SECOORA Regional Glider Observatory

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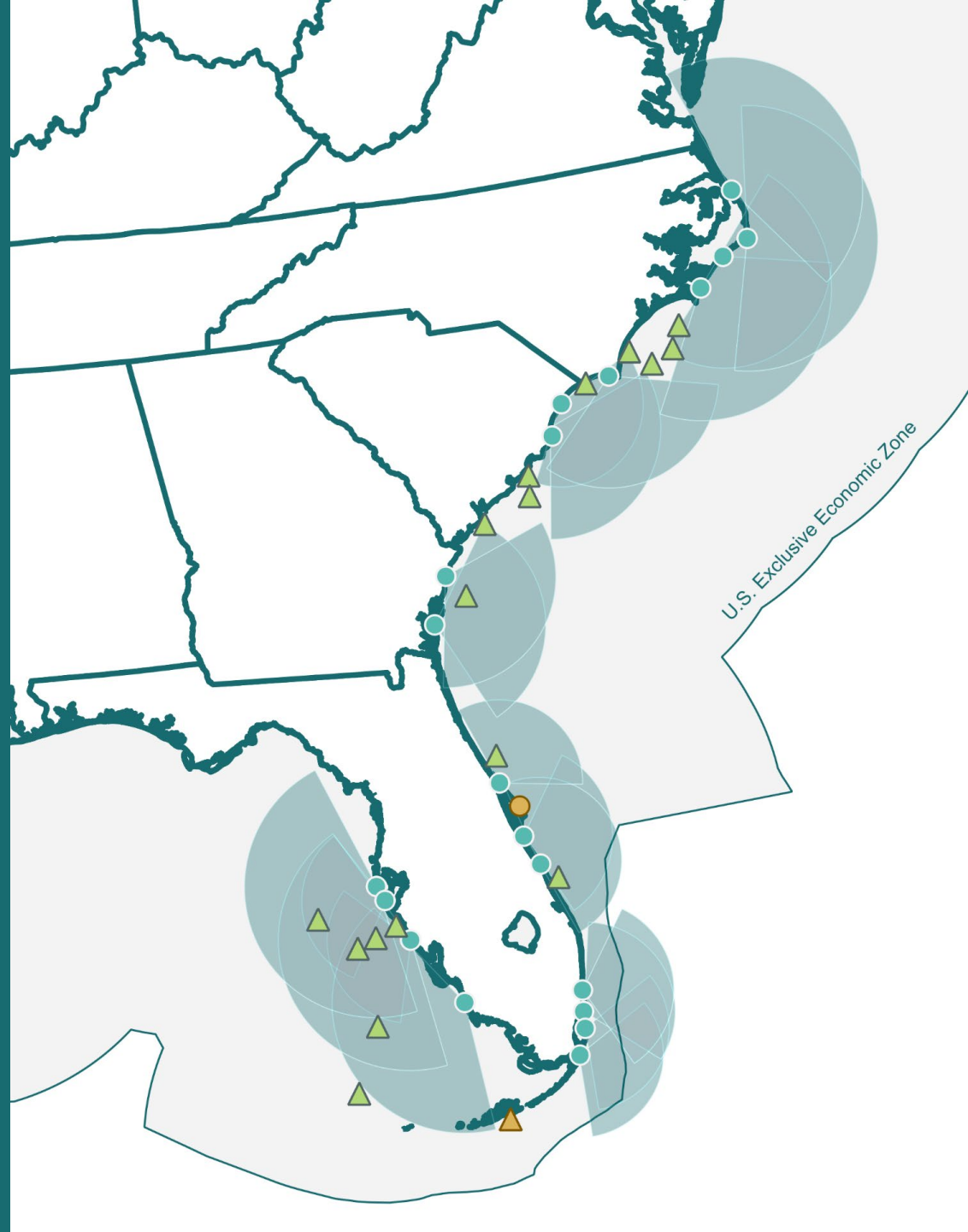


