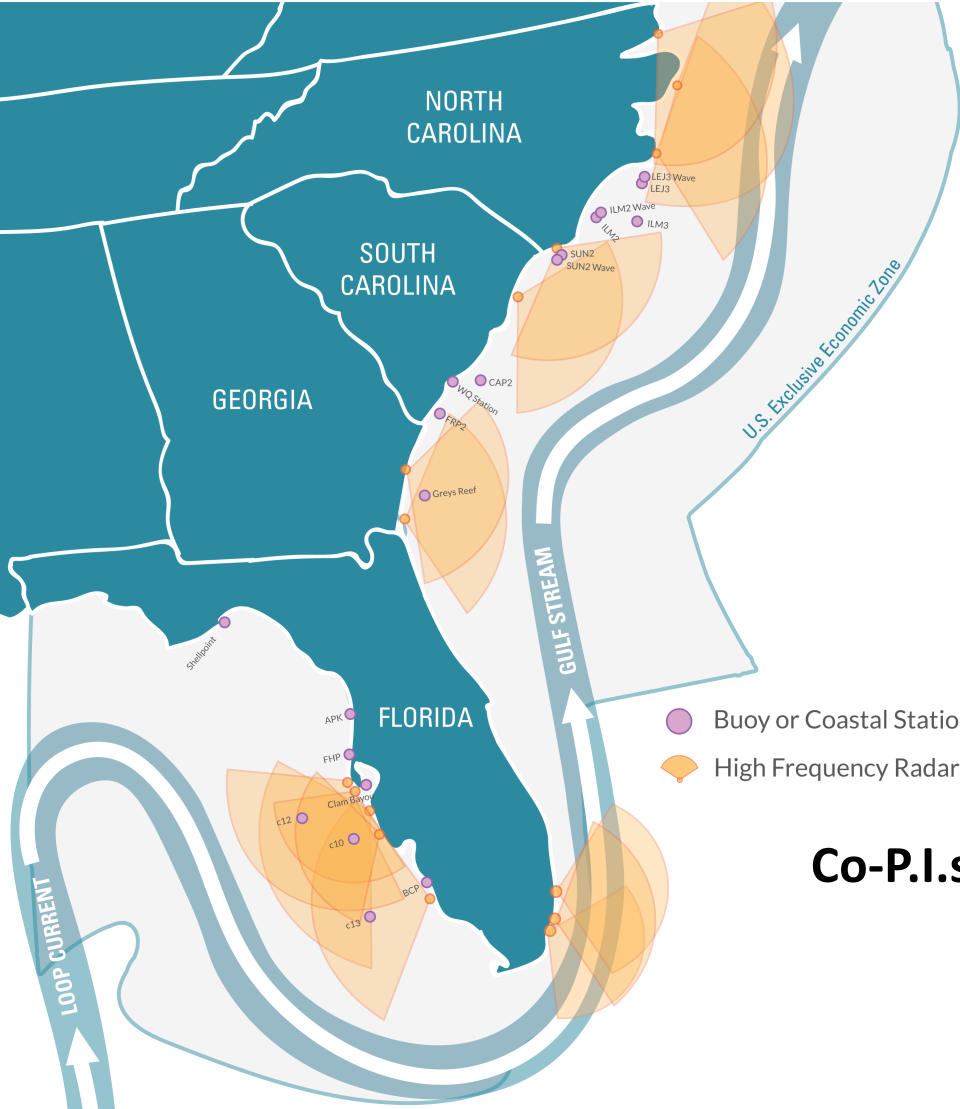


PI Update

USF Observations by HF-Radar (HFR)

