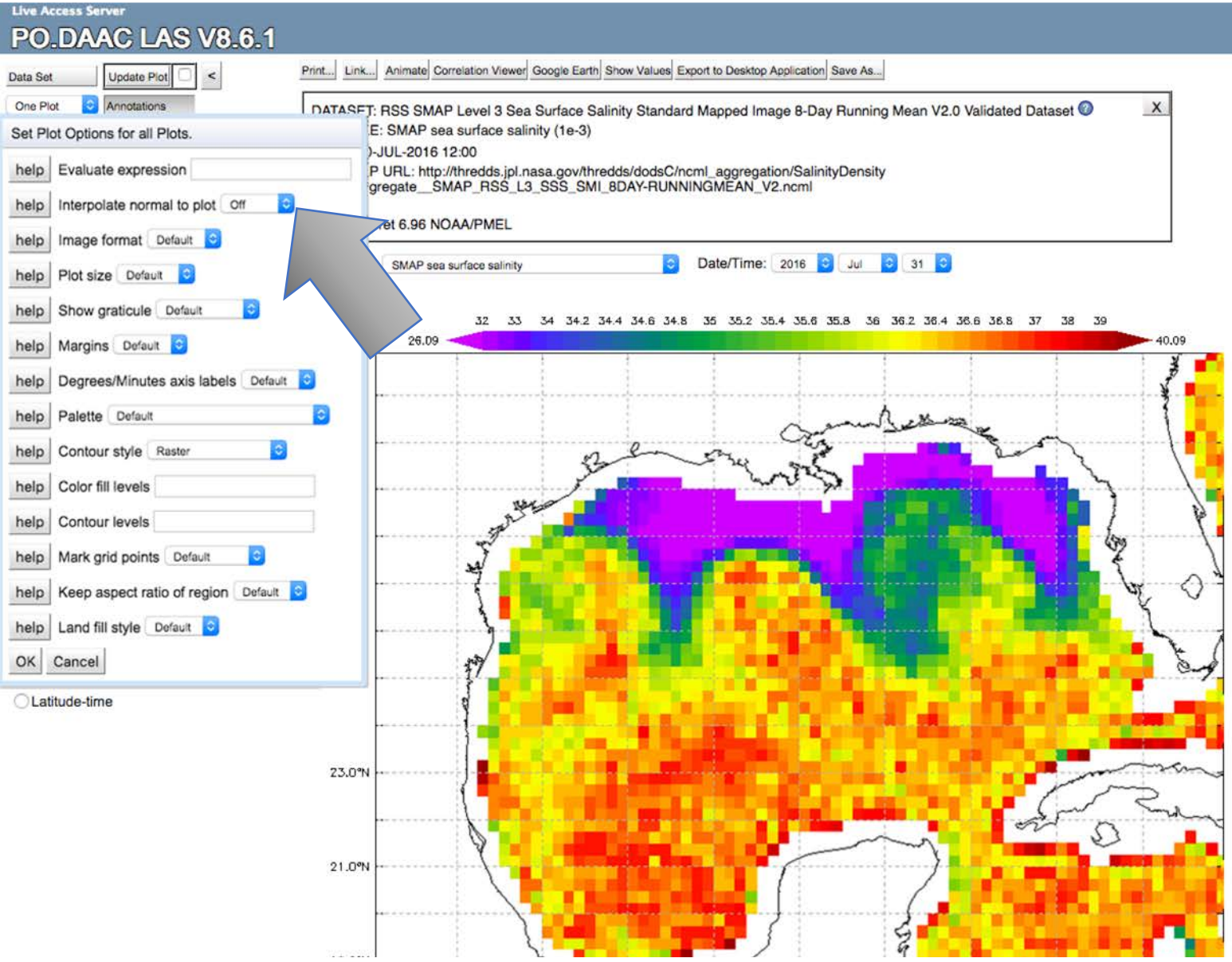
- Time
- Longitude
- Latitude

Hovmoller Plots

- Longitude-time
- Latitude-time



40 km SMAP data for 31-Jul-16



Note: You can click “Plot Options” and choose “Off” to view non-interpolated data