Overview

Observatory-funded missions

- 6 missions, 3 SECOORA observatory, 3 hurricane gliders
- 177 glider-days

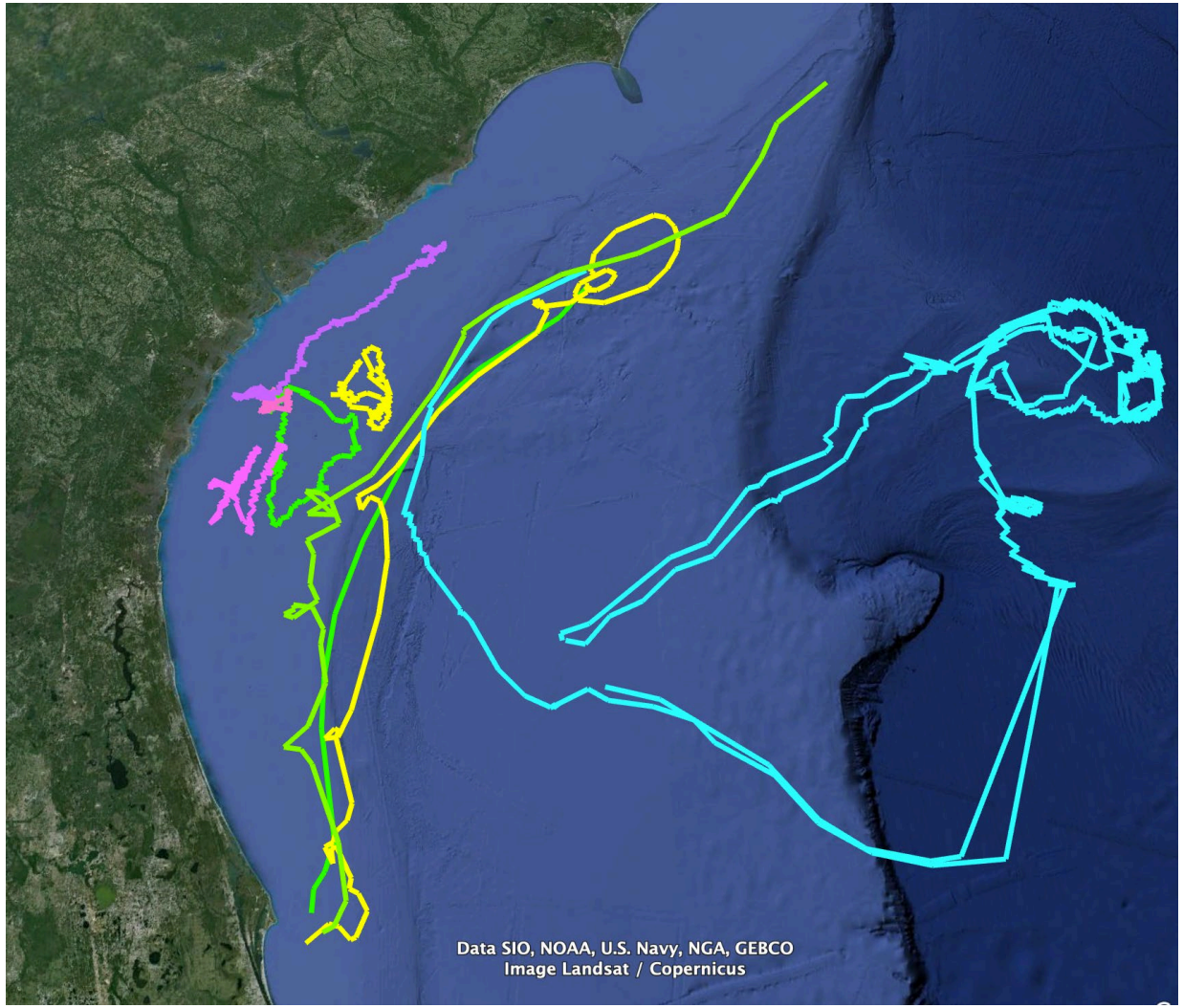
Navy glider missions

- 300 glider-days
- Drama-filled recoveries!

Hurricane gliders, Saildrone collaboration

Right whale monitoring

Expanding autonomy of piloting, planning

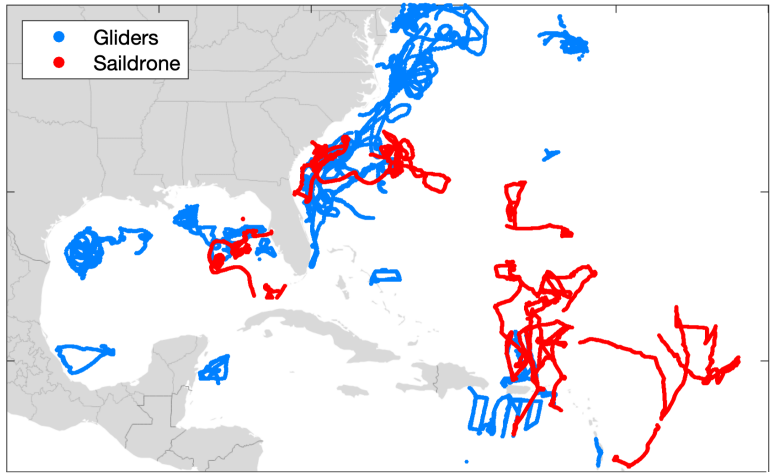


Hurricane gliders, Saildrone collaboration

Obtained external supplemental funding for new glider, 3 hurricane missions per year in 2024, 2025 seasons

