

Surface Currents of Puerto Rico and USVI

**USVI Coastal Ocean
Modelling Workshop
May 2, 2024**

Dr. Hugh Roarty



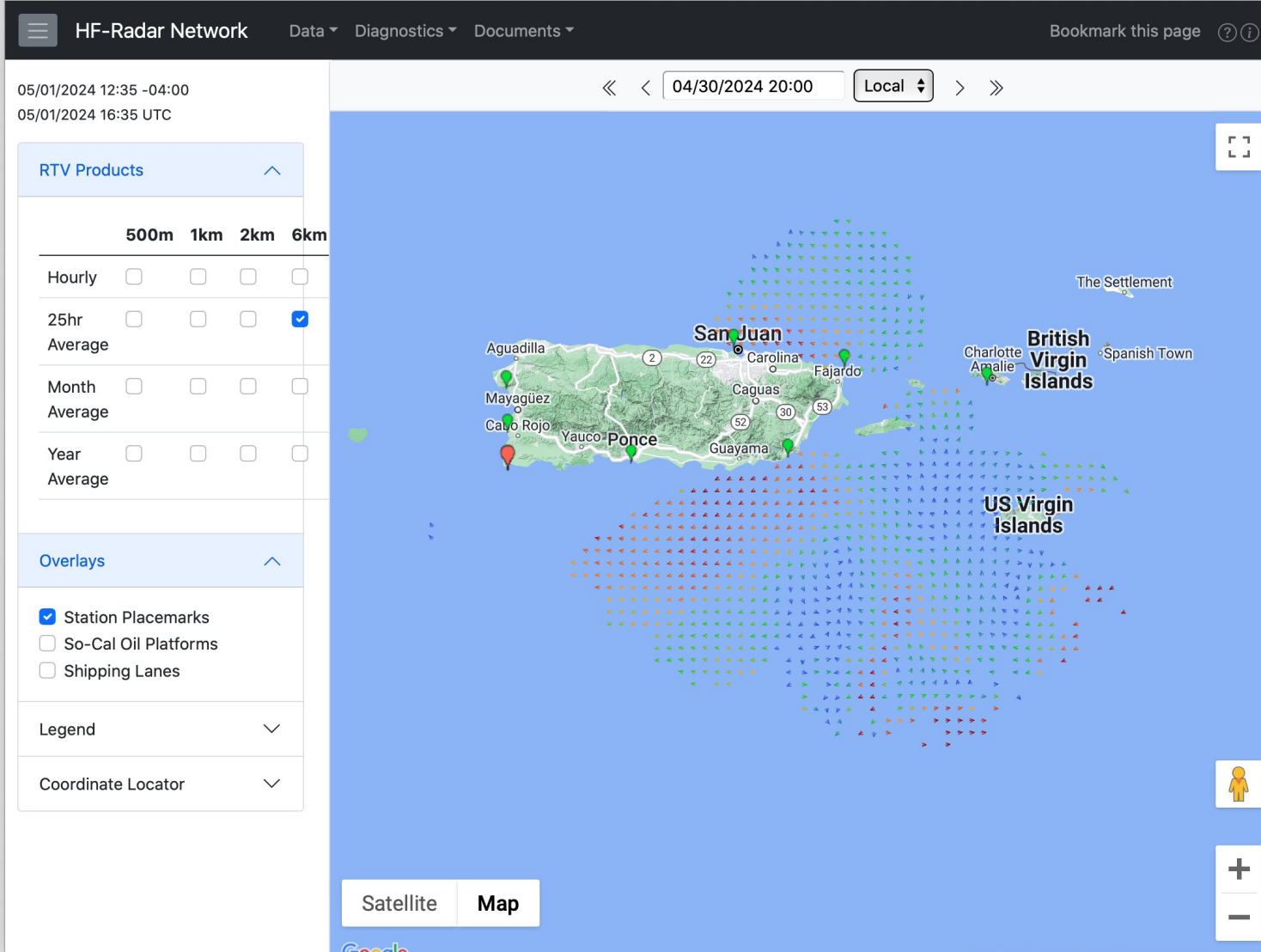
Rutgers UPR/CARICOOS Collaboration



<https://cordc.ucsd.edu/projects/hfrnet/>

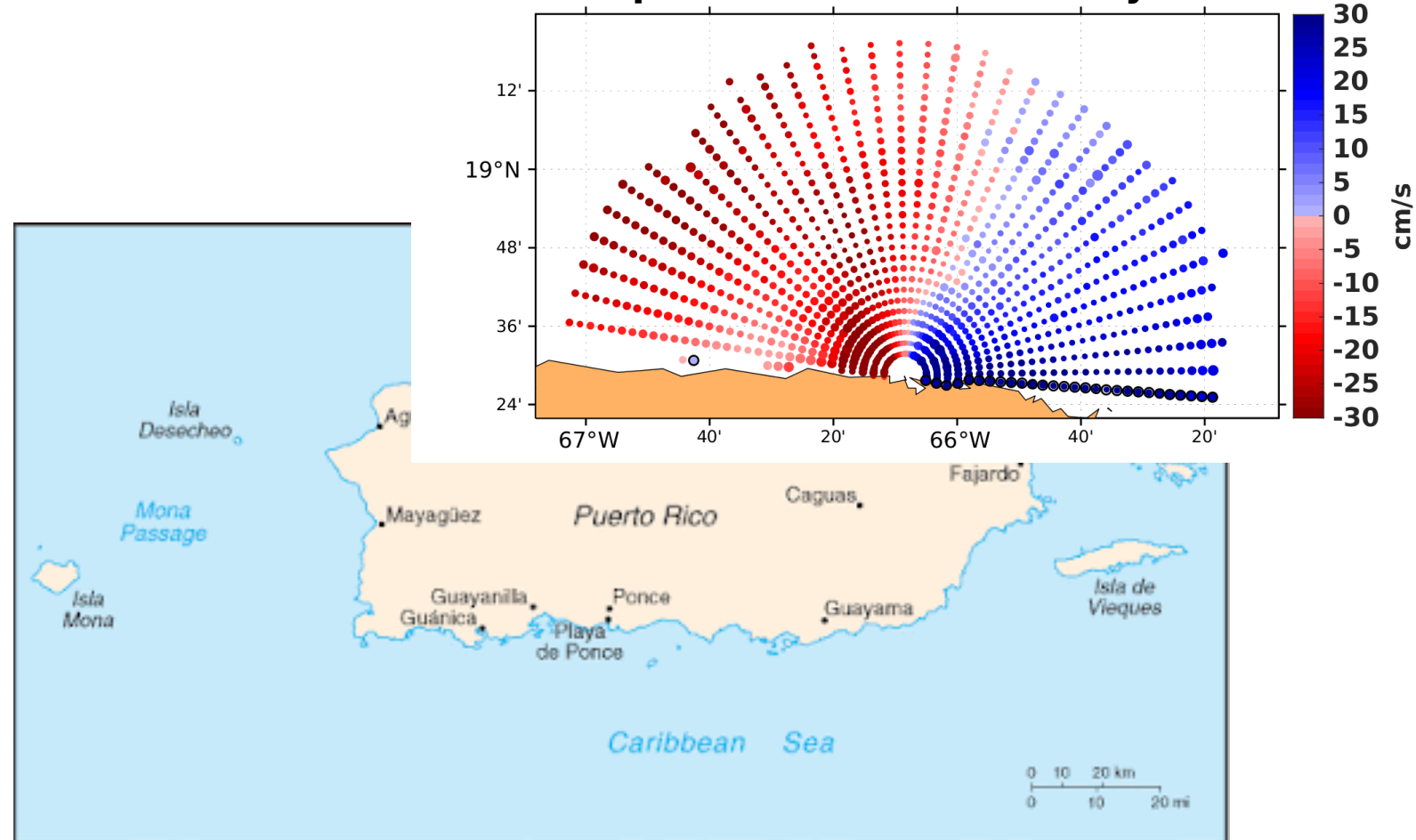
Surface Current Measurements

- 8 HF radar stations in Puerto Rico and USVI
- 5 on west and south shore have been running since 2009
- 2 on north shore and 1 in USVI came online recently



Radar Diagnostics

SBAY RDLi Avg Rad Vel
25 of 25 possible hourly maps
From 30-Apr-2024 05:00 to 01-May-2024 05:00



The Sargassum Tracker – Since June 2019

hroarty @ marine / [animations](#) --> view animations

[View Animations](#)

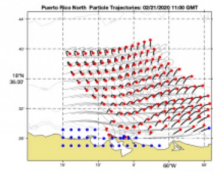
[Generate Animations](#)

[Cron Job Generator](#)

[Help](#)

Current Animations

PR_North - Puerto Rico North

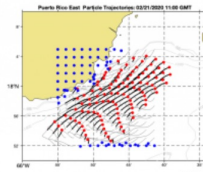


Puerto Rico North 24 hour surface current forecast

Generated February 21 2020 08:00:04.

[View Animation](#)

PR_East - Puerto Rico East

