



NOTES

CONTENTS

Products & Services	pg. 1-2
Conference News	pg. 2
NSIDC News	pg. 3
Citing NSIDC Data	pg. 4
Contact Information & Submissions	pg. 4

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PRODUCTS & SERVICES

New Arctic-wide Frozen Ground Data Sets

The Frozen Ground Data Center recently released four new data sets characterizing permafrost and seasonal frozen ground across the Arctic. These data sets were created using a variety of approaches, including remote sensing and modeling, to provide unprecedented spatial and temporal coverage of freeze/thaw parameters. Where appropriate, data are available in the NSIDC Equal-Area Scalable Earth Grid (EASE-Grid). These data should facilitate broadscale climate analysis.

The *Arctic Soil Freeze/Thaw Status from SMMR and SSM/I, Version 2* data set contains near-surface (<5 centimeter) soil freeze/thaw status on snow-free and snow-covered land surfaces over the arctic terrestrial drainage basin. Data are in the 25 km resolution EASE-Grid format. For more information, visit the product page (<http://nsidc.org/data/ggd641.html>).

The *Northern Hemisphere EASE-Grid Annual Freezing and Thawing Indices, 1901-2002* product contains annual freezing and thawing indices based on the monthly mean air temperature for each year from 1901 to 2002. For more information, visit the product page (<http://nsidc.org/data/ggd649.html>).

The *Arctic EASE-Grid Freeze and Thaw Depths, 1901-2002* data set contains mean, median, minimum, and maximum freeze and thaw depths for each year from 1901 to 2002 in the 25 km EASE-Grid format for areas north of 50 degrees. For more information, visit the product page (<http://nsidc.org/data/ggd651.html>).

The *Northern Hemisphere Seasonal and Intermittent Frozen Ground Areas 1901-2002* data set contains monthly values of the total exposed land area of seasonally frozen ground and annual values for intermittently frozen ground in the Northern Hemisphere. For more information, visit the product page (<http://nsidc.org/data/ggd650.html>).

DMSP SSM/I EASE-Grid Brightness Temperatures Data Available Through FTP and GISMO

NSIDC is pleased to announce that the *DMSP SSM/I Pathfinder Daily EASE-Grid Brightness Temperatures* product is now available through FTP. Beginning with data from January 2005, EASE-Grid Brightness Tempera-

tures for all projections (Northern Hemisphere, Southern Hemisphere, and global) will be made available on our public FTP site as the data are produced. In addition, the historical EASE-Grid data (1987 to 2004) are available for FTP download. All SSM/I EASE-Grid data (July 1987 through the most recently processed) are available for download from the NSIDC FTP site (<ftp://sidads.colorado.edu/pub/DATASETS/ssmi-pathfinder/>). Please see the "readme.txt" file on the FTP site for information about downloading data.

As of January 2006, the *DMSP SSM/I Pathfinder Daily EASE-Grid Brightness Temperatures* product will no longer be mailed out on CD. Registered users were sent their last CD shipments in December 2005. The last shipment includes data through 20 January 2005 (Northern Hemisphere), 24 February 2005 (Southern Hemisphere), and 15 January 2005 (global).

In addition to changing the distribution media, NSIDC changed a file naming convention and a directory structure. For more information about these changes, please view the data set documentation (<http://nsidc.org/data/nsidc-0032.html>).

After a brief hiatus, the SSM/I EASE-Grid data are also once again available through the Graphical Interface for Subsetting, Mapping, and Ordering (GISMO) tool. This Web-based search and order tool allows users to subset EASE-Grid products by geographic region, temporal slices, or parameters (channels). Data are delivered by FTP, CD, or DVD. (Please note that the GISMO tool is not appropriate for long time-series data acquisition.) For more information, see the GISMO Web site (<http://nsidc.org/data/gismo/>).

AWI Moored ULS Data, Greenland Sea and Fram Strait, 1991-2002

This new NOAA data set contains Upward Looking Sonar (ULS) data from 11 moorings that provide ice draft, water pressure, and water temperature information. Raw data files with sonar travel time and files with draft frequency of occurrence are available as well. A single statistical file for each mooring summarizes that mooring's record. These data were contributed to NSIDC by the Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany, in 2002 and 2004, as a contribution to the World Climate Research Programme's Arctic Climate System Study/Climate and Cryosphere (ACSYS/CliC) Project. For additional information, please visit the product page (<http://nsidc.org/data/g02139.html>).

