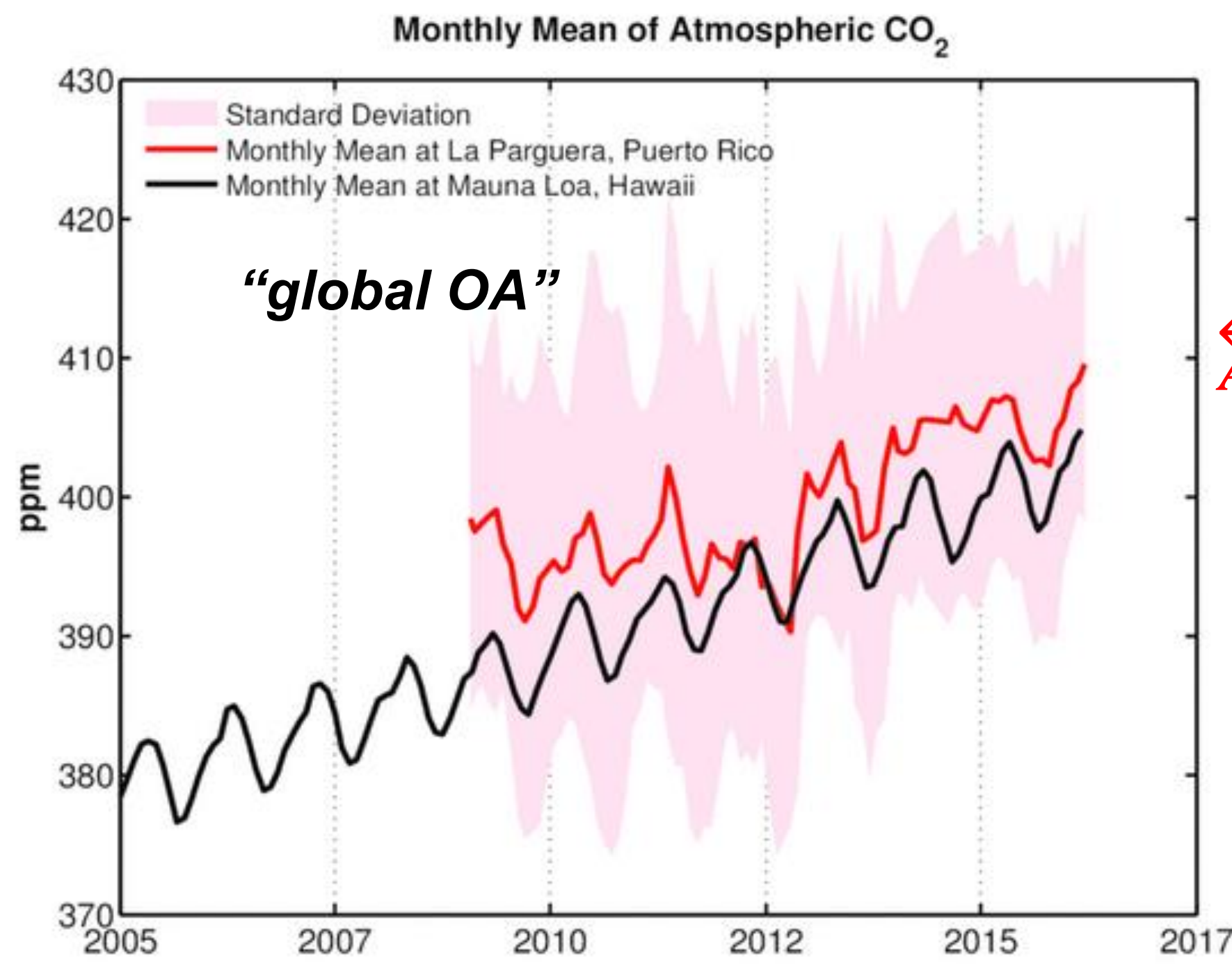


Documenting the expression of nearshore mangrove ecosystem processes on La Parguera shelf water chemistry

Erick M. García-Troche and Julio M. Morell
 Caribbean Coastal Ocean Observing System, University of Puerto Rico at Mayagüez
 Marine Sciences Department, University of Puerto Rico at Mayagüez