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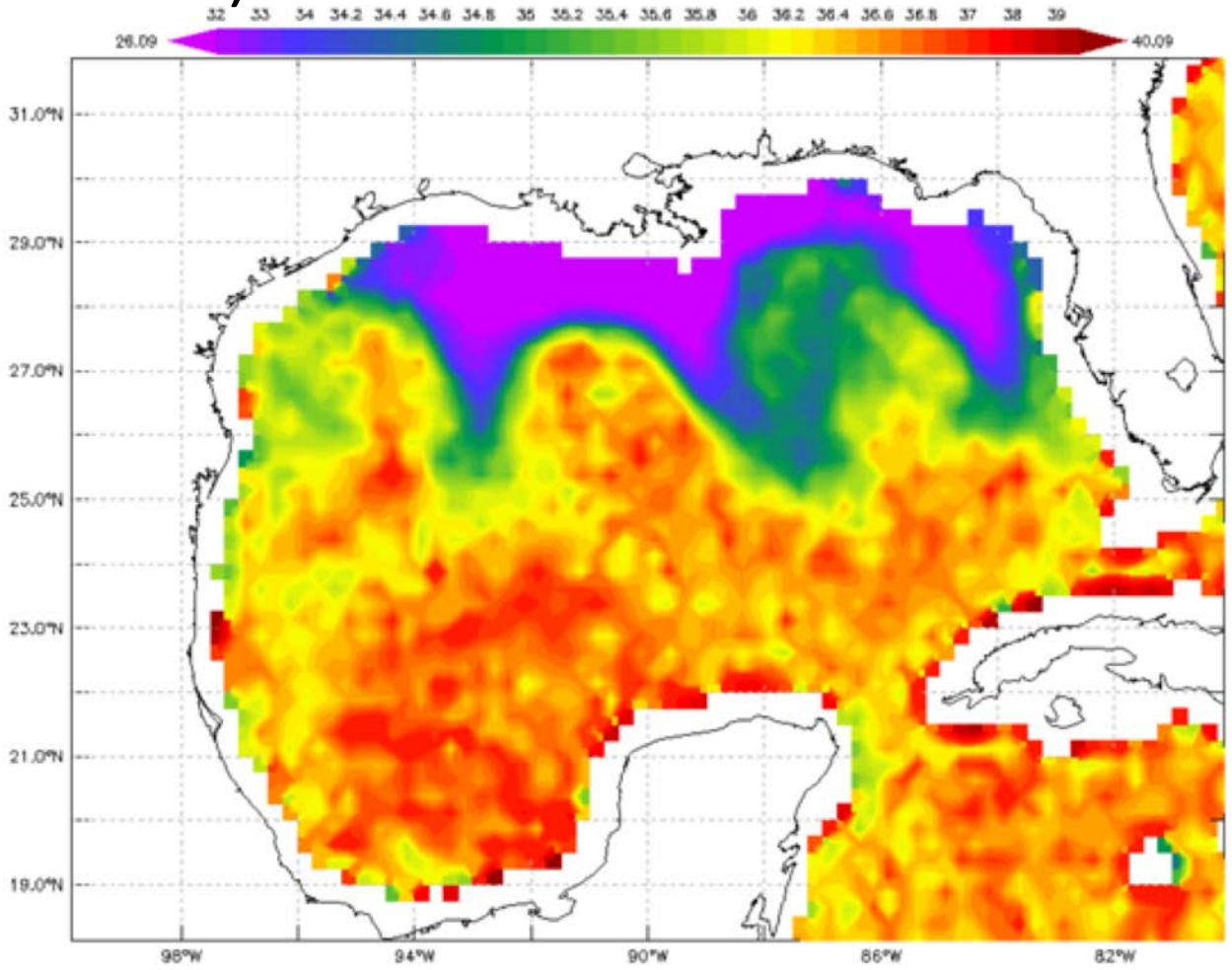