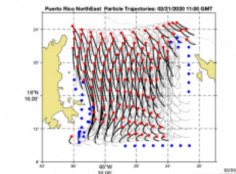


Puerto Rico East 24 hour surface current forecast

Generated February 21 2020 08:00:06.

[View Animation](#)

PR_NorthEast - Puerto Rico NorthEast

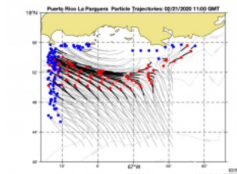


Puerto Rico East 24 hour surface current forecast

Generated February 21 2020 08:00:08.

[View Animation](#)

PR_LaPar - Puerto Rico LaParguera

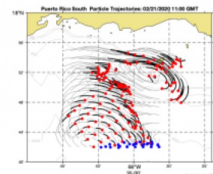


Puerto Rico East 24 hour surface current forecast

Generated February 21 2020 08:00:11.

[View Animation](#)

PR_South - Puerto Rico South

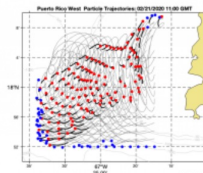


Puerto Rico South 24 hour surface current forecast

Generated February 21 2020 08:00:12.

[View Animation](#)

PR_West - Puerto Rico West

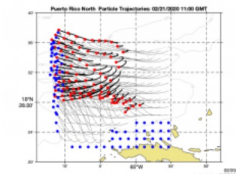


Puerto Rico West 24 hour surface current forecast

Generated February 21 2020 08:00:15.

[View Animation](#)

VI_North - Virgin Islands North

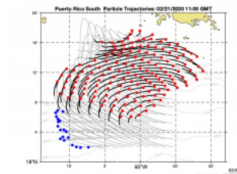


Virgin Islands North 24 hour surface current forecast

Generated February 21 2020 08:00:17.