Background

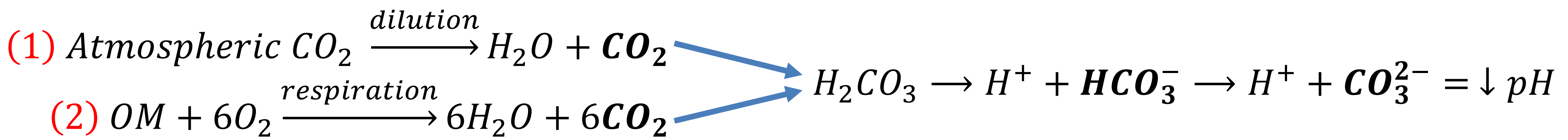
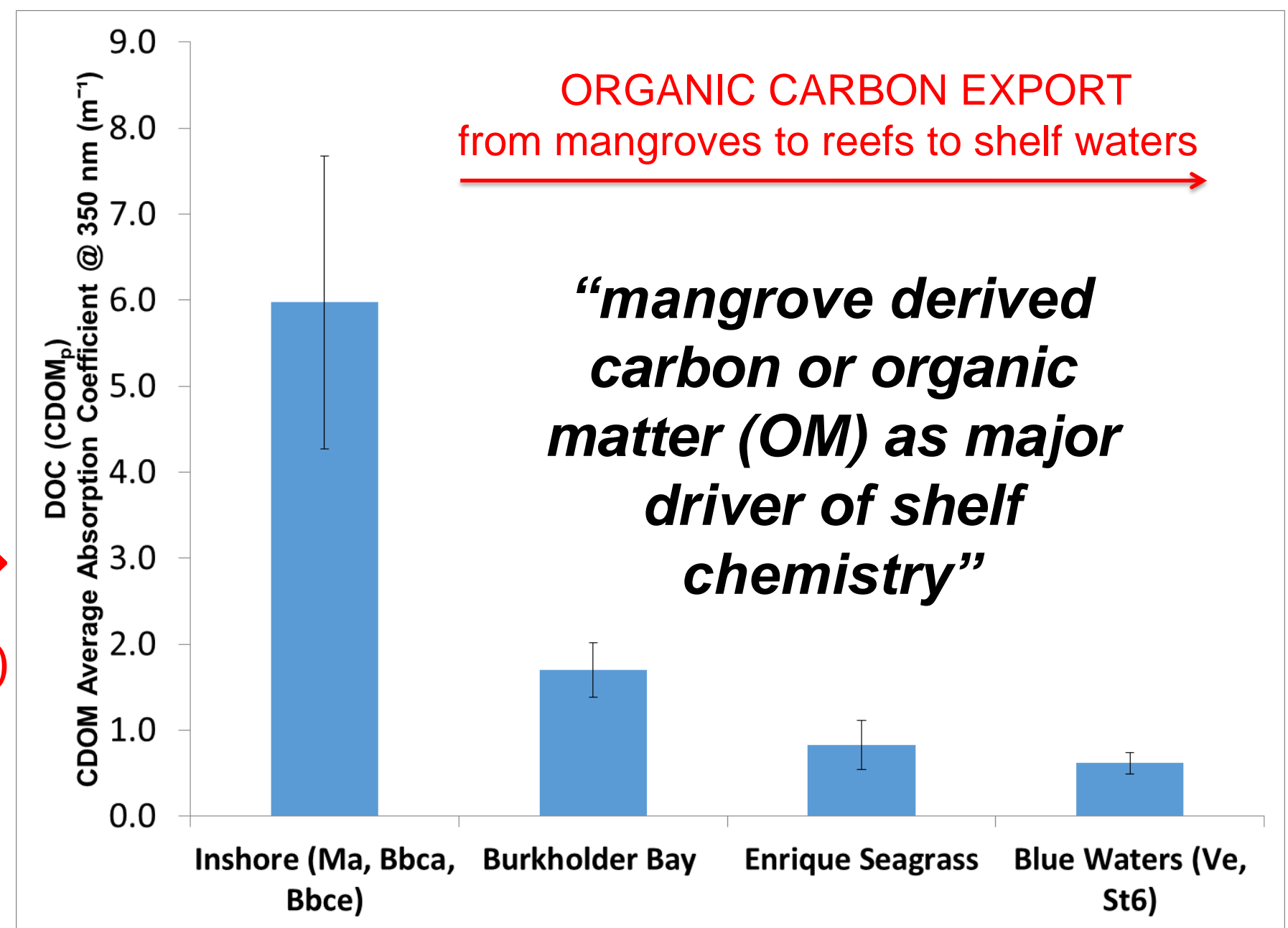


