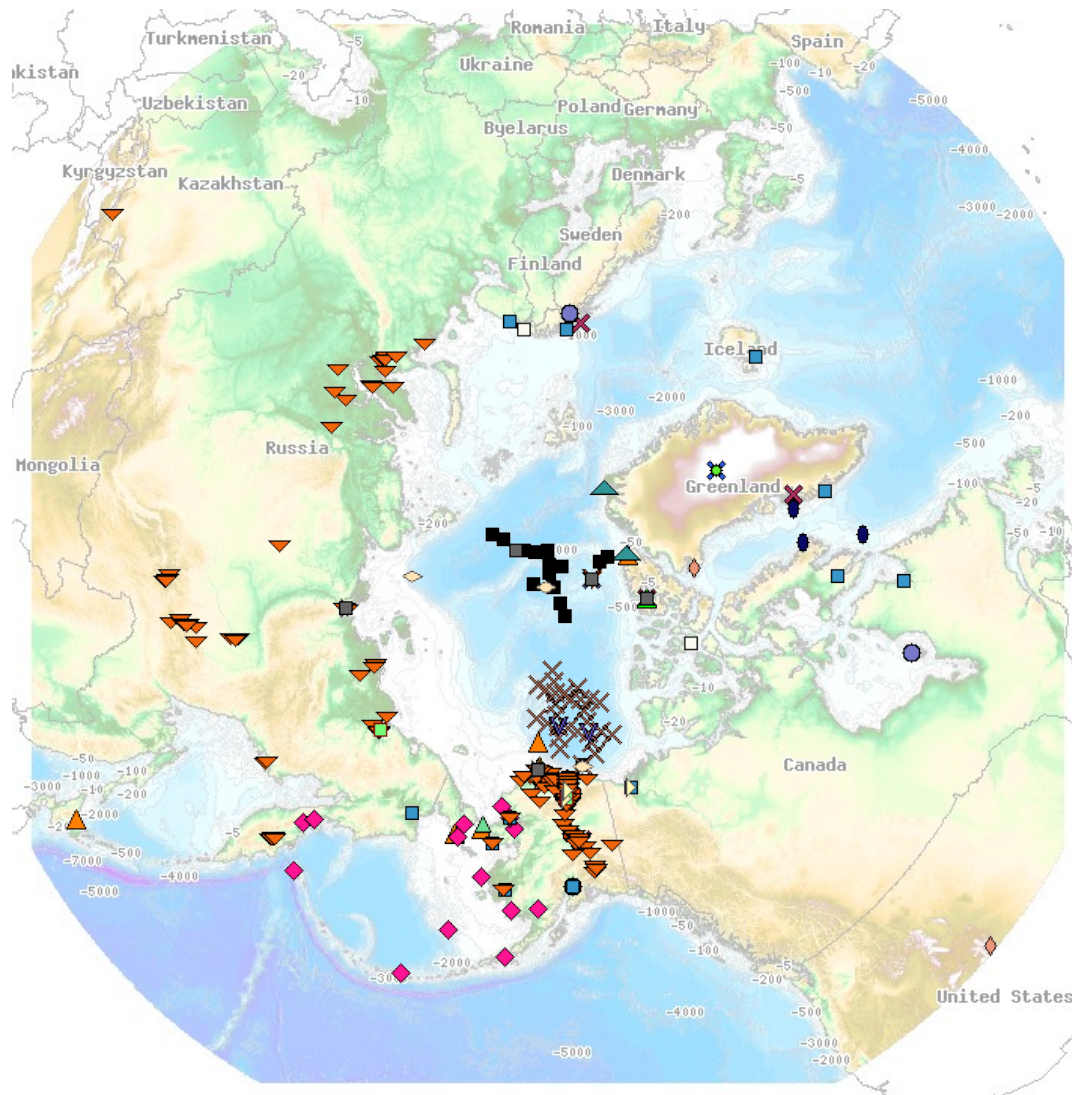


# The Arctic Observing Network

Gus Shaver, Dan Lubin, Mark Parsons



Cooperative Arctic Data and Information Service  
of the ARCTIC OBSERVING NETWORK

**CADIS**

Map by Scot Loehrer

# AON Science Issues

AON is the U.S. contribution to a pan-Arctic, multi-nation environmental observing network. It is integral to the implementation of SEARCH (Study of Environmental Arctic Change) as a lasting legacy of International Polar Year 2007-2009.

AON observations are vital to the ultimate goal of understanding of Arctic Change, including identification and implementation of adaptive responses to Arctic Change. Overall scientific goals include:

- Integrated understanding of a major regional system, the Arctic System
- Understanding of interactions and feedbacks between the Arctic and the global environmental systems
- Understanding of interactions among major components of the Arctic System including
  - Land
  - Atmosphere
  - Oceans
  - Ice
  - People
- Understanding time scales, modes, and drivers of change

# The CADIS/AON Portal...

## Has interface features:

- metadata entry
- data search
- data access
- data visualization

## Built and adapted from:

- CDP
- NSIDC portal
- IDV

## plus

- WMS/OGC
- RSS
- Google Earth

## On a foundation of core technologies:

- THREDDS
- OPeNDAP
- LDM/IDD
- OAI-PMH

## and standards

- netCDF-CF
- IPY metadata profile (FGDC, ISO)

## For data from

- IASOA
- NSIDC
- NCAR
- AON investigators

# CI (and related) Challenges

- Understanding the scientific, especially interdisciplinary, needs
- Data acquisition—timeliness, consistent formats, easy metadata creation, research vs. operational collection
- Observing system design and optimization
- Data for models and synthesis—matching data with tools
- Developing and managing virtual observations—Arctic Collaboratory
- International and interagency coordination
- Stewardship in a distributed environment (e.g. tracking provenance)
- Sustained preservation—the IPY legacy