[View Animation](#)

VI_South - Virgin Islands South



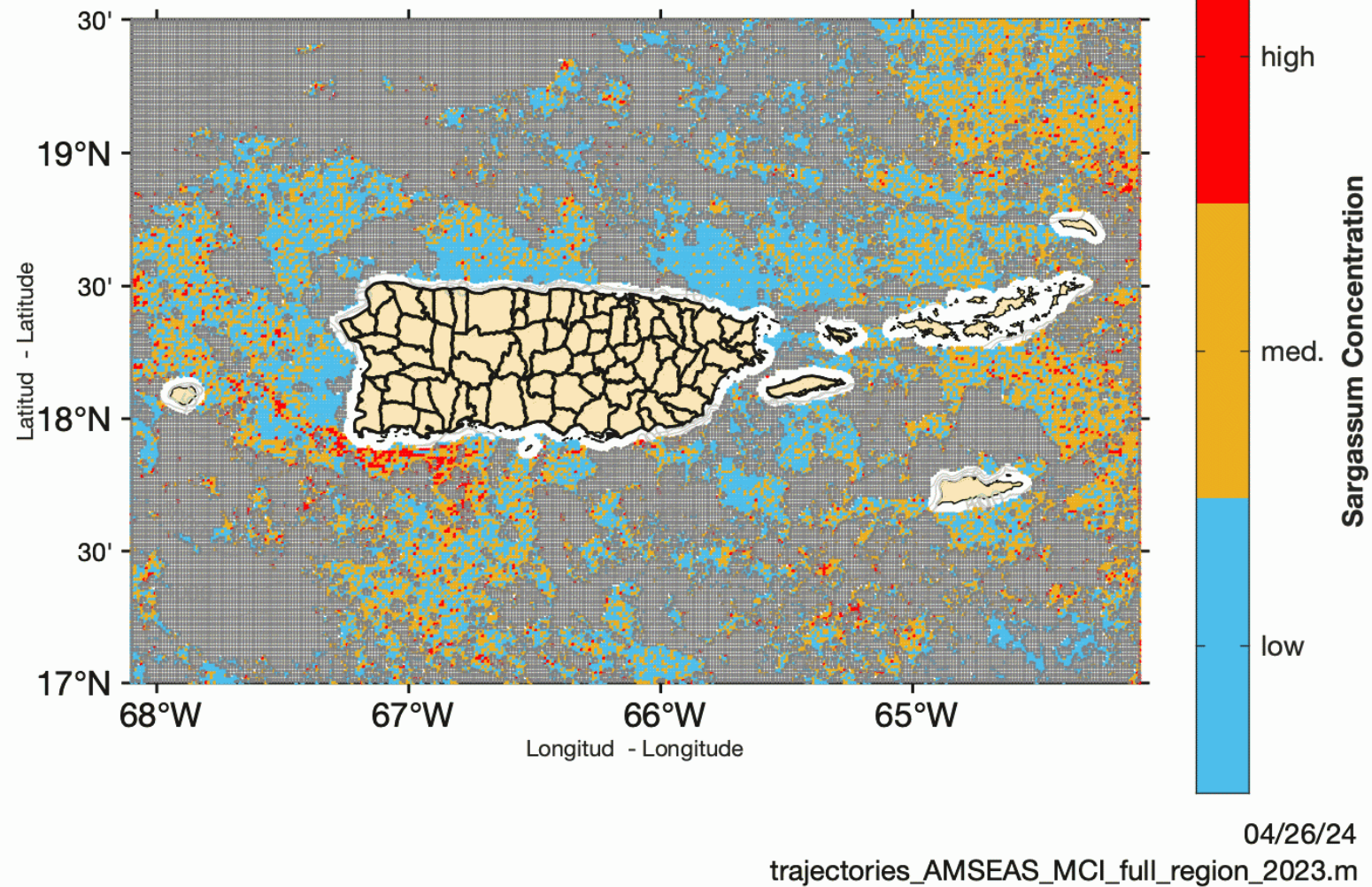
Virgin Islands South 24 hour surface current forecast

Generated February 21 2020 08:00:18.

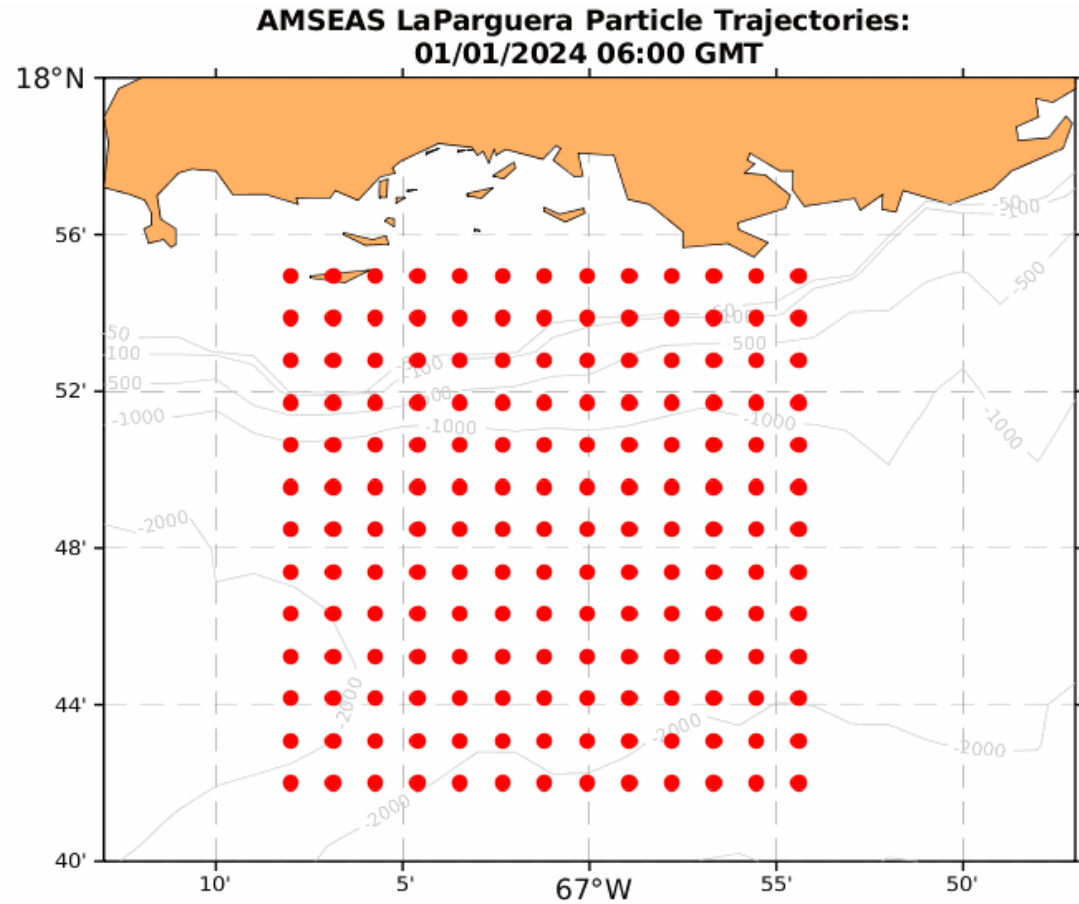
[View Animation](#)