**Co-P.I.s: Robert H. Weisberg and Clifford R. Merz
with
Y. Liu, J. Donovan**

*College of Marine Science
University of South Florida (USF)*



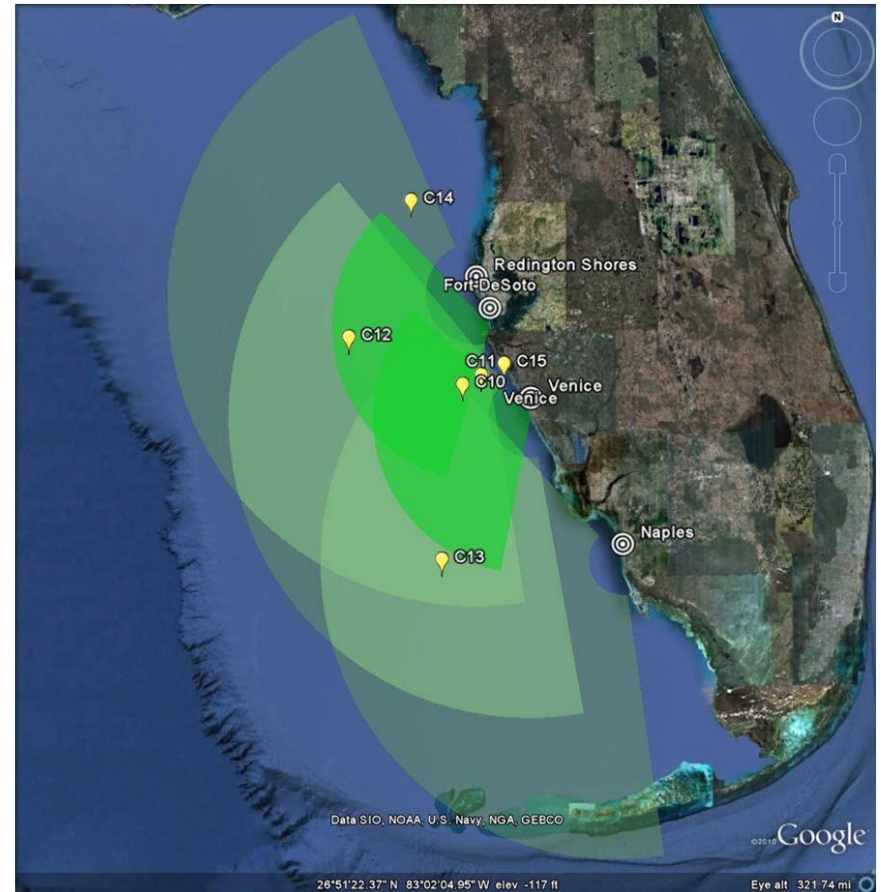
Objective and Approach

Objective

- Maintain a coordinated program of coastal ocean observations and models, including observations made with High Frequency Radars (HFR).

Approach

- Operate three (3) US IOOS/SECOORA identified priority CODAR system HFR sites (Naples, Venice and Redington Shores), along with two (2) WERA HFR sites (Venice and Ft. DeSoto Park) overlooking our instrumented mooring array.



Accomplishments

- Continued to operate and maintain three (3) US IOOS/SECOORA identified priority CODAR system HFR sites, along with two (2) WERA HFR sites overlooking our instrumented mooring array.
- Hurricane Irma passed directly over the entire USF HF Radar array on September 10/11, 2017. Although the 5 sites suffered no direct storm related damage, several sites experienced reductions in real-time up-times because of power outages. Specifically: Redington Shores CODAR – down approximately 2.5 days; Ft DeSoto WERA – down approximately 7 days; and Naples CODAR – approximately 10.5 days.
- The average Post-Irma CORDC up-time (7.5 month) for HFR data received from Oct 1, 2017 to May 15, 2018 by all five USF HFR sites was >93.5%.
- During Hurricane Irma, the Venice CODAR and WERA sites did not lose power and operated continuously throughout the storm's passage without any data loss; providing a valuable and unique data record incorporated in: Liu, Y., R.H. Weisberg, C.R. Merz, J. Law, L. Zheng, and J. Chen: West Florida Shelf response to hurricane Irma, Ocean Sciences Meeting, Portland Oregon, Feb 2018.
- Liu Y., Merz C.R., Weisberg R.H., O'Loughlin B.K., Subramanian V. (2018) Data Return Aspects of CODAR and WERA High-Frequency Radars in Mapping Currents. Chapter 11 In: Venkatesan R., Tandon A., D'Asaro E., Atmanand M. (eds) Observing the Oceans in Real Time. Springer Oceanography. Springer, Cham, 333 pp. DOI: 10.1007/978-3-319-66493-4. On-line publish date: November 20, 2017.

Impact

- We continue to work with other SECOORA region HFR operators to standardize operations, data delivery, display and dissemination, maintain data integrity and provenance, provide accuracy estimates of surface currents and develop common data products for stakeholders.

- These essentially real-time data are:

Displayed to the general public via the internet from our COMPS web page (http://ocgweb.marine.usf.edu/hfradar/hfr_index.html),

Sent to SECOORA, NOAA, and the IOOS National HFR Network (HFRNet) (<http://cordc.ucsd.edu/projects/mapping/>)

- Where it is ultimately integrated into ocean models for various uses such as:
Improved boater safety,
Supporting U.S Coast Guard Search and Rescue (SAR) operations,
Supporting oil spill tracking within the Gulf of Mexico.

