AMSR-E Validation Data
Archive and Distribution

Michelle Holm
AMSR-E Validation Data Coordinator
September 13, 2005
Overview

- Product Team
- Status of Data Set Publishing
- Web Site Updates
- AMSR-E Validation Data Distribution
- What’s Next?
AMSRE Validation Campaigns

Cryospheric Data
- Cold Land Processes Experiment
  - CLP IOP 1: 19 - 24 February 2002
  - CLP IOP 2: 25 - 30 March 2002
  - CLP IOP 3: 19 - 27 February 2003
  - CLP IOP 4: 25 March - 2 April 2003
- Alaska Sea Ice
  - Beaufort Sea, Apr/May 2002
  - Sea of Okhotsk, Japan, 4 and 11 February 2003
  - Beaufort/Northern Bering Seas, 6 - 23 March 2003
  - Bering and Chukchi Seas, February/March 2005
- Antarctic (from Punta Arenas) Sea Ice, 2003 & 2004

Rainfall Data
- Eureka, CA, October 2002 through September 2004
- Iowa City, IA, October 2002 through September 2004
- BALTEX, October 1999 - February 2002

Soil Moisture Data
- SMEX02: Iowa, 24 June - 15 July 2002
- SMEX03: Oklahoma, Georgia, Alabama, 23 June - 18 July 2003
- SMEX03: Brazil, December 2003
- SMEX04-NAME: North American Monsoon Experiment, Mexico and Arizona, 2 August - 27 August 2004
- SMEX05 Iowa, June – July 2005
### Product Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Michelle Holm</td>
<td>Data Coordinator</td>
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<tr>
<td>Amanda Leon</td>
<td>Cryospheric Data Sets Coordinator User Services</td>
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<td>Cari Gallup</td>
<td>Archive Management Services</td>
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<tr>
<td>Lynn French</td>
<td>Technical Writer</td>
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<tr>
<td>Matt Savoie</td>
<td>Scientific Programmer</td>
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### Status of Data Set Publishing

| Cryosphere          | CLPX  
|                    | Meltpond  
|                    | AMSRIce03  
|                    | East Antarctic  
|                    | West Antarctic (AASI)  
|                    | Working with AMSRIce03 PIs to transfer data, define data sets, begin documentation. In process of following up with Antarctic PIs to determine status of data sets.  
| Rainfall           | Baltex  
|                    | Nexrad  
|                    | Wakasa Bay  
|                    | Brokered Data Sets  
|                    | Discussion regarding NEXRAD data in progress, server no longer accessible. Additional brokered data sets from Japan.  
| Soil Moisture      | SMEX02  
|                    | SMEX03  
|                    | SMEX04  
|                    | SMEX05  
|                    | SMEX07??  
|                    | SMEX02 complete. SMEX03 start documentation, complete data transfer. SMEX04 continuing data transfer, complete in 2006. SMEX05 receive data in 2006.  

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**Joint AMSR-E Science Team Meeting**  
Michelle Holm, NSIDC DAAC  
September 13-15, 2005
Web Site Updates

• Modified data listings
  o Quickly determine data availability/status
  o Improved navigation and access to data and documentation

• Adding content as experiments complete
  o Brokered data
  o Reports and supporting documentation
  o Related web links
Web Site Updates

AMSRE Validation Data

AMSRE Validation Data

Home | Cryospheric Data | Soil Moisture Data | Rainfall Data | Submit Data

Rainfall Data

Eureka, CA NEXRAD
Iowa City, IA
BALTEX
Wakasa Bay, Japan

The AMSRE rainfall validation effort consists of gauge-based and radar validation of AMSRE global rain rate products. Gauge-based studies investigate instantaneous rain rate, stratiform/convective rain type, and daily and monthly rain accumulation. The radar studies investigate water vapor profiles and cloud information such as vertical cloud structure, radar backscatter, and radiative properties of different cloud types.

Use the navigation at left to access data and information about the AMSRE rainfall data experiments.

