

Wednesday 28 May 2014: Towards and Arctic Ocean Observing System

Workshop with invited speakers and participants from USA, Germany, Poland, Spain, United Kingdom, Denmark, and Norway.

Session 1. Technological capabilities and existing observing systems for Arctic research

Presentations should be limited to 20 minutes allowing 10 minutes for questions and discussion.

9:00-09:15: Stein Sandven (Nansen Environmental and Remote Sensing Center, Norway); Welcome and Introduction to the workshop.

09:15 - 09:45: Kuvvet Akatan, (University of Bergen, Norway), European Plate Observing System (EPOS) and the need for increased monitoring capacity in the Arctic".

09:45-10:15: Agnieszka B. Møller, (Institute of Oceanology, Polish Academy of Sciences, Poland), Oceanographic components of an Arctic Ocean Observing System, focus on Fram Strait

10:15-10:45: Torsten Kanzow (Alfred Wegener Institute, Germany): Multidisciplinary research in the Arctic Ocean by AWI

Coffee break

11:00–11:30: Kathleen Vigness Raposa, Marine Acoustic Inc. "Passive acoustic studies of marine mammals and ambient noise conditions with ocean observing systems."

11:30–12:00: Hanne Sagen (Nansen Environmental and Remote Sensing Center, Norway) and Peter Worcester, Scripps Institution of Oceanography, USA. "Multipurpose Acoustic Networks in the Integrated Arctic Ocean Observing System."

12:00-12:30: Dr. Peter Mikhalevsky LEIDOS: "Arctic Ocean acoustic observing network."

Lunch break @ NERSC.

Session 2. Stakeholder's needs for observations in the Arctic

13:30 – 13:50. Vigdis Lonar Barth, Norwegian Space Center: SIOS - Svalbard Integrated Arctic Earth Observing System.

13:50-14:10: Elling Tveit, Norwegian Research Defense Establishment, Norway: "Arctic Ocean Observations: relevance for Norwegian Defense Research"

14:10 – 14:30: Robert Headrick, Office of Naval Research, USA "The ONR shift back to the Arctic."

14:30–14:50: Øivin Aarnes, Det Norske Veritas, Norway, "The use and need for accurate, timely, and high resolution observation data in risk management of the Arctic, with some practical examples."

14:50 – 15:10. Harald Brekke, Norway, Norwegian Petroleum Directorate: Offshore geological resources, politics and maritime limits in the Arctic.

Coffee break and mingling

Session 3. Panel discussion and sum up.

Panel: TBD

1530-1700: Discussion will address the following topics:

- What should be the prioritized functionalities of an Arctic Ocean Observing System? (Ice, Ocean and Seafloor, real-time data transfer...)
- What would be the technologies and components to reach this functionality?
- How can we reach the goal of implementing an Arctic Ocean Observing System with the prioritized functionality and components? Strategy?
- Potential for coordination and implementation of planned pilot systems in the period from 2015 – 2020 and beyond. Bits and parts again – or can we manage coordinated actions on international level
- Whose responsibility is it to maintain the existing components and future Arctic Ocean Observing System – is it the research community to ensure long-term observing systems with research money? Can we learn from how the organization satellite remote sensing or ARGO system is done?

Workshop ends at 17:00

Evening Event

Prof. Walter Munk, Scripps Institution of Oceanography visits the Nansen Center to discuss ongoing and future collaboration between the two institutes. The two institutions have signed a MoU, and have collaborated closely with development of acoustic remote sensing of the ocean temperature in the Arctic. Prof. Walter Munk has worked within oceanography the last 75 years, and is by far the most distinguished oceanographer in our time. It is therefore an honor for the Nansen Center and Norwegian Scientific Academy for Polar Research to organize a special evening for Prof. Walter Munk.

Program for the evening

18:00 – 18:10: Welcome and introduction by Prof. Stein Sandven.

18:10 – 19:00. Prof. Walter Munk: “Waves and the Normandy Landing”.

19:00 – 19:30. Refreshments.

19:30 – Dinner@NERSC

Thursday 29 May 2014

09:00 – 13:00: Proposal to Belmont Forum (Call Topic: Arctic observing systems). (NERSC, SIO, Marine Acoustics Inc, GEO-UiB, GEUS).

13:00 - 17:00: UNDER-ICE project meeting: Establish background for Environmental Assessment. (SIO, Marine Acoustics, NERSC).

No dinner organized.

Participants TAOOS workshop 28 Mai

| Participant no. | Participant organisation name | Num Part. | Country |
|-------------------------------------|--|-----------|----------------|
| 1 (Organizer) | Nansen Environmental and Remote Sensing Center Stein Sandven, Lisbeth Iversen, Hanne Sagen, Florian Geyer, Jenny Ullgren, Ola M. Johannessen. | 6 | Norway |
| 2 | Institute of Oceanology, Polish Academy of Sciences Agnieszka B. Møller | 1 | Poland |
| 3 | Consejo Superior de Investigaciones Científicas Pedro Elosegui | 1 | Spain |
| 4 | Natural Environmental Research Council / British Antarctic Survey– Jeremy Wilkinson, Jonathan Watkins, Damien Guihen | 3 | United Kingdom |
| 5 | Geological Survey of Denmark and Greenland (GEUS) Thomas Funck, Peter Voss | 2 | Denmark |
| 6 | University in Bergen, Department of Earth Science (UIB-GEO) Kuvet Atakan | 2 | Norway |
| 7 | Scripps Institution of Oceanography (SIO) Walter Munk and Matthew Dzieciuch | 2 | USA |
| 8 | Alfred Wegners Institute of marine and polar research (AWI) Torsten Kanzow | 1 | Germany |
| 9 | LEIDOS Peter Mikhalevsky | 1 | USA |
| 10 | Marine Acoustics Inc. Kathleen Vigness Raposa | 1 | USA |
| Stakeholder are invited from | | | |
| 11 | Office of Naval Research (ONR), USA Robert Headrick, Joel Feldmeier | 2 | USA |
| 12 | Office of Naval Research – global Ellen Livingston | 1 | USA |
| 13 | Norwegian Research Defense Establishment (FFI), Norway Elling Tveit, Dag Tollefsen | 2 | Norway |
| 14 | Norwegian Petroleum Directorate, Norway Harald Brekke | 1 | Norway |
| 15 | Det Norske Veritas (DNV), Norway Øivin Aarnes | 1 | Norway |
| 16 | Norwegian Space Center, Norway Vigdis Lonar Barth | 1 | Norway |