<https://marine.rutgers.edu/~hroarty/caricoos/animations/>

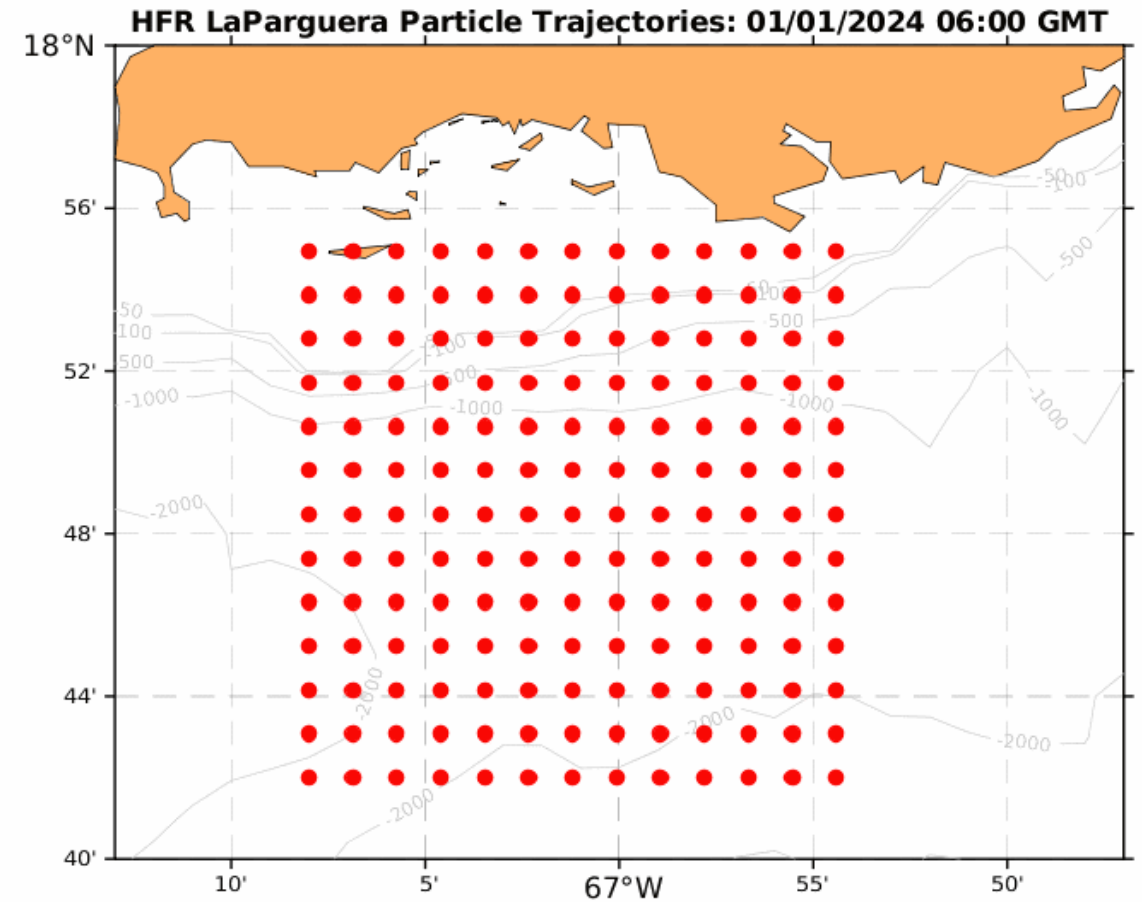
CARICOOS SARGASSUM FORECAST
PUERTO RICO and US VIRGIN ISLANDS
CARICOOS Particle Trajectories: 04/26/2024 02:00 local



