ACOUSTICS2008/1741
Acoustic Navigation and Communications for High Latitude Ocean Research (ANCHOR)

Craig Lee and Jason Gobat
Applied Physics Laboratory, University of Washington, 1013 NE 40th St, Seattle, WA 98105-6698, USA

Recent community reports on autonomous and Lagrangian platforms and Arctic observing identify the development of under-ice navigation and telemetry technologies as one of the critical factors limiting the scope of autonomous (e.g. floats, AUVs and gliders) high-latitude measurement efforts. These platforms could provide persistent, high-resolution, basin-wide sampling in ice-covered regions and collect measurements near the critical ice-water interface. Motivated by the dramatic advances in temporal and spatial reach promised by autonomous sampling and by the need to coordinate nascent efforts to develop navigation and communication system components, an international group of acousticians, platform developers, high-latitude oceanographers and marine mammal researchers gathered in Seattle, U.S.A. from 27 February - 1 March for an NSF Office of Polar Programs sponsored Acoustic Navigation and Communication for High-latitude Ocean Research workshop. Workshop participants summarized the current state of knowledge concerning Arctic acoustics, navigation and communications, developed an overarching system specification to guide community-wide engineering efforts and established an active community and steering group to guide long-term efforts and ensure interoperability between elements developed by disparate teams. This presentation will summarize workshop findings and provide an update on recent developments stemming from the EU DAMOCLES and US NSF Arctic Observing Network programs.