

Utilizing Deep Submergence Vehicles in the Polar Regions

Masako Tominaga, Maurice Tivey,
Terry Wilson, and Kurt Panter

Background

- Polar regions are a science frontier.
- Underwater/under ice technology needed to achieve scientific goals (marine and ice science).
- New recently-built under-ice vehicle [Nereid-UI](#).
- Some attempts have been made: but common reviews indicate : lack of visibility including knowledge of new capabilities, infrastructure costs, operation risk and cost.
- NSF PMs suggested PIs communicate with DeSSC.

To establish the visibility of Nereid-UI

Upon historical effort in deep sub ops areas (ROVs; AUVs; DeepTow systems) – [and maybe a workshop idea here]

- To review currently available technology, including operational NDSF vehicles.
- To assess feasibility of deep submergence vehicles in ice covered water
- To engage a broader community (polar research scientists and beyond)
- To brainstorm science ideas/opportunities (single/multiple seasons programs) that can be facilitated by vehicle use
- To brainstorm cost effective operational model(s)