AMSEAS Model

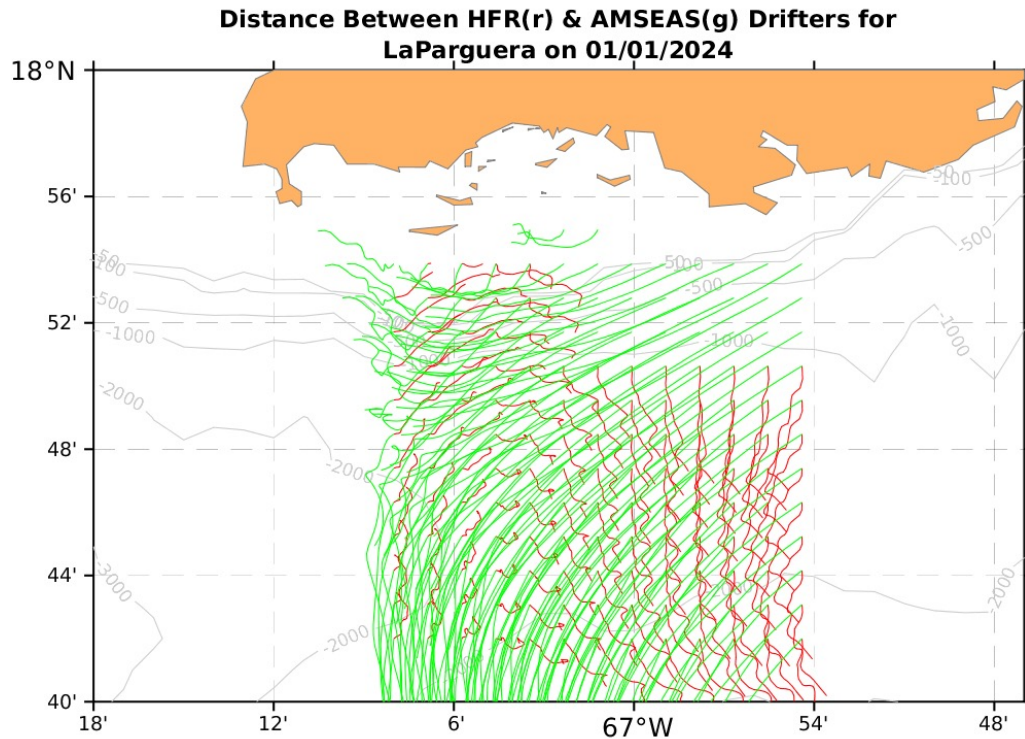


HFR Measurements



01/03/24 trajectories_HFR_files\server.m

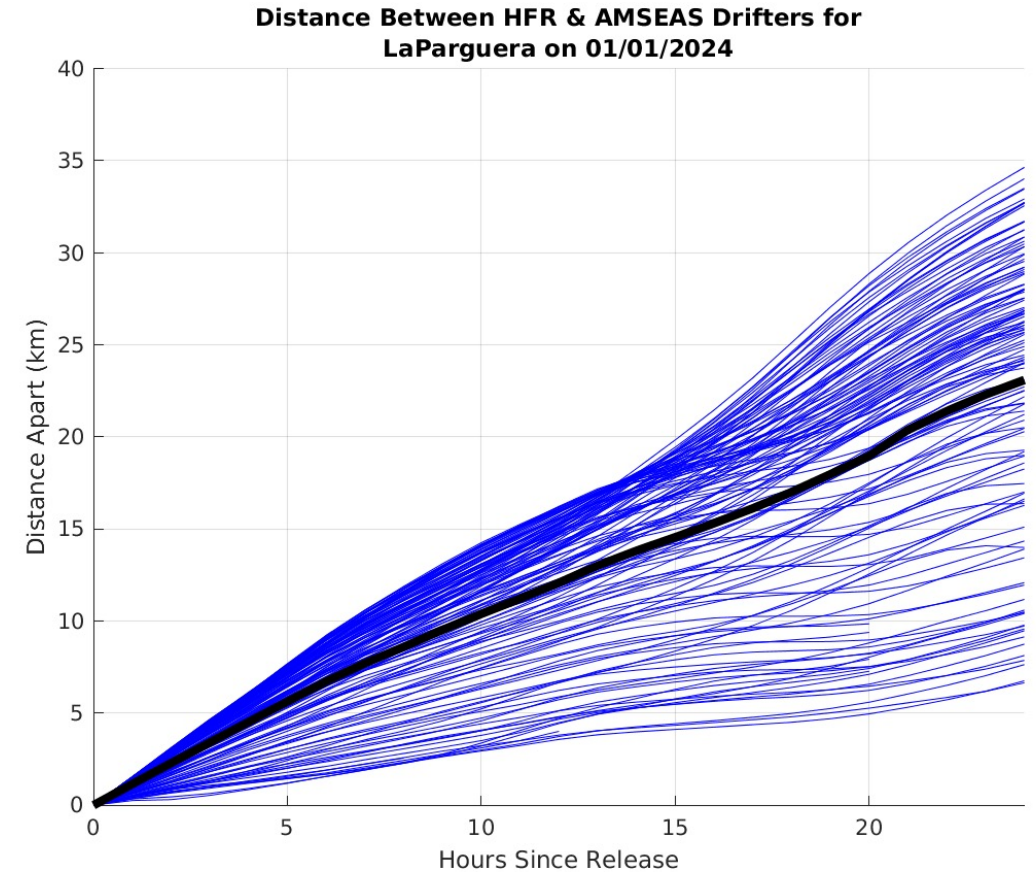