New Online Access to The Dehn Collection of Arctic Sea Ice Charts, 1953-1986

NSIDC is pleased to announce that many images from *The Dehn Collection of Arctic Sea Ice Charts, 1953-1986* data set are now available online. William H. Dehn was one of the first ice observers for the U.S. Navy, flying on ice reconnaissance flights in the 1950s. NSIDC houses a collection compiled by Dehn of 6,896 paper ice charts of Alaska, the western Canadian Arctic, and Bering Sea waters. 3,982 charts have been scanned through the NOAA Climate Database Modernization Program and are now available on the product Web site (<http://nsidc.org/data/g01111.html>).

AMSR-E HDF-EOS To GeoTIFF (HEG) Conversion

HDF-EOS to GeoTIFF (HEG) conversion is now available for some AMSR-E data products through the Data Pool Web access. The HEG converter enables format conversions and projection changes. The options available depend on the data set, but typically include conversion to GeoTIFF and reprojection to geographic, UTM, and other projections. HEG also provides spatial and band subsetting.

HEG functionality is available for the AMSR-E/Aqua L2A Brightness Temperatures, the L2B Ocean Products, and the L3 Ocean Grids.

To use the HEG converter, access data through the Data Pool (http://nsidc.org/data/data_pool/).

ICESat/GLAS Product Updates

As of December 2005, Release-24 data are available for all 15 GLAS products. This release covers the Laser 2A time period (25 September to 18 November 2003) and contains significant improvements to the data quality, as well as changes to the lengths of the files. For more information, see the ICESat/GLAS Data Releases page (http://nsidc.org/data/icesat/detailed_disclaimer.html).

The new data are currently available through the Data Pool, SNOWI, and the EOS Data Gateway (EDG), but are not yet available through the GLAS Subsetter. All of the ordering options can be accessed on the ICESat/GLAS product ordering page (<http://nsidc.org/data/icesat/order.html>). Software tools for visualizing and reading ICESat data have been updated for use with Release-24 data. These tools are available from the ICESat/GLAS Tools page (<http://nsidc.org/data/icesat/tools.html>).

Nimbus-7 SMMR and DMSP SSM/I Bootstrap Updates

NSIDC has received updates to the *Bootstrap Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I* data set. The daily and monthly data now span 26 October 1978 through 31 December 2004 for both the northern and southern polar regions. For more information, visit the product page (<http://nsidc.org/data/nsidc-0079.html>).

Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I Passive Microwave Data

Daily and monthly averaged sea ice concentrations were updated through December 2004. Users can order the entire time series through FTP. For documentation and data access, please visit the product page (<http://nsidc.org/data/nsidc-0051.html>).

Timing and Statistics of Autumn and Spring Annual Snow Cover for the Northern Hemisphere

This NOAA data set includes the timing of snow cover onset in the fall, the timing of last observed snow cover in the spring, and the snow-free duration from 1972 to 2000. Data are presented for land areas that exhibited snow cover in each of the 29 years. For more information, visit the product page (<http://nsidc.org/data/g02168.html>).

CONFERENCE NEWS

International Workshop on the Ice and Climate System of the Antarctic Peninsula: “Antarctic Peninsula Climate Variability: Observations, Models, and Plans for IPY Research”

The workshop will convene on 14 to 16 May 2006 at the University of Colorado, Boulder, to discuss recent research results and logistical cooperation for ice, ocean, climate, and biological topics regarding the Antarctic Peninsula (AP).

The meeting is intended as an opportunity to organize the several International Polar Year (IPY) efforts underway and planned for the AP, and to present individual science plans for potential collaborations.

NSIDC will host the workshop, which will include a series of invited and keynote talks, contributed talks, poster sessions, and break-out sessions for collaborative field research planning. Student participation is encouraged, and some travel funds for students are available. Workshop results, in the form of peer-reviewed manuscripts, will be published in a widely circulated polar science journal (such as *Antarctic Science*, *Polar Geography*, or *The Polar Record*).

Online registration is now available. Abstracts and registration are due in early April. For more information, please see the announcement on the NSIDC Web site (http://nsidc.org/events/IPY_APCV/).

NCAR and NSIDC Scientists Show Extreme Thaw of Near-Surface Permafrost by 2100

Recent analysis of model results by NCAR and NSIDC scientists suggests that global warming may decimate the top 10 feet (3 meters) or more of perennally frozen ground across the Northern Hemisphere, potentially altering ecosystems as well as damaging buildings and roads across Canada, Alaska, and Russia.

Climate model simulations from the National Center for Atmospheric Research (NCAR) show that more than half of this topmost layer of permafrost could thaw by 2050 and as much as 90 percent by 2100. The study, using the NCAR-based Community Climate System Model (CCSM), is authored by David Lawrence (NCAR) and coauthored by Andrew Slater (NSIDC). For more information, view the press release on the NCAR Web site (<http://www.ucar.edu/news/releases/2005/permafrost.shtml>).