Saildrone partnership with AOML/PMEL: added Saildrone coverage to WFS, provide mission support to piloting team

New 2023-2025 UxS OAR/OMAO transition funding to develop colocation and sampling strategy for Saildrones+glider pairs

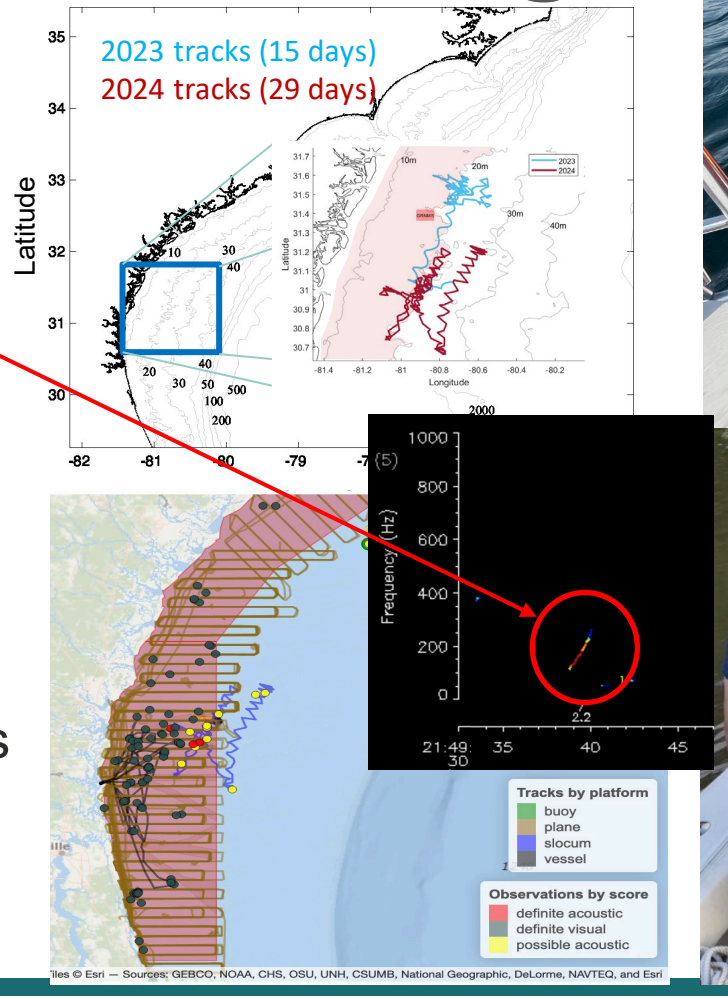


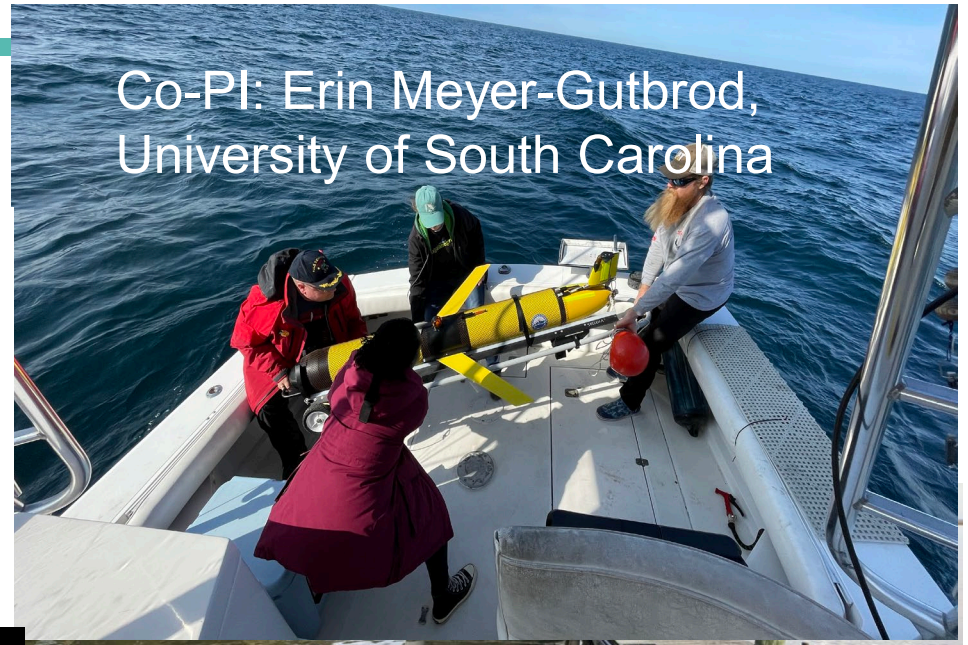
Weekly meetings, briefings to EMC/ NHC evaluating model performance