AMSEAS Surface Drifter Error



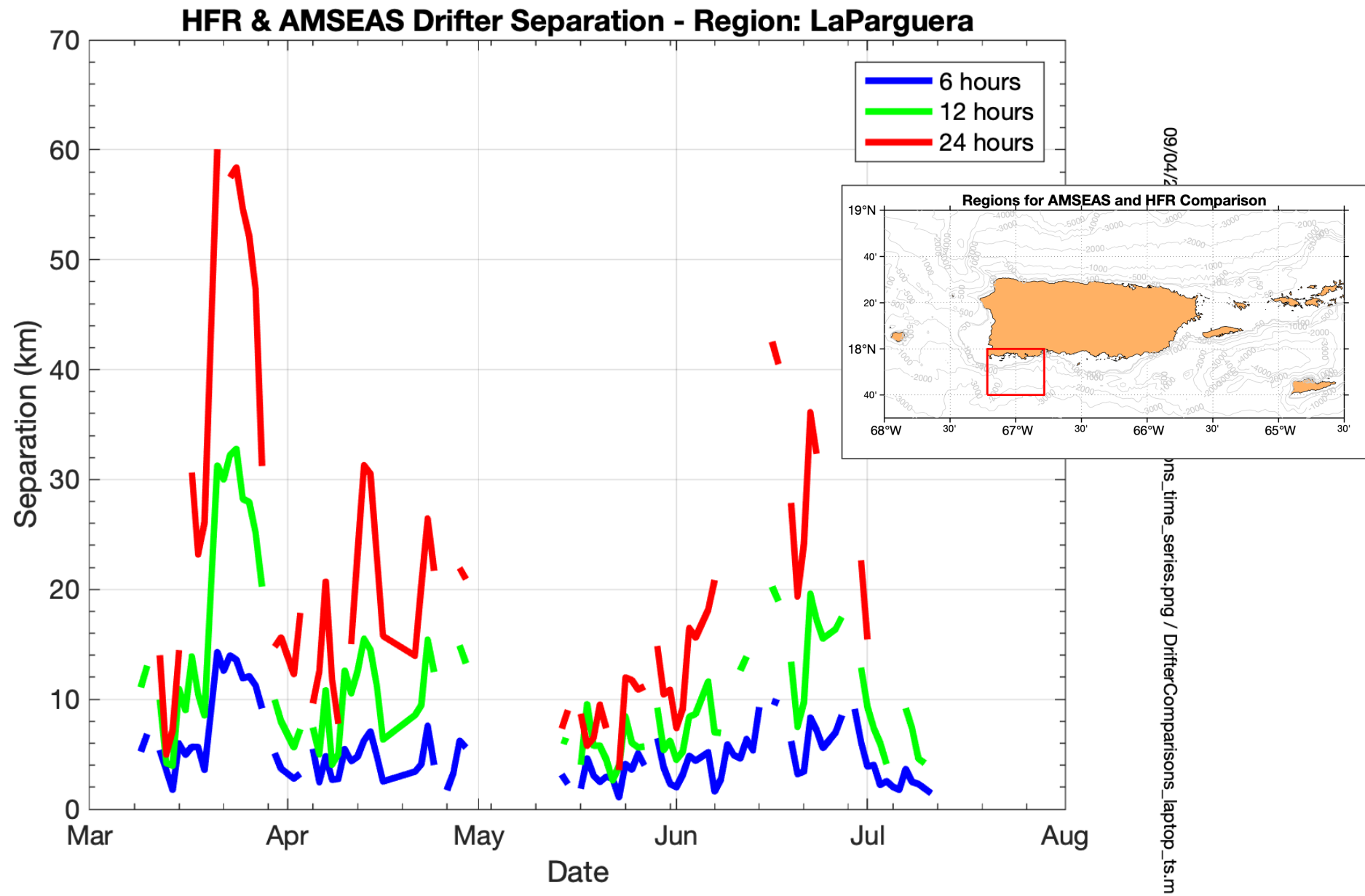
AMSEAS

HFR

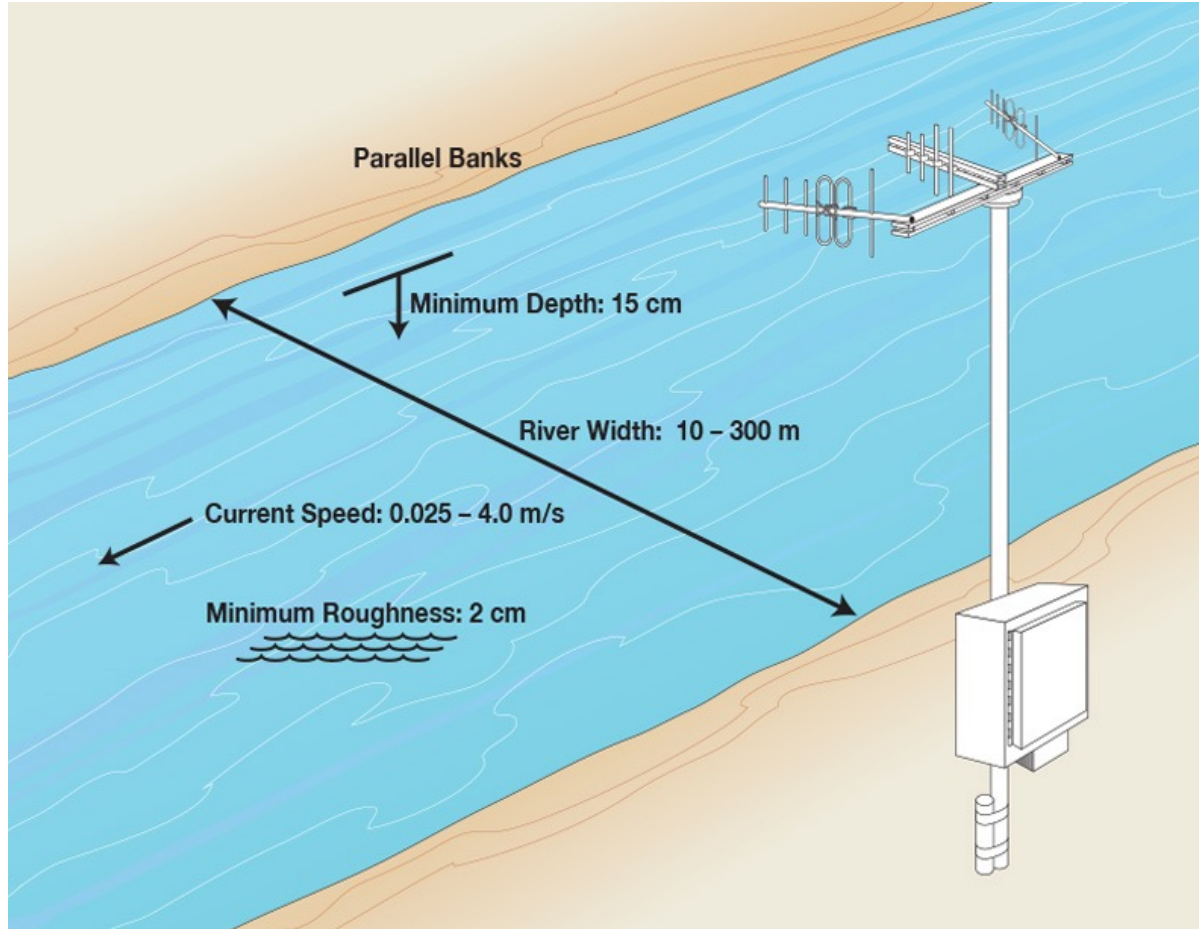
01/03/24 DrifterComparison_files\server.m