Rainfall estimates from the National Space Development Agency of Japan’s AMSRE Instrument on Aqua and the Tropical Rainfall Measuring Mission (TRMM) Microwave Imager (TMI) for a rainfall event over the eastern U.S. on June 5, 2002. Images courtesy of Jeff McColloch of the University of Maryland and Majen Ferraro of NOAA, members of the AMSRE Science Team.
Web Site Updates

AMSRE Validation Data Management Portal - Mozilla Firefox

AMSRE Validation Data

Soil Moisture Data

Soil moisture field experiments conducted from 2002 to 2005 (SMEX02 - SMEX05) address a broad range of science and instrument questions related to soil moisture remote sensing. The objectives of the experiments are to provide data sets for studies of hydrologic processes and land-atmosphere interactions, validate spaceborne soil moisture measurements (such as from AMSRE), and evaluate new instrument technologies.

AMSRE validation studies linked to SMEX are designed to evaluate the accuracy of AMSRE soil moisture data. Specific validation objectives include assessing and refining soil moisture algorithm performance, verifying soil moisture estimation accuracy, investigating the effects of vegetation, surface temperature, topography, and soil texture on soil moisture accuracy, and determining the regions that are useful for AMSRE soil moisture measurements.

Use the navigation at left to access data and information about the SMEX02-SMEX05 soil moisture experiments.
#### SMEX03 Data Sets

The table below contains SMEX03 data sets received to date for AMSR-E Validation soil moisture experiments. The data are restricted to approved investigators. The restricted data do not yet have documentation. Please continue to check back for data set additions.

To access restricted SMEX data, you must be an AMSR-E Validation or SMEX investigator and register with NSIDC to obtain the password. After you get the password you can right-click on a link in the table and choose to open the link in a new window. In the password window that appears, enter the password, and click OK.

If you have problems accessing data or have questions, please contact [NSIDC User Services](http://nsidc.org/nsidc-division-communications/).

To learn more about the experiments or to access related links, view [About Soil Moisture Experiment 2003 (SMEX03)](http://nsidc.org/).  

<table>
<thead>
<tr>
<th>Ground Soil Moisture</th>
<th>Alabama</th>
<th>Georgia</th>
<th>Oklahoma</th>
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<tr>
<td>SMEX03 Soil Climate Analysis Network (SCAN)</td>
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<td>SMEX03 Regional Ground Soil Moisture Data</td>
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<td>SMEX03 Watershed Ground Soil Moisture Data</td>
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<td>SMEX03 Theta Probe Measurements</td>
<td>Documentation</td>
<td>Data</td>
<td>Data</td>
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<td>SMEX03 Micronet</td>
<td>Documentation</td>
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<tr>
<th>Satellite Remote Sensing</th>
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<tr>
<td>SMEX03 Vegetation Index and Water Index (NDVI and NDWI)</td>
<td>Documentation</td>
<td>Data</td>
<td>Data</td>
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<td>SMEX03 Thematic Mapper GEOTIFF Imagery</td>
<td>Documentation</td>
<td>Data</td>
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<thead>
<tr>
<th>Vegetation</th>
<th>Alabama</th>
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Data Distribution

AMSR Validation
Number of Files and Volume of Data Distributed

![Bar Chart showing the number of files and volume of data distributed by category: Soil Moisture, Cryosphere, CLPX, Rainfall. The CLPX category shows the highest number of files and the largest volume of data distributed.](chart.png)
Data Distribution

AMSR-E Validation
Number of FTP Accesses by Campaign

455 IPs
Bibliography

• One measure of use is number of papers published

• Obstacles
  ▪ Data are not regularly cited
  ▪ Difficult to gather comprehensive results
    ○ “Catchy” or unique names help
  ▪ Difficult to sort through results

• Quick look searching several databases
Bibliography


Bibliography


- Validation of AMSR-E Ice Concentration & Thickness in the Okhotsk Sea. Gayana (Concepción) 2004
Future Plans

• Continued stewardship of data sets
  ▪ “Close out”
    o Rainfall
    o SMEX02
    o Meltpond 2000
  ▪ Archival and Publishing of SMEX03 & Cryospheric Data Sets

• Assessing Use of Data Sets
  ▪ Distribution Statistics
  ▪ Bibliography
    o Feedback from Science Team on publishing
    o Interest in this as a product/activity?

• Outreach
  ▪ Priority?
  ▪ Audiences and Strategies
    o Conferences
    o Papers
    o Newsletter
    o Other?

• Other activities
  ▪ Science Team Feedback on Functionality and Priorities
Access and Contact Information

- To access or submit data:
  - [http://nsidc.org/data/amsr_validation](http://nsidc.org/data/amsr_validation)
  - NSIDC User Services
    nsidc@nsidc.org

- Questions or concerns:
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