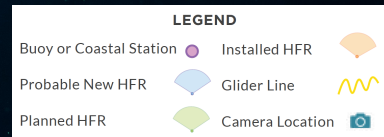


Scott Noakes, Janet J.  
Reimer, Wei-Jun Cai

*University of Georgia and  
University of Delaware*



# Objective and Approach

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## Objective

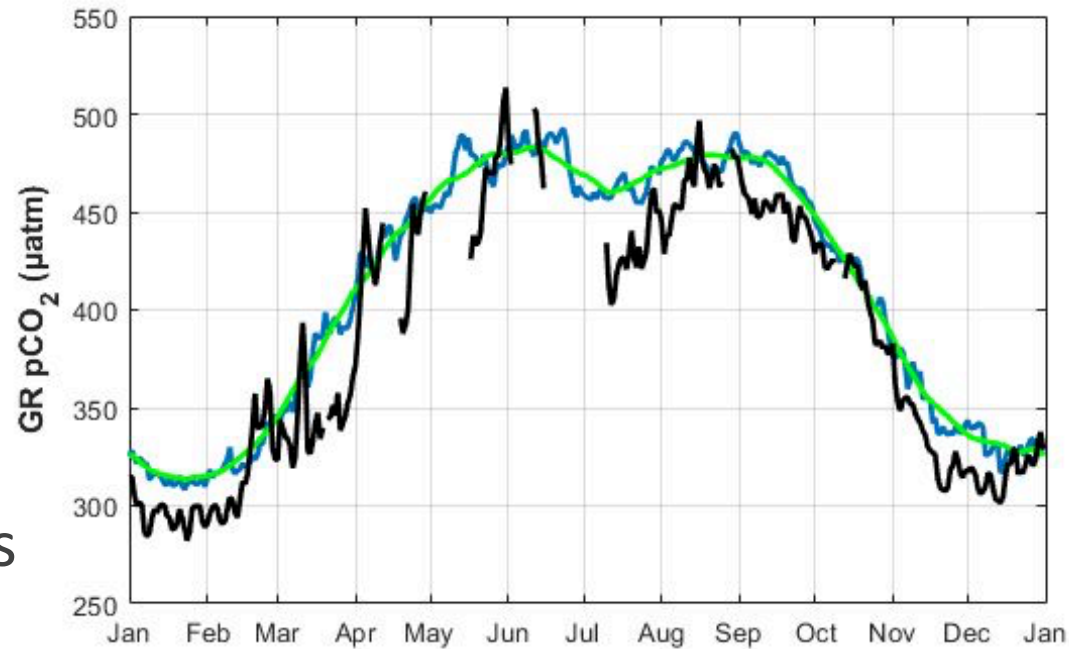
- Support NOAA MAPCO2 System – maintenance.
- Method internal consistency experiments (underway, discrete sample, mooring system)
- Climate quality measurements for long-term monitoring and model development

## SECOORA Focus Area

- Offshore monitoring to assess
  - Climate Variability for  $p\text{CO}_2$ , pH, and acidification variables
- Inshore – through modeling transport of carbonate chemistry variables
- Provide acidification information to South Atlantic Bight coastal managers

# Accomplishments

- Continued routine maintenance and cleaning of the MAPCO<sub>2</sub> system
- Water sample collection in May 2018, August 2018 (twice), and December 2018
- Internal consistency studies are ongoing
- With approximately 10 years of observations we calculated the climatology (manuscript in prep)



Blue line is one-day average, green line is 30 day smoothed climatology (calculated July 2006 to July 2015), black line (year 2014) is daily average for that one year – some anomaly occurred in the summer.



# Impact

- The GR mooring provides high quality observations that will allow stakeholders and managers to make decisions concern the placement of aquaculture facilities.
- Observations from the GR mooring have shown that there has been a significant decrease in pH since initial deployment
- If this project was not funded we would loose the longest running coastal CO<sub>2</sub> mooring
- So far, only scientists are using the data
- “Recent work by [Reimer et al. \[2017\]](#) provides a break-through, although not without difficulty, and indicates what we may expect around the world as both CO<sub>2</sub> and temperature simultaneously rise at the highly populated land-sea interface.”  
**Peter Brewer**, AGU <https://eos.org/editors-vox/coastal-ocean-warming-adds-to-co2-burden>