Briefed NOAA leadership (lab, line office, program heads)

Right whale monitoring

- Goal: detect RWs near the ports of Savannah, Jacksonville, Charleston
- First EVER confirmed real-time acoustic detection of RWs south of the VA/NC border 1/20/24
- Acoustic coverage for days w/o aerial coverage
- Pushed shallow limit of operation (10-11m)
- Impacts: Coordinated efforts with FL/GA early warning system, soon will generate NOAA notice to mariners



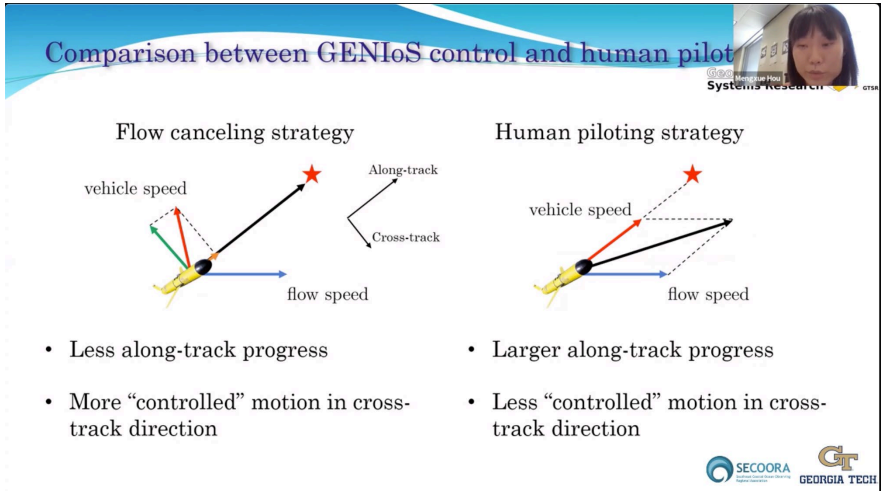


TIDES
A Force for Social Good

Funded through Tides Foundation, SECOORA

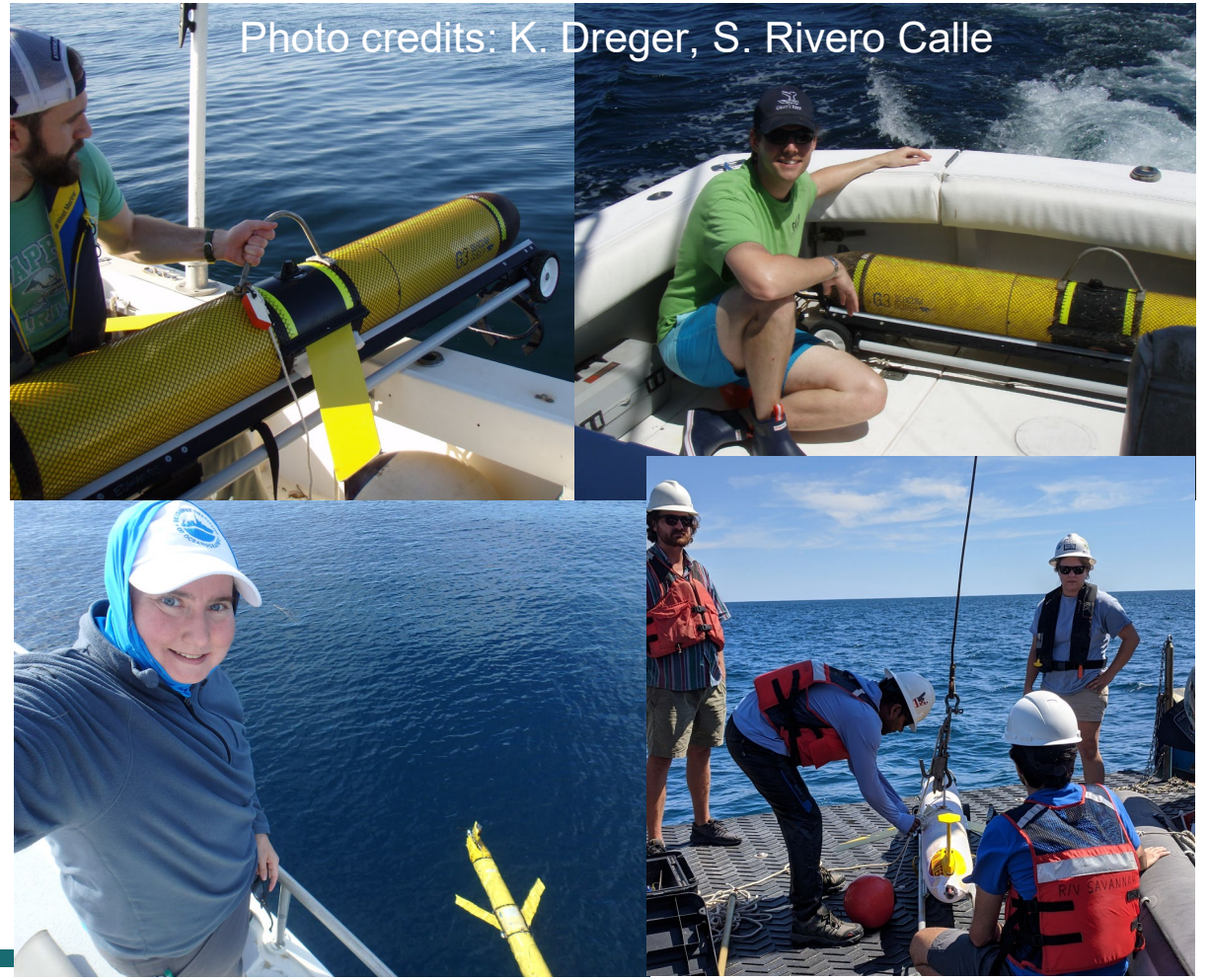
Accomplishments

- Met/exceeded all requirements for deployments, glider-days
- New G3S glider: unit_1091, back-to-back missions this hurricane season
- Continued success with external funding (>$1.1M to date, $650k pending)
- Team experience skyrocketing through cross-training, tech talks, webinars participation in UG2 (K. Dreger on steering committee!)
- Advances in autonomy: operational testing of anomaly detection algorithm implemented on two SFMC servers, developed new algorithm for predicting spatio-temporal variability
- New USF Brewery/BrewSkIO software tool for integrated piloting/data viz