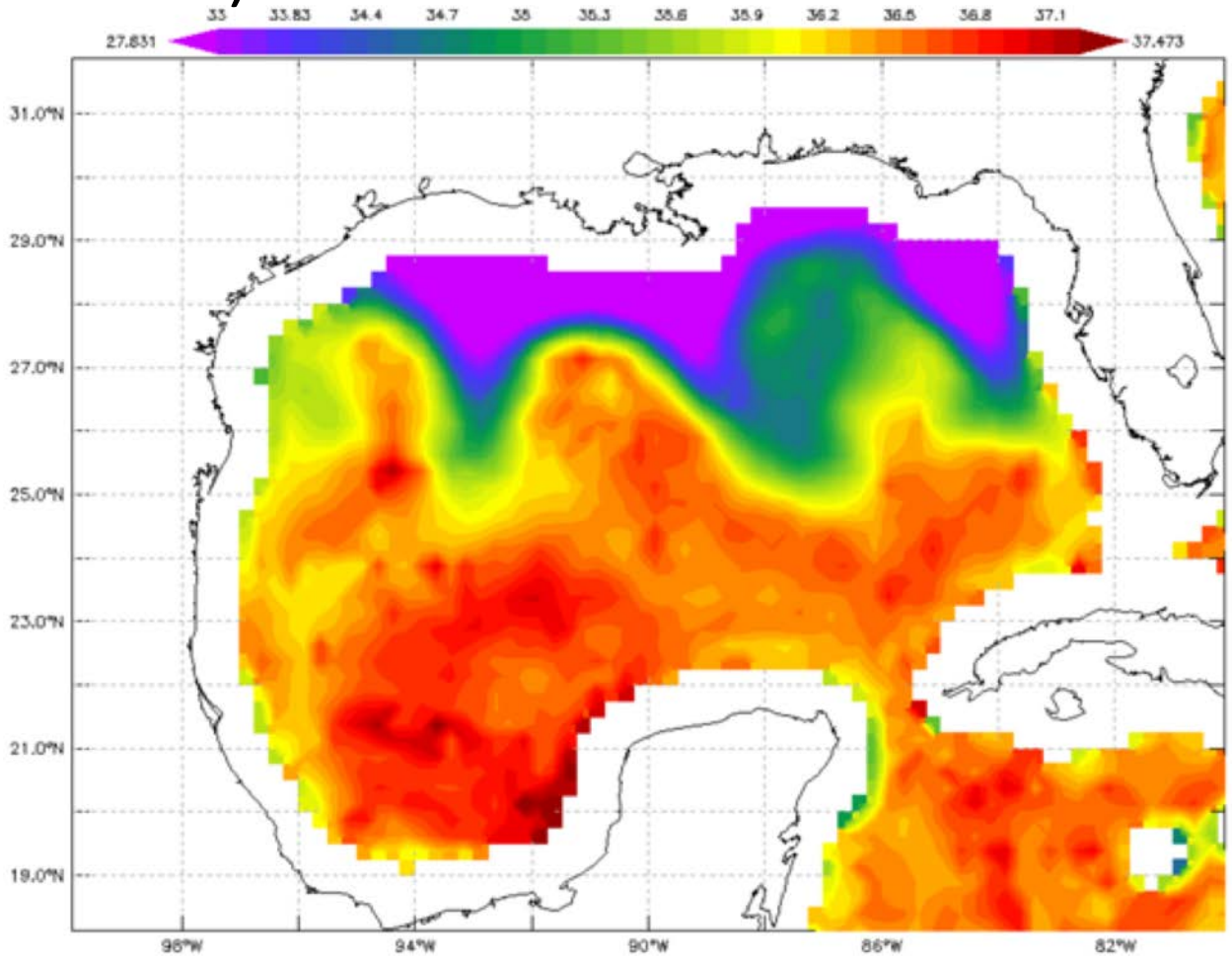
GOM – 40 km RSS Data (interpolated)

