

Report on CCSM Climate Change and Assessment (CCA) Working Group Meeting

Sixth Annual CCSM Workshop, The Village at Breckenridge

Co-Chairs: Warren Washington, Karl Taylor and Gerald Meehl,

Wednesday, 27 June, 2001

The CCA Working Group session at the Sixth Annual CCSM Workshop took place on Wednesday, 27 June, 2001. There were nine talks given in the session.

Jerry Meehl, filling in for Warren Washington who was unable to attend, started by giving a summary of CCA activities in the past year.

Aiguo Dai followed with a talk on simulations of 21st and 22nd century climate.

Changes in extreme precipitation events in the PCM were discussed in **Michael Wehner's** talk.

After lunch, the session continued with a talk by **Chuck Hakkarinen** on the ARCAS web access system for climate model data access, visualization and comparison.

Krishna AchutaRao's talk addressed vertical coherence of atmospheric temperature in models and observations. That talk was followed by Jerry Meehl who looked at projected future changes in Asian-Australian monsoon climate.

Julie Arblaster gave a talk on the Arctic Oscillation and future climate, and **John Weatherly** spoke on polar climate change and recent observations.

The final talk was by **Caspar Ammann** who outlined plans for putting together a dataset for future external forcing from the sun and explosive volcanism based on a statistical model.

The session ended with a discussion of CCA plans for the upcoming year:

A set simulations with black carbon distributions in PCM1 was noted to be just getting underway, headed by Jeff Kiehl and Ramanathan. A set of ensemble simulations with PCM1 using the new Ammann volcanic forcing dataset along with other forcings is nearly ready to begin. An important ongoing activity of the Working Group is further analyses of the CSM and PCM climate change simulations.

A T85 atmospheric model version of CCM3 furnished by Jim Hack will be coupled to PCM prior to a T85 version of the new CAM being tested with the new CCSM. A project on land use changes headed by Johannes Feddema at University of Kansas is underway. This project aims to produce a land use change dataset for use in 20th and 21st century climate change simulations. The ongoing problem of model data archival and access is being addressed in the DOE Earthgrid project.

The Accelerated Climate Prediction Initiative (ACPI), a project that started in the past year, will continue as an end-to-end climate change project. It spans the generation of global coupled model data, to regional models and downscaling activities, to impacts models and societal impacts studies.

It was noted that the new interactive carbon cycle version of CSM put together by Inez Fung will be run for future climate change studies. Ammann's statistically-generated future solar and volcanic forcing dataset will be used in climate scenario experiments. Tom Wigley is working on generating a time and space-varying SO₂ emission dataset for use in 20th century climate simulations. And finally, simulations with the PCM/CSM Transition Model (PCTM, formerly PCM2) and the new CCSM will be run for climate change experiments when both are ready.

