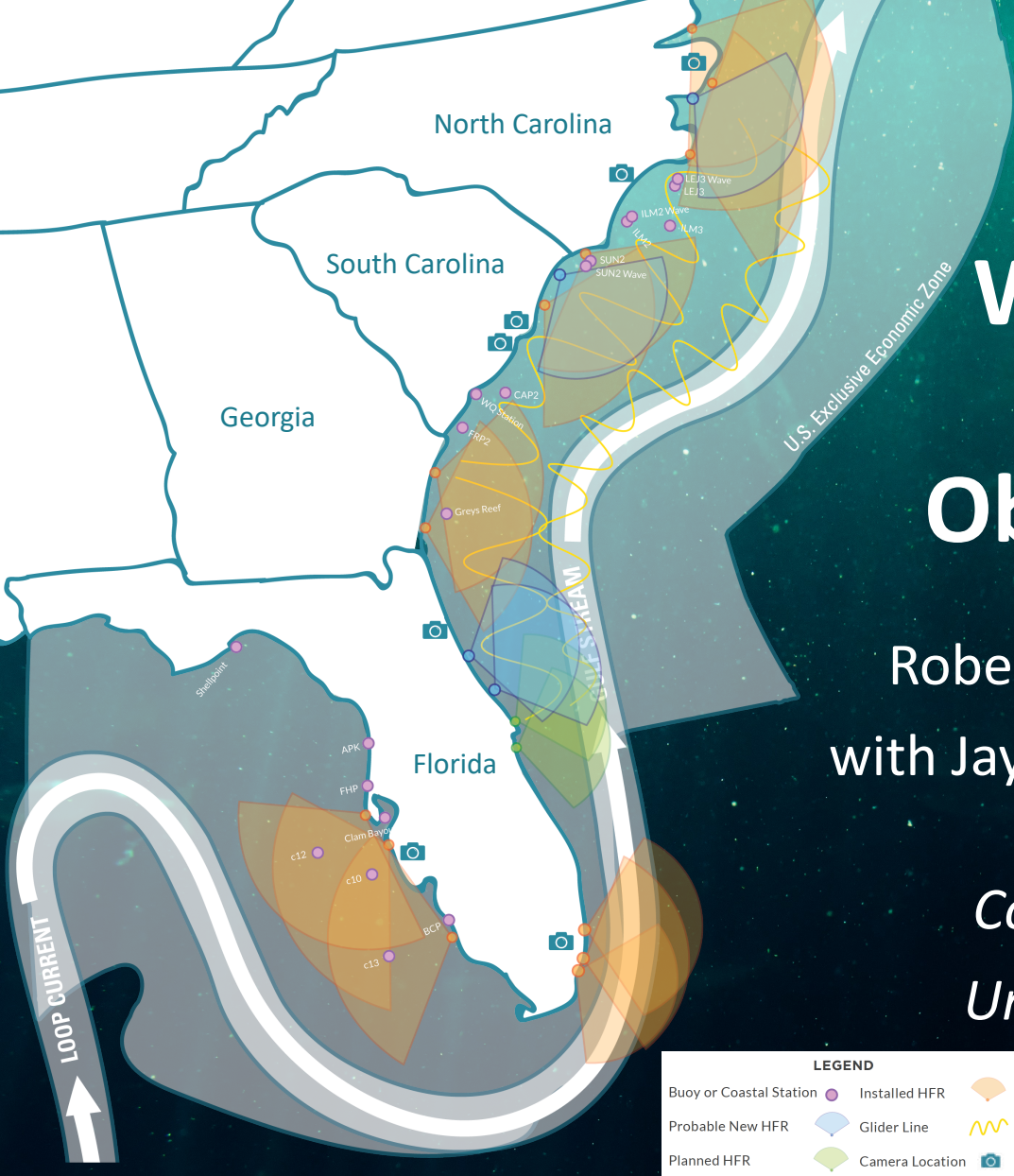


West Florida Shelf Coordinated Observing-Modeling

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Objective and Approach

Objectives

- Describe & understand WFS water properties through coordinated observing and modeling.
- Sustain science motivated and defensible moorings, HF-radar and gliders.
- Model the WFS by downscaling from the deep-ocean across the shelf and into the estuaries supported by observations for model veracity testing.

