Sustained, Integrated Ocean Observing System for the Gulf of Mexico (GCOOS)

AUVS

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Which AUVs?

• Long endurance (month or more)
• <$200k for basic platform
• Launch and retrieve from coastal vessels
AUVs

• Teledyne Webb Slocum Glider
• ANT Alaska glider
• Scripps/WHOI Spray
• Liquid Robotics Wave Glider
• USF Bottom Stationed Ocean Profiler
• ...
Glider AUVs Have Measured

- Time
- Location
- Average currents
- Temperature
- Conductivity
- Pressure
- Salinity
- Chlorophyll fluorescence
- CDOM fluorescence
- Optical backscatter
- Dissolved oxygen
- Karenia Brevis
- pCO₂ air and pCO₂ water
New Sensors for Gliders

• Satlantic: Submersible Ultraviolet Nitrate Analyzer
• Symphotic Tii: Contros sensors for ROVs/AUVS
  – methane/hydrocarbons
  – CO₂
  – PAHs
  – MEG
  – H₂S
• Acoustic sensors can be used for fisheries and marine mammal monitoring
Stakeholder Identified AUV Needs

- Hypoxia Monitoring Plan
- HAB Monitoring
- ...


Current Gulf Assets

- USF operates 5 Slocum gliders on a monthly transect and has 25 BSOPs
- Mote Marine Lab runs frequent Slocum glider missions with 2 gliders dedicated to HABS monitoring.
- USM has two Slocum gliders
- NAVOCEANO runs glider operations worldwide
USF Operational Slocum Glider Line
GCOOS/SECOORA Glider Conveyor Belt
(20 gliders)