AWAKE-2

Arctic climate system study of ocean, sea ice and glaciers interactions in Svalbard area

Partners:

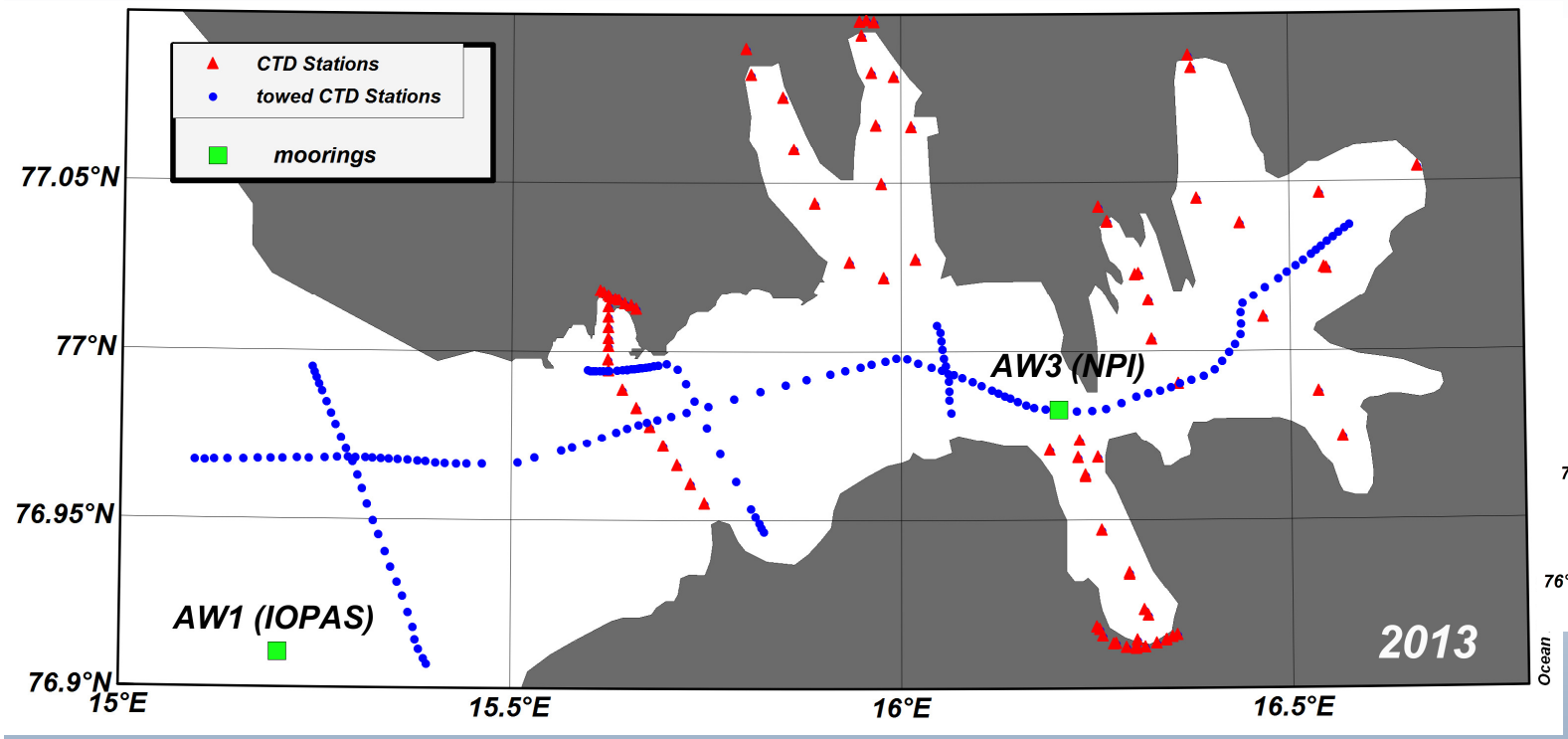
- Institute of Oceanology, Polish Academy of Sciences (project promoter)
- Nansen Environmental and Remote Sensing Center
- Norwegian Polar Institute
- The Norwegian Meteorological Institute
- The University Centre in Svalbard
- Nicolaus Copernicus University
- University of Silesia
- Institute of Geophysics, Polish Academy of Sciences

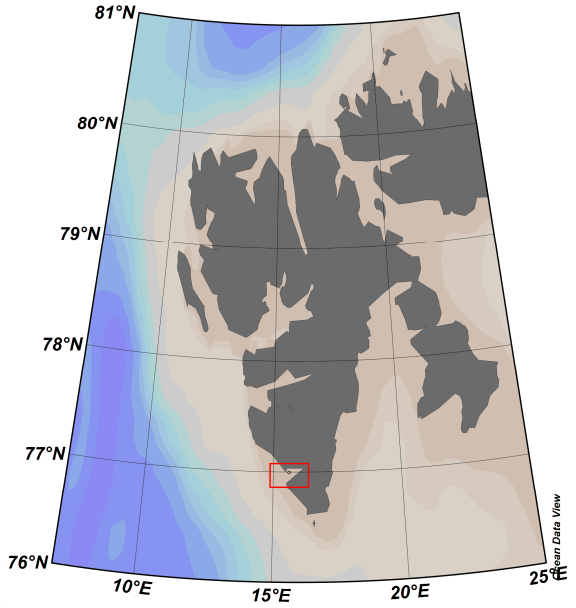
Duration: 01.05.2013 – 30.04.2016

Budget: 4 056 284 PLN

AWAKE-2 project main objectives:

- Impact of the Atlantic Water variability in the West Spitsbergen Current on the adjacent shelf- and fjord ocean climate
- Exchange processes between shelf and fjord
- Freshwater input and distribution in an Arctic fjord (Hornsund)
- Sea ice variability and its impact on fjord circulation
- Glaciers dynamics and interactions between ocean and glaciers
- Atmospheric climate variability and trends in the coastal areas of the western Spitsbergen





Research area

Expected results (including the already achieved):

2013 Preparatory Phase

- Organization of the project office
- Field measurements to extent the main meteorological, glaciological and oceanographic time series
- Analysis of historical data
- Preparatory phase for the core campaign

2014 The main campaign in fjords and in the open ocean - the most important phase of the project

- Achieving a complete picture of all climatic components in Hornsund and in the region potentially influencing the Hornsund conditions

2015

- Further extension of the core parameters time series
- Analysis and synthesis of the new data provided by the core field campaign
- Potential possibility to repeat measurements failed in 2014

2016

- Joint analysis of the project data and a synthesis of the new results obtained in different spheres (hydro-, cryo- and atmosphere) of the studied fjord system

The main methodological assumptions:

- meteorological, oceanographic, glaciological and hydrological observations
- high-resolution numerical modeling
- historical data analysis

R/V Oceania

Hydrographical measurements in Hornsund

Automatic Weather Station in Hornsund