SECOORA Focus Areas 2018/2019

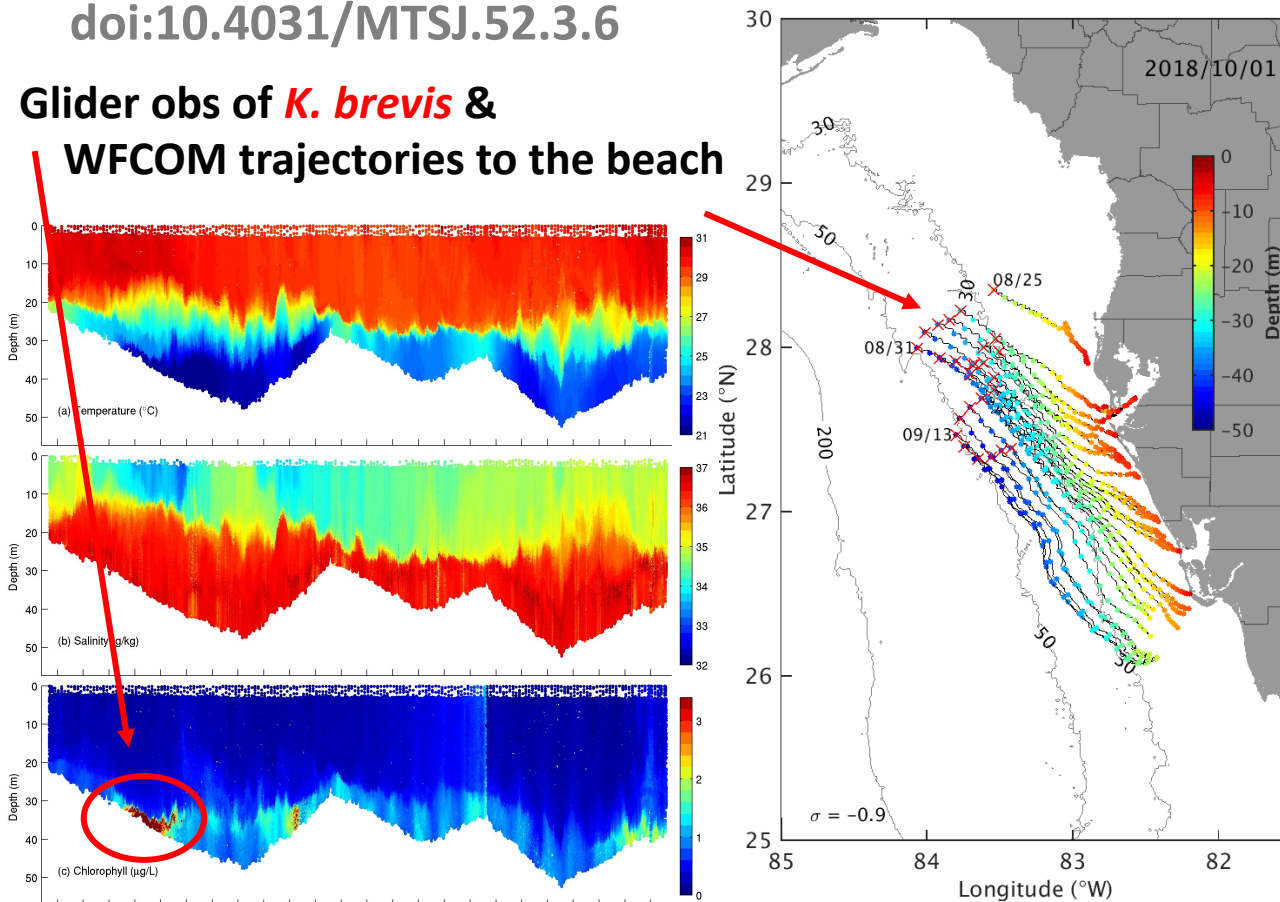
- *K. brevis* Red tide
- Coastal hazards
- Living Marine resources
- Stakeholders
 - General Public
 - FWC-FWRI
 - USGS (ocean acidification)
 - NASEM (UGOS)
 - Pinellas, Hillsborough and other Co.
 - TBEP
 - FWEAUC
 - Tierra Verde Comm. Assoc.
 - NOAA Fisheries, Beaufort, NC
 - Media (print, TV, radio)

Accomplishments

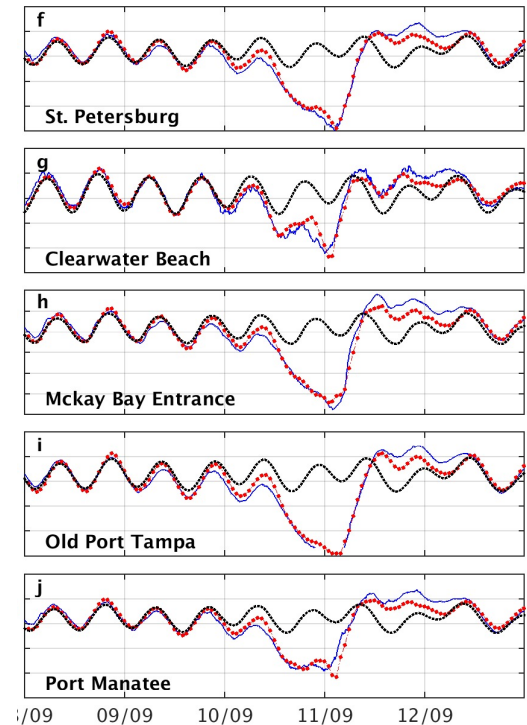
Our two most important outreach papers: red tide and storm surge

- Weisberg, R.H., Y. Liu, C. Lembke, C. Hu, K. Hubbard, M. Garratt (2019), The Coastal Ocean Circulation Influence on the 2018 West Florida Shelf *K. brevis* Red Tide Bloom, *J. Geophys. Res.: Oceans*, 124, doi:10.1029/2018JC014887.
- Chen, J., Weisberg, R.H., Liu, Y., & Zheng, L. (2018), The Tampa Bay Coastal Ocean Circulation Model performance for Hurricane Irma, *MTS Journal*, 52(3), 33-42, doi:10.4031/MTSJ.52.3.6

Glider obs of *K. brevis* & WFCOM trajectories to the beach



TBCOM Simulation of Tampa Bay response to H. IRMA



Impacts



- **Stakeholder Impacts.**
 - West Florida county officials and citizens had advance warning of red tide bloom movement. Pinellas Co. used this information to position dead fish clean-up apparatus.
 - Invited public lectures at several west Florida venues facilitated public awareness.
 - We are on the cusp of contributing to both ocean acidification and sediment transport studies, two new topics initiated this year.
- **What difference has our project made?**
 - Distinguishes myth from fact.
 - Provides boating, fishing and beach-going information.
 - Assists communities.
- **What would be lost if this project was not funded?**
 - The only WFS real time in-water data providing unique perspectives on WFS ecology.
 - High frequency winds facilitated dissipation research by NOAA hurricane modelers.
- **Who is using your data or information?**
 - The public, plus print, radio and TV media.
 - County emergency and environmental managers.
 - Criminal prosecutors and defenders.

