

# **ARCSS/IARC/SEARCH Data-Modeling Workshop Planning ARCSS Committee Briefing**

**2 November 2006**

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# Rationale

- Current focus of ARCSS is on synthesis
- Need strategy to improve model-data integration
- Consistent with NSF cyberinfrastructure goals
- Efforts of AON, IPY, SEARCH, and ISAC also need this integration
- Consistent with direction of IARC activities

# Workshop Organizing Committee

- Charlie Vorosmarty (Co-Chair)
- Dave McGuire (Co-Chair)
- Marika Holland (AC)
- Larry Hinzman (IARC)
- Janet Intrieri (NSF)
- Maribeth Murray (AC)
- Josh Schimel (AC Chair)
- John Weatherly (Past Chair ARCSS Data Working Group)

# Workshop Goal

***Bring together representatives of the data provider and data user communities to identify innovative approaches for uniting data management & assimilation, recent developments in technology, and modeling that will advance synthesis studies of the Arctic system.***

# Community Representation

Participation is sought from a wide array of perspectives, with participants drawn from four major categories:

**Data Providers** -- *Scientists and agency representatives who make available to others operational and/or benchmark data sets, thereby supporting the further processing of information for a variety of end uses*

**Technology and Information Technology Experts** -- *Developers of innovation in sensor and sensor network design, including in situ and remote technologies, as well as data-serving, scientific visualization, and modeling frameworks*

**Data Consumers** -- *"Power Users" of data, scientists who routinely ingest raw and/or processed data streams, who synthesize and use this information to produce value-added products*

**Information Users** -- *"Downstream" data consumers including policy-makers, environmental managers, & outreach personnel, who use high level distillations of Earth system science data sets*

# Workshop Structure

The workshop will assemble a group of 30-40 individuals who will interact on-site for 3 days. The workshop will begin with plenary talks and plenary discussion on the state-of-the art in data-modeling-synthesis fusion. The workshop will consider a set of supporting discussion points:

- *What are the data and modeling needs to advance synthesis-focused arctic system science?*
- *What's currently working and what is not in terms of applying data and modeling for analysis to advance science?*
- *What are the existing impediments limiting the assimilation of disparate data sources needed to advance arctic synthesis studies.*
- *What are the practical steps forward as far as mechanisms, approaches, tools and procedures, organization, standards, etc?*

The smaller breakout group interactions will tackle a set of broad scientific challenges, each of which requires the innovative linkage of technology development, data base management, modeling, and IT fusion -- a set of "worked examples". To ensure a still broader set of perspectives, updates will be provided to and feedback solicited from the community prior to the workshop as well as after each day of the meeting.

# **Workshop Product**

**An Executive Summary of the effort, produced shortly after the workshop, will be prepared as a short report to NSF Program Managers and to the community at large. This will provide a summary of the key issue, common challenges, and general lessons that emerged during the workshop. It will include a set of recommendations for NSF investments in this arena. An expanded report will be issued 2 to 3 months after the workshop and will be targeted for a broad cross-section of readers, including policy-makers and the public.**

# Other Informational Items

- List of Participants to be Invited - ARCUS
- Broader Community Involvement - ARCUS
- Dates, Location, Venue
  - 8 to 10 January 2007
  - Santa Barbara, California
  - Venue - ARCUS