Source: http://www.caricoos.org/drupal/oa_trends

Ocean Acidification (OA) at La Parguera

← *Antropogenic CO₂ increase (1)*

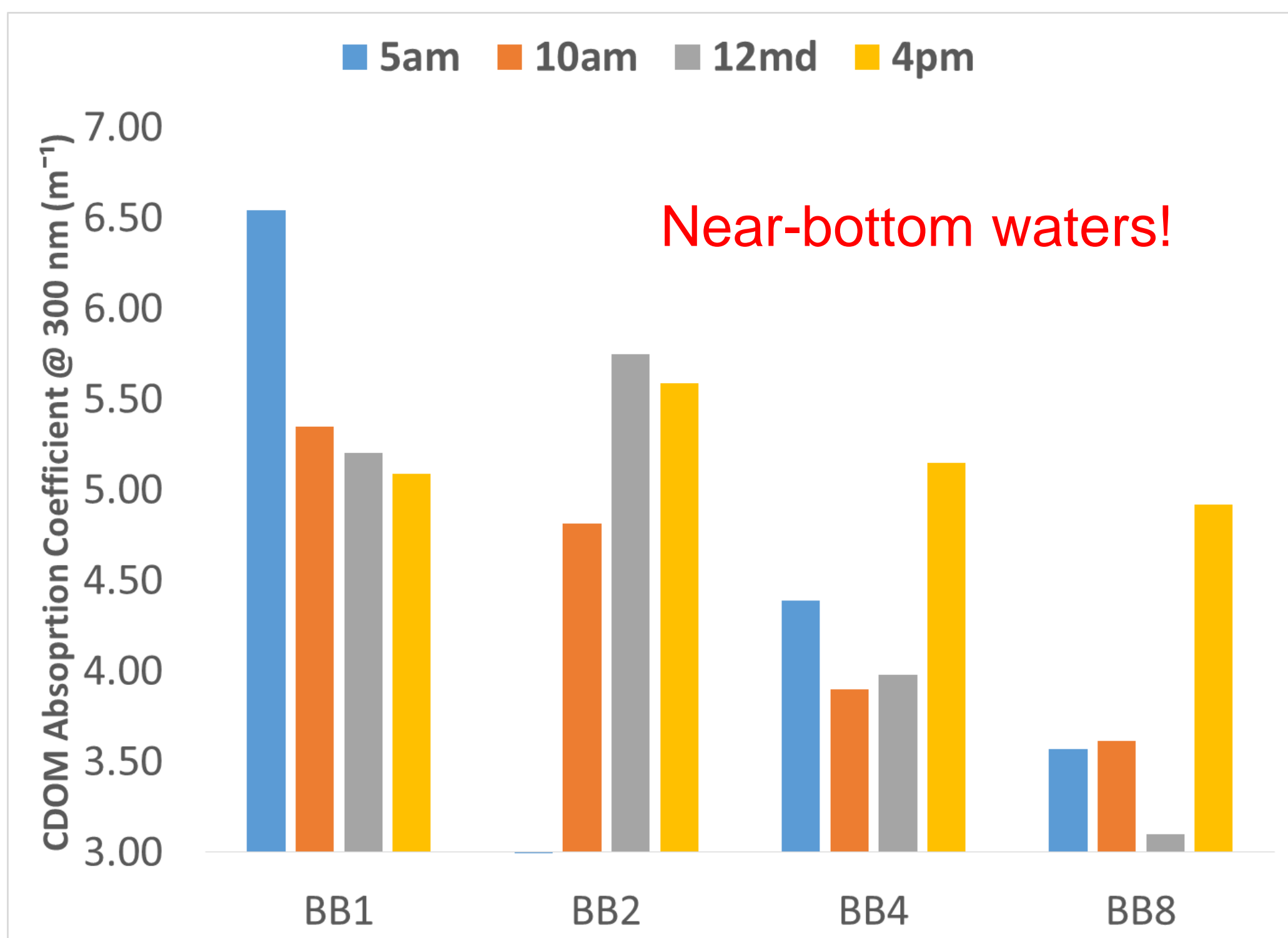
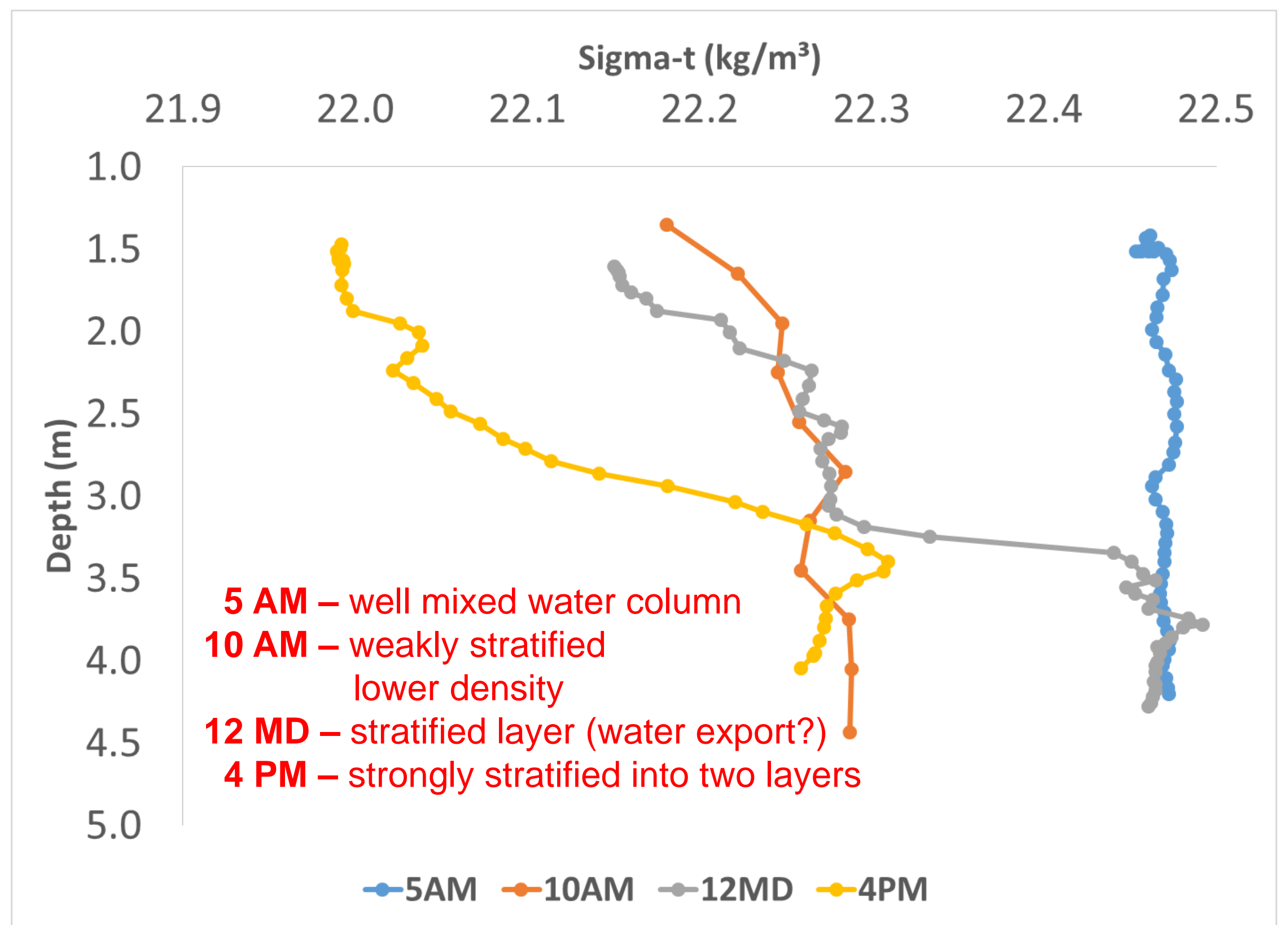
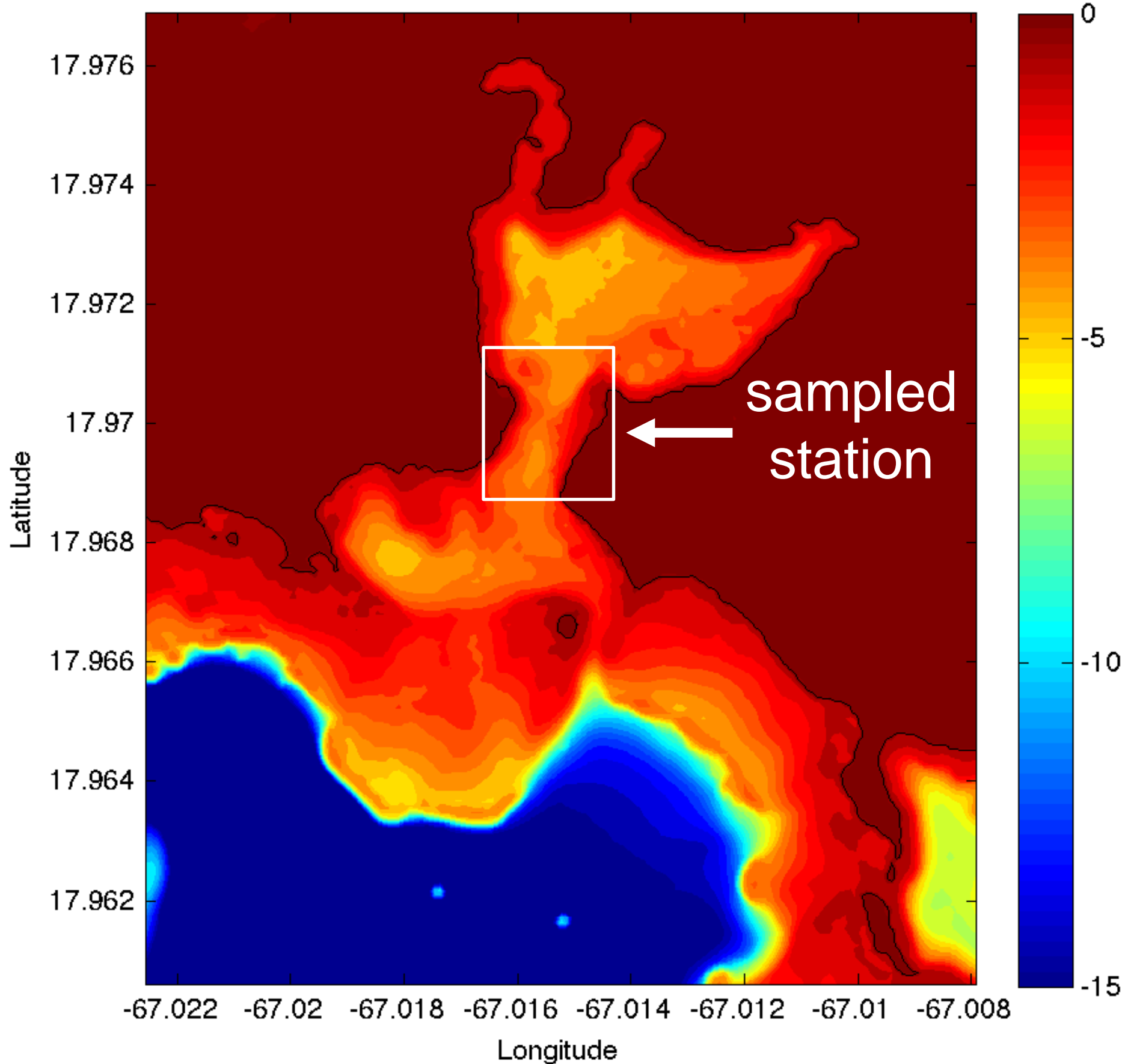
→ *Localized (2) DOC (CO₂*) increase*



- What are the mangrove generated carbon export rates from these mangrove ecosystems?
- Are nearby coral reefs being negatively affected by this double OA effect?

Phase 1 Observations

Bathymetry for Project Site: Bahia Fosforescente



Future Research

1. Hydrodynamic time series (ADCP) and discrete samples to document export rates
2. Vertical stability of water column with T and S profiles
3. Chemical parameters to understand carbon chemistry (DOC, POC, TA, DIC = CO₂ + HCO₃⁻ + CO₃²⁻)

Acknowledgements

CARICOOS and NOAA's OAP provided the funding for this research. UPRM's Department of Marine Sciences provided logistics support.