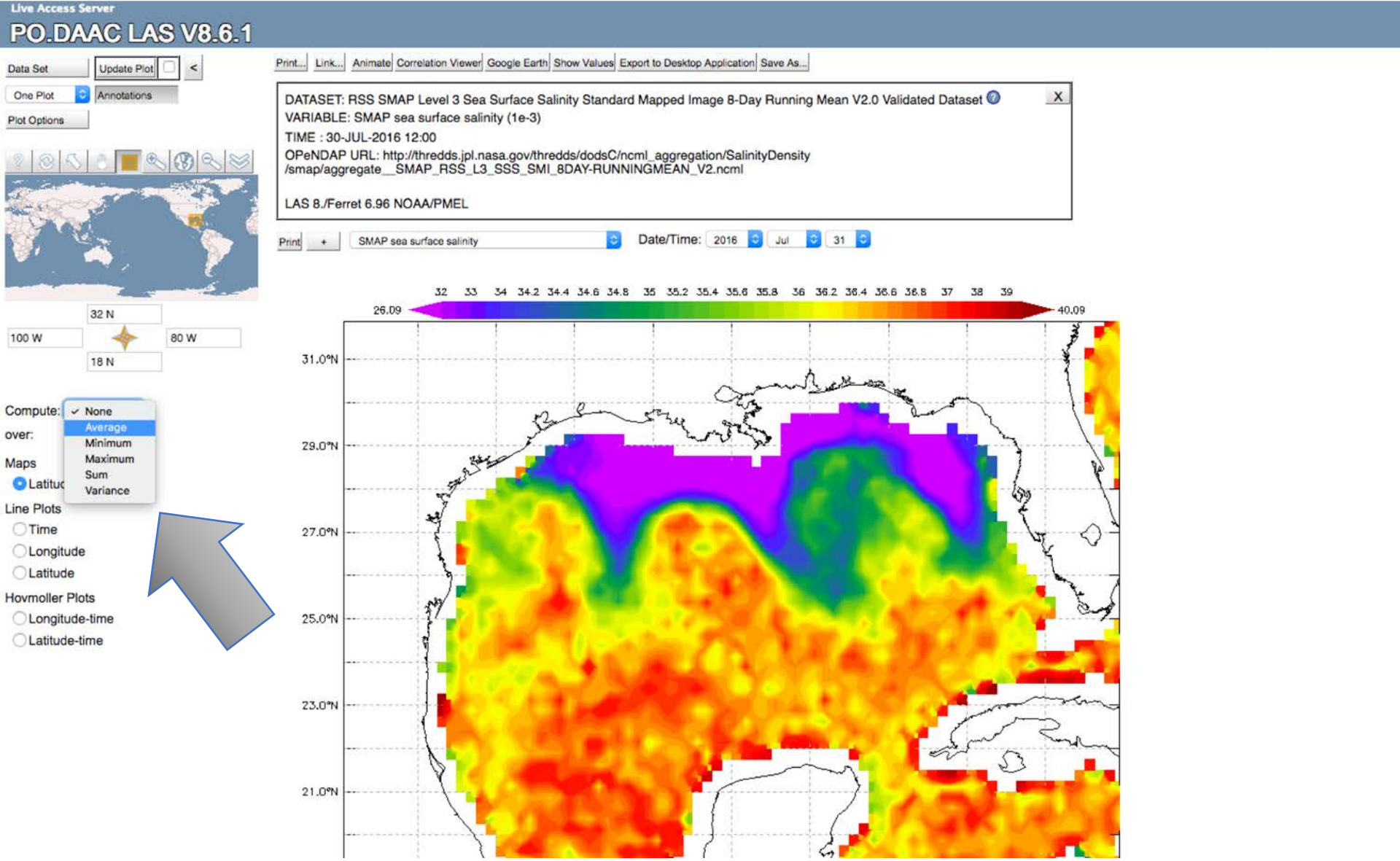
Data are close to the coast but noisy



