

**ARCSS Synthesis Workshop**  
**2–4 October 2007 (Tuesday–Thursday)**  
**Embassy Suites Old Town**  
**Alexandria, VA**

**WORKSHOP GOAL AND OBJECTIVES**

The goal of the ARCSS Synthesis Workshop is to formulate approaches and plan activities to achieve coordination, integration, and synthesis between existing ARCSS synthesis projects and efforts.

ARCSS research focuses on understanding the fundamental characteristics, dynamics, and controlling principles of the arctic system through integration and synthesis of knowledge from past and ongoing studies. In order to advance toward an integrated understanding of the system, the synthesis efforts in ARCSS focus explicitly on questions that link multiple system components and processes across a range of temporal and spatial scales.

Synthesis-focused projects represented at the workshop will include the Synthesis of Arctic System Science (SASS) projects; Synthesis of the Last 2000 Years of Climatic Variability from Arctic Lakes (ARCSS 2 kyr), Freshwater Integration Study (FWI), Study of Northern Alaska Coastal System, Human Dimensions in the Arctic System (HARC), and Shelf-Basin Interactions (SBI), with additional experts in areas of system modeling and data management. Representatives from Surface Transformations of the ArcTic Environment (STATE), Ocean-Atmosphere-Sea Ice-Snowpack (OASIS), Tracking Routes of Atmospheric Components in the Environment (Arctic TRACE) and other developing ARCSS Communities of Practice also will participate in the synthesis workshop.

Through a series of plenary presentations and discussions, and considerable time in break-out groups, workshop participants will explore how to achieve synthesis at the highest levels—beyond the project-level—to promote answering the central ARCSS question: What do the changes in the Arctic mean for the future of both the Arctic and the Earth?

Towards this end, the specific workshop objectives are:

- To share information and assess existing synthesis-focused ARCSS projects—the components and interactions studied, and expected and completed products;
- To discuss and formulate conceptual (e.g. thematic) and/or operational (e.g. data sharing) approaches and methods for integration between individual projects, groups of projects, and broader synthesis efforts; and
- To define an achievable product(s) and/or goal for broader synthesis among the constellation of current synthesis projects in the near-term (e.g., 2-year) time frame.

This workshop is part of an ongoing effort in the ARCSS Program to synthesize results of arctic system research. The need for synthesis has increased dramatically over the past few years as the pace of arctic change has accelerated. The analysis and integration activities that began with the start of the ARCSS Program in 1989, coupled with more recent investigations, provide compelling substance for this major synthesis effort.