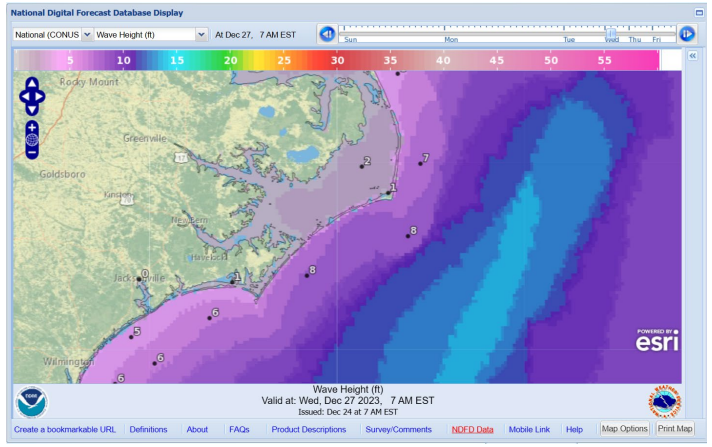
Accomplishments, continued

- Hurricane Gliders: data assimilated into NOAA RTOFS model
- Saildrone coordination, cross-calibrations with NDBC, CDIP buoys, OMAO vessel operations (11 presentations, 2 publications)
- Two student papers/presentations at MTS/OCEANS
- Thanks to charter/vessel partners: Coastal Studies Institute, Reed Meredith, Latitude 31, Gray's Reef NMS, R/V Savannah, Fin Factor Charters, Sea Leveler, Dave Scott, UNC-W, GA MAREX, CSI, and SC DNR



Challenges

- Equipment loss and damage during Hurricane Idalia (RIP Gansett), shark strikes, bad luck
- Terrible fall weather hampered Navy glider recoveries
- TWR will no longer do even basic maintenance for G1s (~50% of fleet)
- G3s owned by SkIO, USF, SECOORA due for hardware upgrades
- Rising costs for operations, personnel
- Vendor/service issues



Looking Ahead

- New partners/stakeholders
- Additional funding for two 2024-2025 right whale missions through Tides Foundation, SECOORA data support
- GENIoS release for beta-testing
- Pending proposal to ONR Marine Mammals program to purchase new SkIO glider, establish regular RW surveys off GA/SC

Photo credit: F. McQuarrie (won Teledyne's company-wide photo contest!)