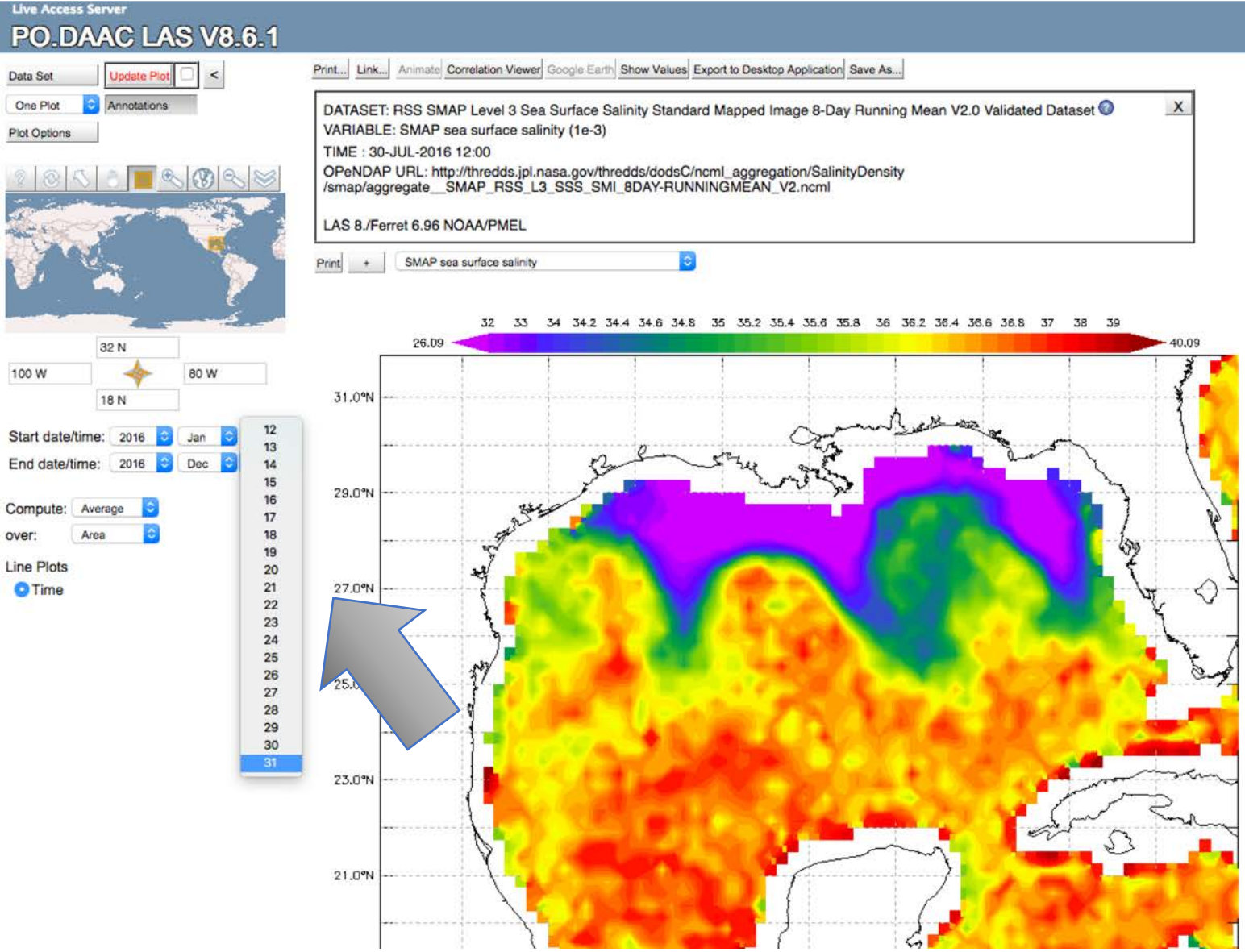
GOM – 70 km RSS Data (interpolated)

