NSIDC Ice and Ocean Products
Examples and highlights for AOMIP

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About NSIDC

- Part of the University of Colorado’s Cooperative Institute for Research in Environmental Sciences (CIRES) Cryospheric and Polar Processes division
- Chartered in 1982 by the National Oceanic and Atmospheric Administration (NOAA) to provide data and information services to the cryospheric community
- Affiliated with NOAA through the NOAA-CIRES Cooperative Agreement
- Sponsored by the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF) and NOAA
Data Holdings

- NASA Distributed Active Archive Center (DAAC) Provides archive and access for Earth Observing System (EOS) data products, and other heritage data products
- NOAA at NSIDC Focus on data rescue and access to non-traditional data sources
- NSF Antarctic Glaciological Data Center Data and metadata for and from NSF funded investigators
- NSF Arctic System Science Data Coordination Center Data and metadata from NSF’s Arctic System Science program-funded investigators
- NSF IARC Frozen Ground Data Center at NSIDC In cooperation with the International Permafrost Association
Reaching Out to Modelers

Goal: Increase data usage, where appropriate, by sea ice, regional, and global modelers (e.g., CCSM community)

Strategy: Two-way interaction with modelers

Identify: Areas where NSIDC can improve user interface

Outcome: A more modeler-friendly website that will lead to increased usage

Feedback on data usage, quality, needs, etc., wanted!

Links to NSIDC & recommended data from AOMIP web pages?
In Progress…

Web site upgrade:
• Improve web interface
• Integrate user comments
• Limited resources (1-2 persons)

AGU Special Session
(Fall 2005 target)
• NASA DAAC managers
• Global, regional modelers
• Opportunity to express concerns, suggestions
Accessing Data -- Where to start…

1) Main NSIDC Data Page:
   • http://www.nsidc.org/data/

2) Sea Ice Data:
   • http://www.nsidc.org/data/sea_ice.html

3) Ocean Data
   • http://www.nsidc.org/data/oceans.html

4) Sea Ice Products at NSIDC:
   • http://www.nsidc.org/data/seaice/index.html

5) List of All Sea Ice Products (Alphabetical):
   • http://www.nsidc.org/data/seaice/alpha.html

6) Data Summaries (All Sea Ice Products Available from NSIDC):
   • http://www.nsidc.org/data/seaice/all.html

7) Links to other (external) Sea Ice Products:
   • http://nsidc.org/data/seaice/other.html
In Situ Data (Sea Ice)

- Submarine Upward Looking Sonar Ice Draft Profile Data and Statistics
- IABP Drifting Buoy, Pressure, Temperature, Position, Interpolated Ice Velocity
In Situ Data (Ocean)

- Summer Surface Hydrography (AARI)
- North Pole Environmental Observatory (external link)
- Coordinated Eastern Arctic Experiment (CEAREX)
- Scientific Ice Expeditions (SCICEX)
- Norwegian North Polar Expedition 1893-1896 (Nansen)
- More...
**Ice Charts**

- **U.S. National Ice Center ice analyses**
- **A variety of operational charts available through the Global Digital Sea Ice Data Bank**
Decadal and Longer Time Series (Sea Ice)

- Daily and Monthly Polar Gridded Sea Ice Concentrations 1978-present (several satellites and algorithms)
- Polar Pathfinder Daily 25-km Sea Ice Motion 1978-2003 (upper right)
- Arctic and Southern Ice Extent 1901-1995 (lower right)
- Environmental Working Group Joint U.S.-Russian Atlases (Ocean, Meteorology and Climate)
- NH Weekly Ice Extent/Snow Cover 1966/78-2001
- Arctic and Antarctic Drift Buoy Data
- More...
Sea Ice Index (1978-present)

- Updated monthly
- Allows users to monitor sea ice extent, trends, and anomalies
- Access archived images illustrating ice conditions
- http://www.nsidc.org/data/seaice_index

Stroeve et al. (2004)
Snow Melt Onset (1979-1998)

- Yearly snowmelt onset dates over Arctic sea ice
New Data: AMSR-E

- Advanced Microwave Scanning Radiometer - Earth Observing System
- Launched 4 May 2002
- Twice the resolution of SMMR/SSMI
- Combines channels that SMMR and SSMI had individually
- http://www.nsidc.org/data/amsre/
New Data: AMSR-E

- Snow, Ocean, Land, Rain, and Sea Ice Fields
- Daily, 5-day, and Monthly Products
- Global and Polar Projections
- Coverage Varies by Product
**AMSR-E: Sample Images**

Data Products at NSIDC
Other Data

- Near Real-Time Products
- MODIS Products
- Field Project Data
- More...
Other Information

Getting more help:
• Data Help Center: www.nsidc.org/data/help
• NSIDC User Services: nsidc@nsidc.org

Supporting NSIDC:
• Register for Data; it helps User Services keep track of what’s being used
• Cite data in reference section of papers; instructions for citation are included in dataset documentation