

## Discussion Topics

# DARPA Ocean Synoptic Sensing Roundtable

August 1, 2024 | Stanford University | Meeting Purpose & Discussion Topics

**Meeting Purpose** New technologies open the possibilities of acquiring such data. These include autonomous platforms, fixed and mobile sensing platforms, remote observations; but the question remains - *how do you collect and utilize multi-modal data to substantially improve Ocean Models and forecasting capabilities?*

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### Discussion Topics

#### Climate & Ocean Models

- What are the inadequacies of current models?
- What are the consequences?
- If better models are accomplished – what difference would it make?

#### Problems unique to Ocean vs Atmosphere

- What are the limits of predictability in ocean weather forecasting?
- How to distinguish between ocean and atmospheric climate?
- Data transmission, computation, and storage challenges
- Monitoring the deep ocean

#### Acquisition of Data

- How would more data help?
- How would you acquire it?
- How would you use it?

#### Integration & Management of Data

- Data assimilation
- Machine learning interpolation processes

#### Modalities – Sensors, Sensor Platforms

- What coverage is needed?
  - Depth?
  - Area?
  - Time?
- What is the required precision of the measurements?

**Would a basin-scale demonstration be valuable? If so, what would it look like?**