NSIDC Partners with Arctic Explorers to Validate Satellite Data

A team led by British explorer Jim McNeill will take scientific snow and ice measurements as they make a record-breaking trek across the Arctic. The team's scientific sampling will be undertaken in collaboration with NSIDC scientists Ted Scambos and Walt Meier.

The team's measurements will help validate data from the NASA Ice, Cloud, and Land Elevation Satellite (ICESat), which will be taking simultaneous measurements from orbit. Scambos said that the combination promises "to give us the best possible chance of resolving the Arctic system to a new degree of accuracy."

More information about the project, called Ice Warrior, is on the team's Web site (<http://www.ice-warrior.com>).

NSIDC Tests Google Base

NSIDC is working with Google to test Google Base, a free extension of Google's existing content collection efforts. "We hope that helping test this new product will lead to increased discovery of our scientific data by data users and others," said Clark Judy, NSIDC Deputy Director.

Google Base (<http://base.google.com/>) is similar to a database, allowing content owners to describe and assign attributes to the information they submit. Google uses this metadata to better target search results to user needs. NSIDC has submitted metadata for a number of data sets to Google Base and plans to monitor the resulting traffic.

Nature recently published an article about Google's new effort, which is available by subscription on the *Nature* Web site (<http://www.nature.com/nature/journal/v438/n7067/full/438400a.html>).

NSIDC Scientists Release Arctic Textbook

Senior NSIDC scientist Mark Serreze and NSIDC director Roger Barry announce the publication of their textbook, *The Arctic Climate System*.

The Arctic Climate System provides a comprehensive and accessible overview of Arctic exploration, research, physical characteristics, and climatic features. The text details atmospheric heat budget and circulation; surface energy budget; hydrologic cycle; interactions among the ocean, atmosphere, and sea ice cover; arctic paleoclimates; and recent climate variability and climate projections. Details about the book are on the Cambridge University Press Web site (<http://cambridge.org/0521814189>).

NSIDC Scientist Receives Paper of the Year Award

NSIDC scientist Oliver Frauenfeld has received the Climate Specialty Group John Russell Mather Paper of the Year award from the Association of American Geographers. His paper, "A Distinctly Interdecadal Signal of Pacific Ocean-Atmosphere Interaction," was published in *Journal of Climate* in 2005; co-authors are R. E. Davis and M. E. Mann.

NSIDC's role in IPY Data Management

NSIDC wants to help ensure the long term legacy of the upcoming International Polar Year (IPY) by enhancing data preservation and access and by fostering a coordinated data management approach for all the projects within the IPY. Recently, the ICSU/WMO Joint Committee for IPY endorsed a proposal submitted by NSIDC to host the IPY Data and Information Service (DIS) in collaboration with many international partners, including the Electronic Geophysical Year. As a result of this effort, NSIDC's Mark Parsons has been appointed as a co-chair for the recently formed IPY Data Policy and Management Subcommittee.

NSIDC has also received an NSF grant for a planning workshop on IPY Data Management and NASA support for a prototype effort relating to arctic coastal zone data. Parsons and NSIDC director, Roger Barry, will host the planning workshop in early March at the IPY Programme Office in Cambridge, UK. There they will convene the Data Subcommittee to begin developing an implementation plan for DIS. Barry and Parsons will conduct a follow-up townhall meeting on IPY data management at the General Assembly of the European Geosciences Union in April. NSIDC will continue to seek support for the IPY DIS and will help international partners secure funding as well.

NSIDC welcomes your feedback on any aspect of IPY data management. Please direct questions or comments to Mark Parsons (parsonsm@nsidc.org). For more information, see the IPY Web site (<http://www.ipy.org>). NSIDC's DIS proposal is also located on the IPY Web site Expression of Intent database (<http://www.ipy.org/development/eoi/proposal-details.php?id=49>).

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CITING NSIDC DATA

Please acknowledge NSIDC as the source when you obtain data from us.

Refer to the data set documentation for suggested forms of acknowledgement and citation, or contact User Services for further information.

NSIDC also requests one reprint or the exact reference of any publication that was supported by data received from NSIDC.

We also greatly appreciate reprints of any publication related to snow and ice research, for inclusion in the World Data Center Information Center collection.

If you have published data that you wish to archive and make available to the scientific community, please contact User Services to discuss the content, form, and size of the data set. A list of guidelines for submitting data in electronic format is available.

SUBSCRIPTION, SUBMISSION & CONTACT INFORMATION

For information about any of the products or services offered by NSIDC, or to subscribe to *NSIDC Notes*, please contact User Services.

NSIDC welcomes the submission of short items from our readers that are of interest to the cryospheric community. Please use the following address to submit news items, publication notes, research notices, or brief articles for publication in NSIDC Notes.

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