70-km data are smoother but further from the coast



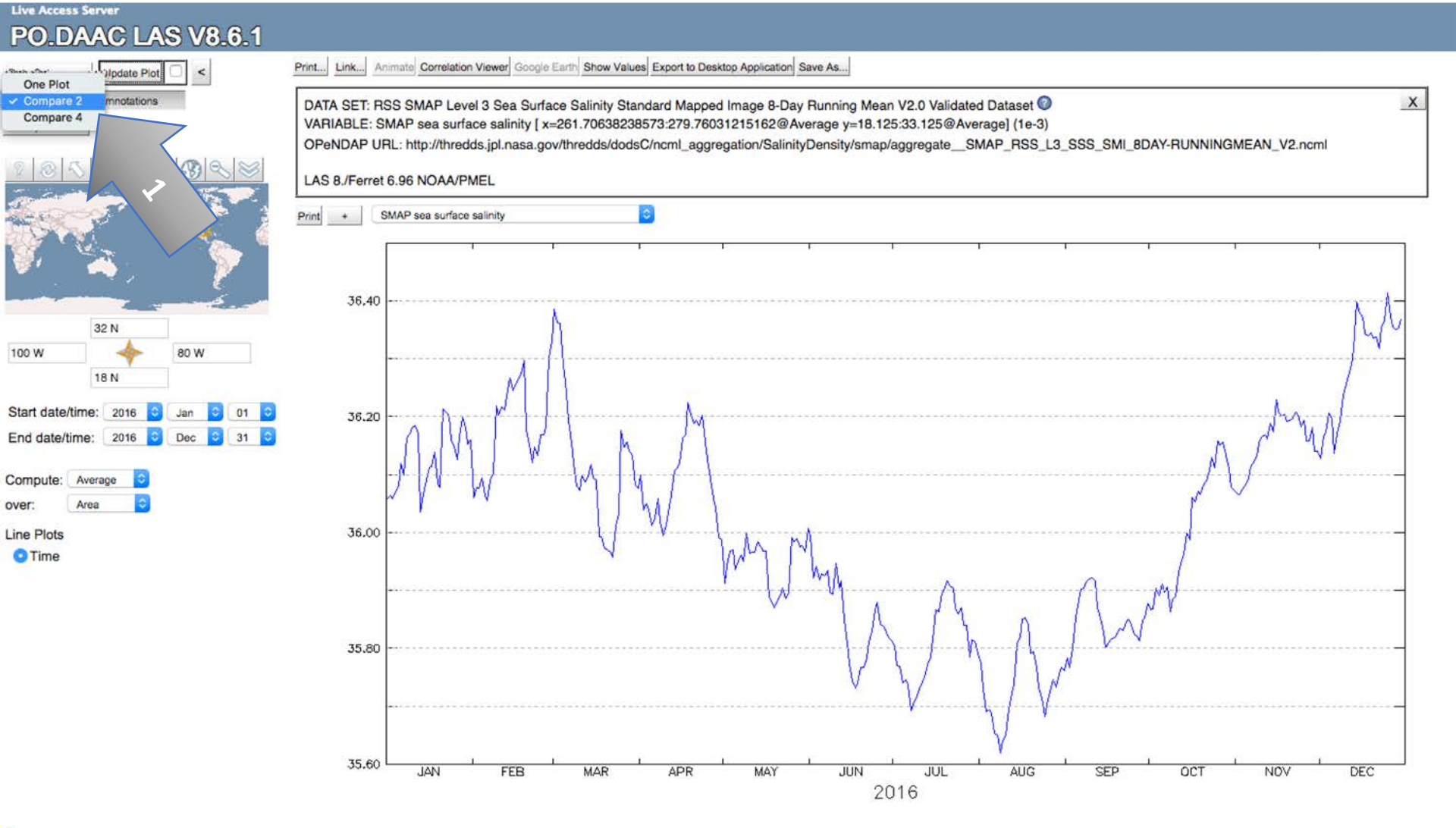


To generate time-series average data, use the “Compute” pull-down menu…



…and set “Start date/time” & “End date/time.”

