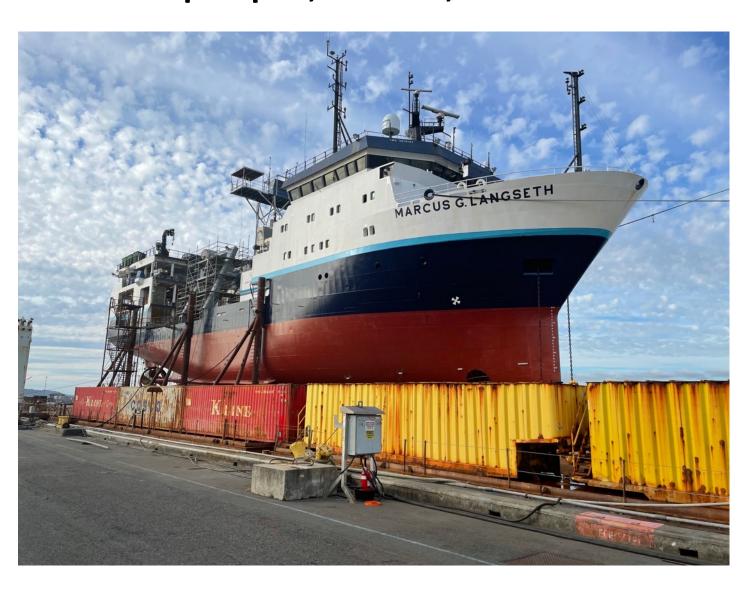


UNOLS Council – Fleet Renewal Session– November 1 2021 L-DEO Office of Marine Operations

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

2021 Langseth Dry Dock- (Sept-Oct) Everett Ship Repair, Everett, WA



2021 Shipyard/Maintenance Projects

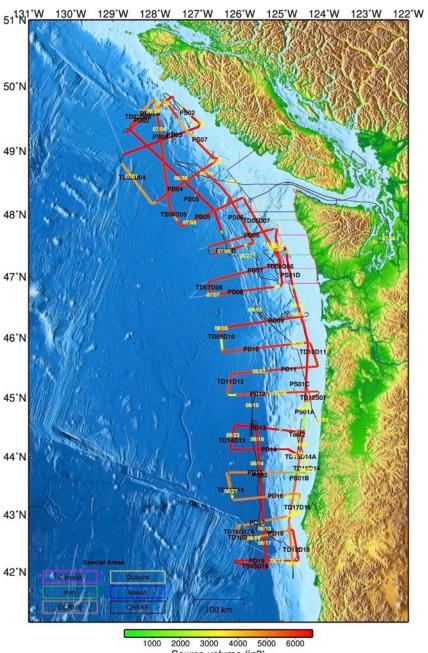
Langseth Maintenance and Shipyards

- Seismic source controller- major update
- DP upgrade
- New back deck Toimil crane replacement for existing Effer crane to be delivered by December
- Overhauled Turbos, main Bergen and Caterpillar engines, multiple coolers
- Replaced Marine Sanitation Device
- Main air handler and 25 in room ac/ heating units
- Two shipyard periods -split into above and below water line dry dock to accomplish regulatory 5yr survey.

Cascadia Subduction Zone - CASIE21

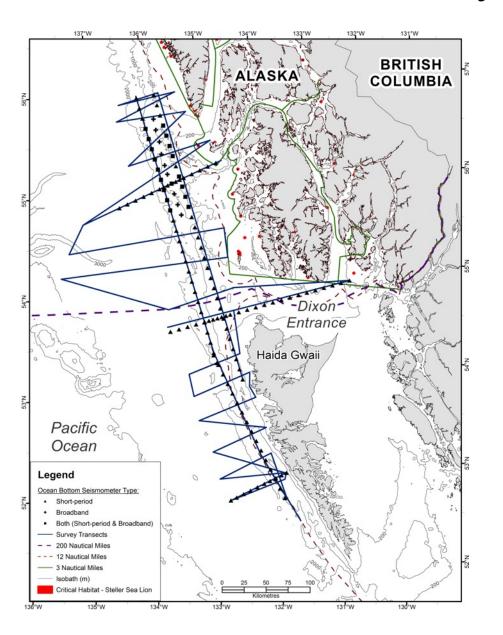
Source Volume





2000 3000 4000 5000 6000 Source volume (in3)

Queen Charlotte Fault Project



July-August 2021

Future Ship Planning

Langseth Replacement

- 1) Langseth to be retired Fall 2024
- 2) Still Targeting ~2025 for a replacement vessel
- 3) Working with LDEO Directorate, Climate School and University on funding for planning team