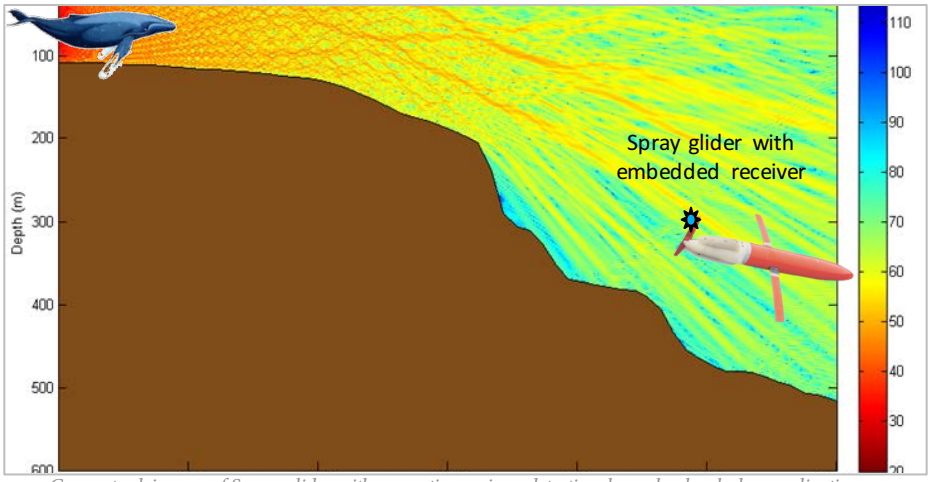
Glider-based Ambient Noise Observations for Tactical Oceanography

Naval Postgraduate School



Conceptual image of Spray glider with acoustic receiver detecting humpback whale vocalization

Purpose

- Improved acoustic data collection supporting student investigations on sound propagation and ambient noise
- Broaden the scope of investigations that OC4270 students may conduct
- Add new tactical concepts to acoustic field studies not otherwise achievable
- Provide ancillary oceanographic data sets in support of student projects & research

Proposed work

- Integrate multi-channel acoustic recording system into OC deep-diving Spray gliders
- Measure performance in test tanks and in the field, analyze results
- Deploy Spray gliders in support of the OC4270 at-sea labs.
- Analyze data sets to measure performance against known signals.
- Generate a summary report of project activities

Operational importance

- Characterizing ambient noise in an operational environment is essential to understanding impacts on sonar system performance in that environment
- Glider-based systems have long-endurance enabling characterizing the noise environment over statistically significant time frames crucial for building noise databases
- Mitigating the impact of noise optimizes deployment of a limited number of assets to conduct USW missions.

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