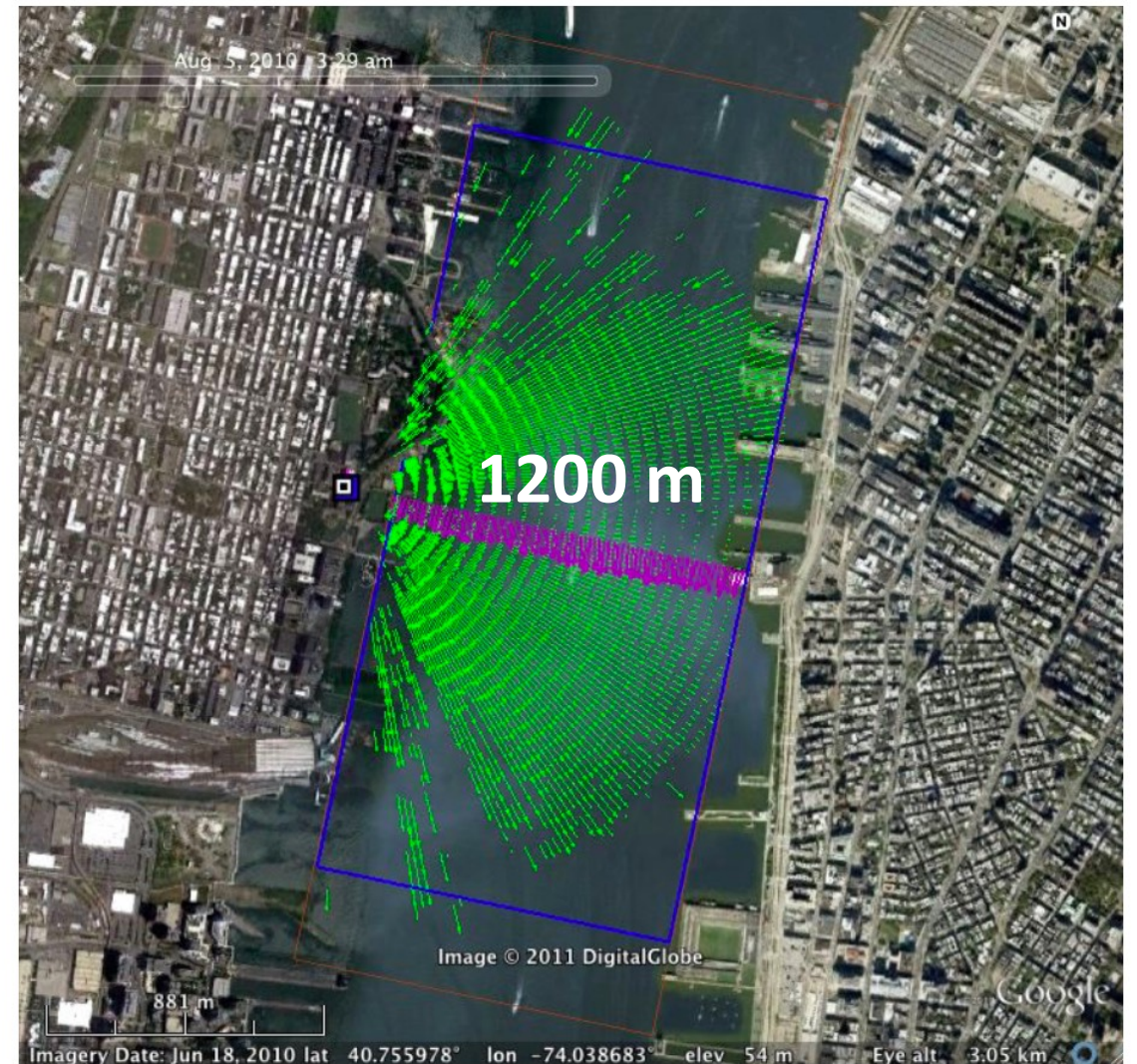
01/03/24 DrifterComparison_files\server.m