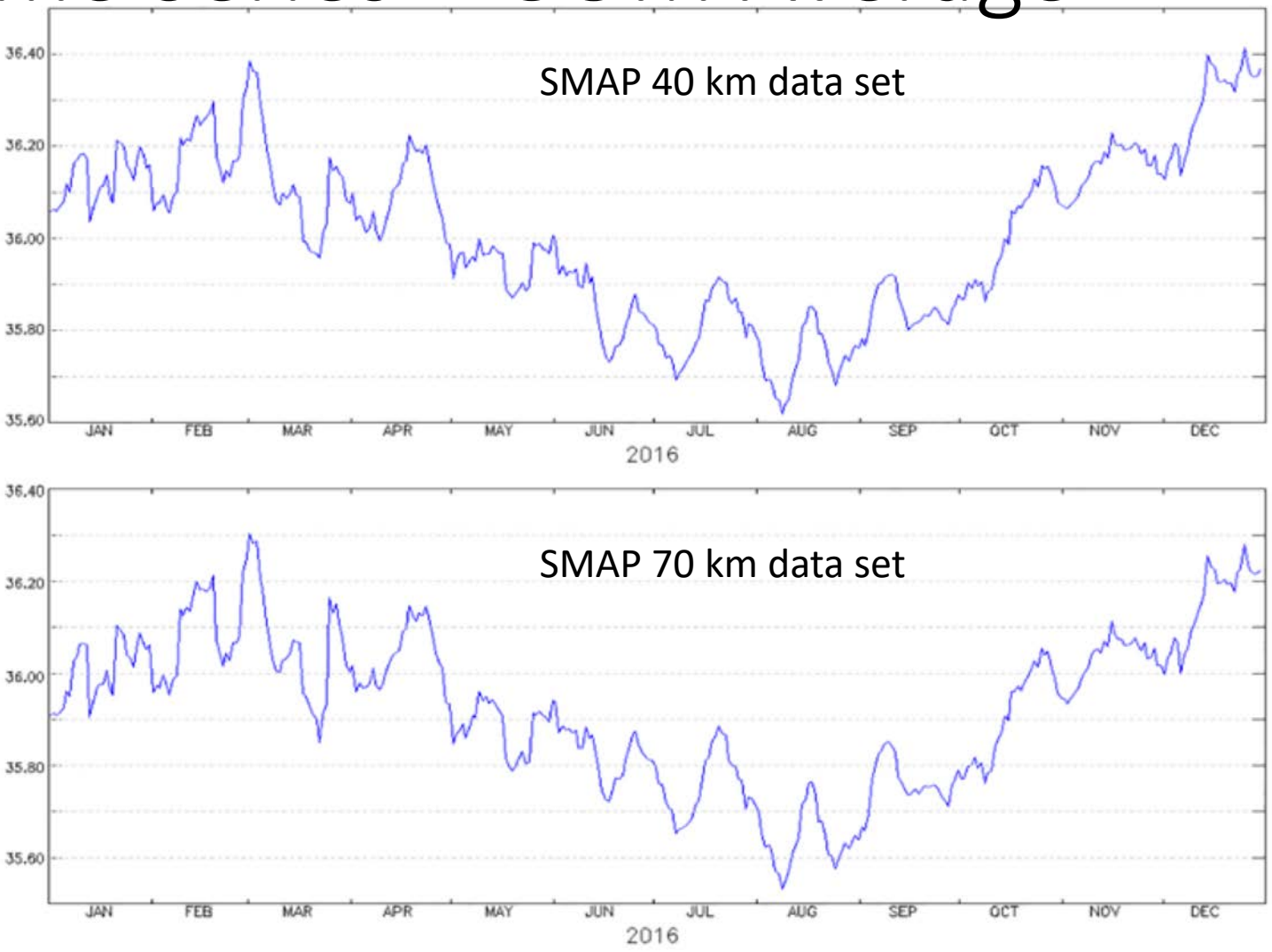
Click Update Plot to see your results.



Average GOM salinity Jan – Dec 2016.

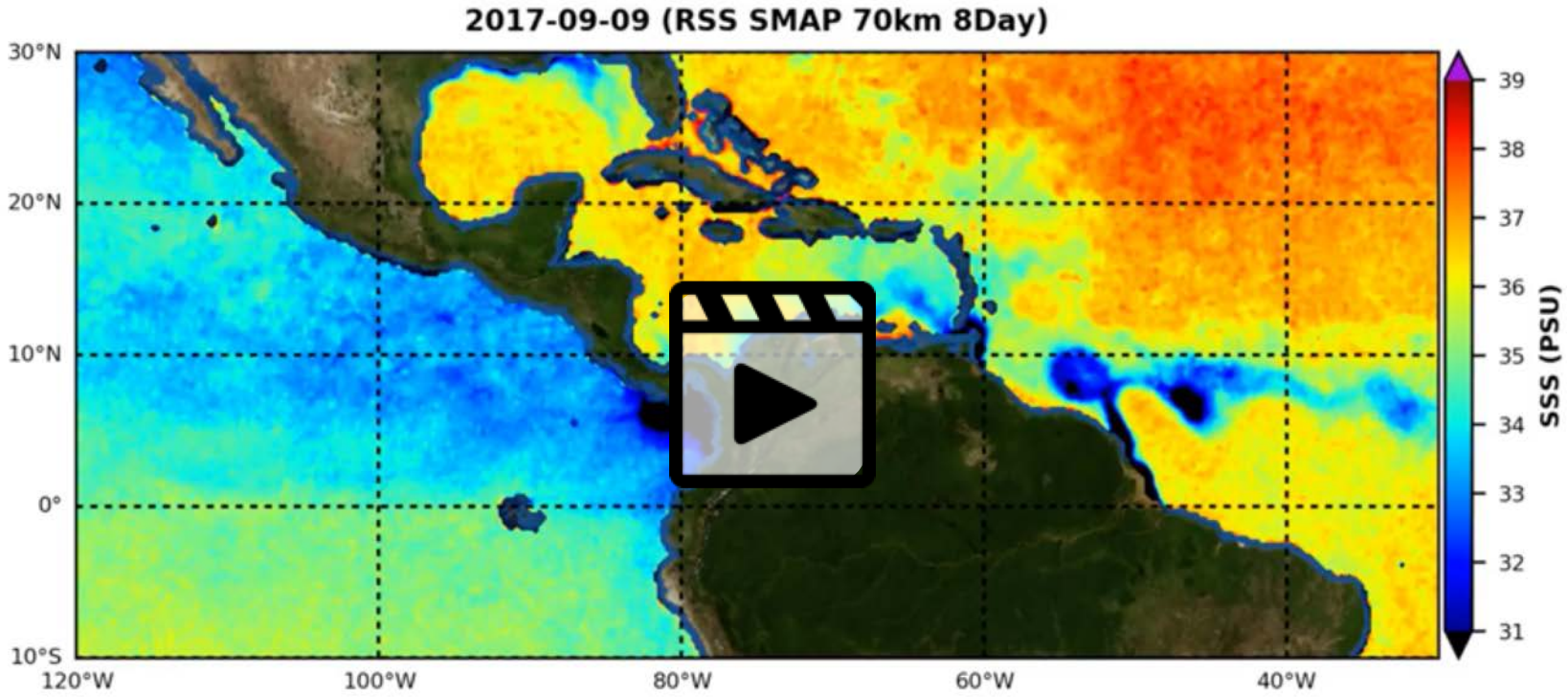
(1) You can also compare with other data using the “Compare 2” option.

Time Series – GOM Average



SMAP 70 km Data – Amazon

- SMAP data have also been used to create a time-series visualization of the Amazon Plume



Recap of LAS Instructions

- http://podaac.jpl.nasa.gov => Go to to drop-down menu under ”Data Access”. Click on “LAS (L3 subsetting)”
- Go to ”Data Set” (RSS 40-km & 70-km and JPL 60-km SMAP Salinity data sets available at 8-day running mean and monthly resolutions)
- Click on the desired data set
- To subset, put in coordinates to define desired box
  - Underneath the map on the left hand side of LAS interface
- Select time range
- Select desired output (lat-lon map; time series; Hovmoller diagrams)
- At the top right corner, clicking on “Save As…” gives you option to save output as: NetCDF; ASCII; CSV; arcGrid.
- Other tools include Animate, Correlation Viewer, etc.

Thank you!

Don't pass the salt!

https://salinity.oceansciences.org

https://podaac.jpl.nasa.gov/SeaSurfaceSalinity

http://www.remss.com/missions/smap/salinity/