CODAR RiverSonde



Deployment on Hudson River

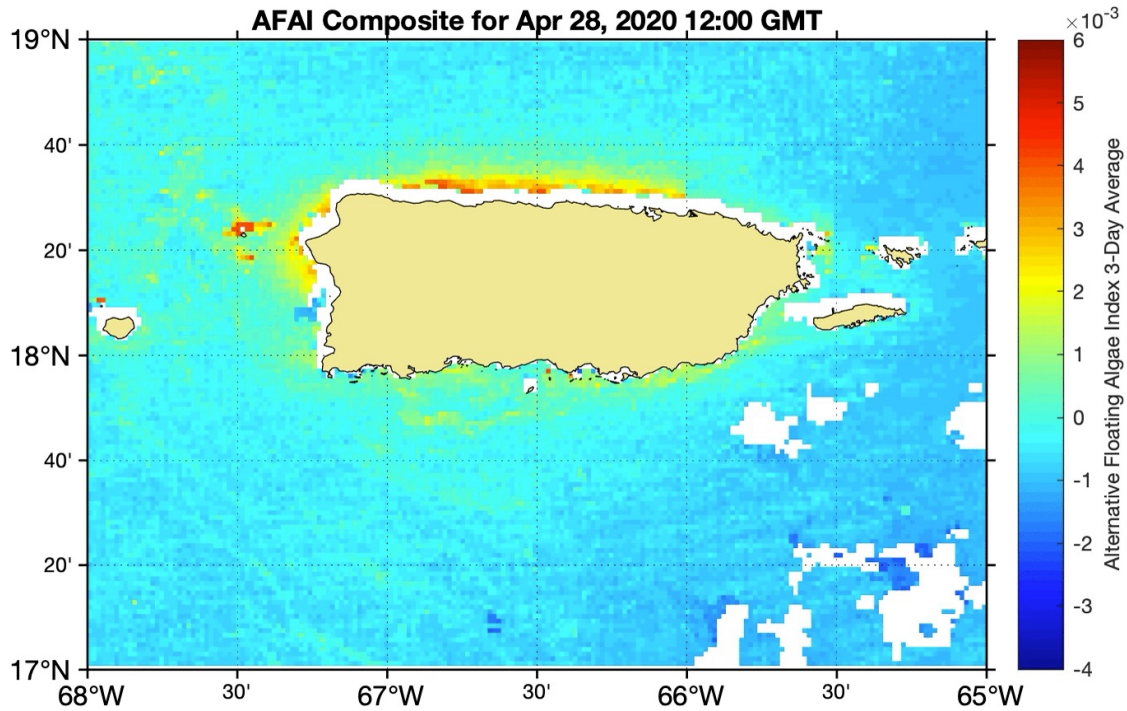


THANKS

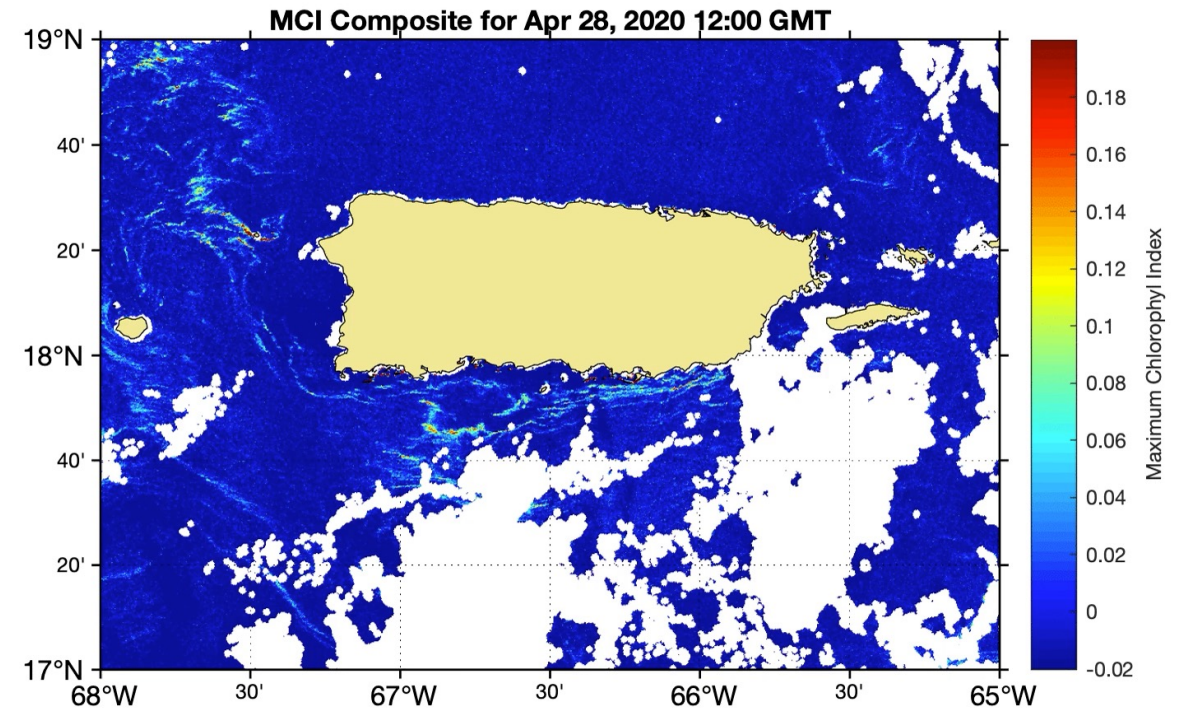
USVI Coastal Ocean Modelling Workshop May 2, 2024



AFAI vs MCI



AFAI_CARICOOS_20200428_1200.png / AFAI_erdap_plot.m



MCI_CARICOOS_20200428_1200.png / MCI_erdap_plot.m