10th Annual CCSM Workshop
Climate Variability Working Group (CVWG) Meeting Report
Breckenridge, CO, June 23, 2005, 2:50-4:30 PM

The CVWG meeting included scientific presentations and a discussion of business issues including possible new sets of simulations to be conducted by the CVWG.

Presentations on Pacific Air-Sea Interaction
- The Effect of Tropical Instability Waves upon Atmospheric Intraseasonal Variability in CAM3 by Markus Jochum (NCAR)
    SSTs associated with tropical instability waves in a high-resolution ocean model lead to enhanced tropical atmospheric variability when they are used as boundary conditions in CAM.
- Spatial and Temporal Structure of ENSO in the 20th Century CCSM3 Integrations by Antonietta Capotondi (NOAA/Climate Diagnostics Center)
    Wind stress forcing in the CGCMs has a narrower meridional scale and is displaced westward compared to observations, which can lead to a shorter timescale for ENSO.
- North Pacific SLP Precursors to Tropical SST Variability in CCSM2 and 3 by Bruce Anderson (Boston University)
    Equatorial Pacific SST anomalies appear to be related to large-scale atmospheric modes of variability 12-15 months prior to the maturation of ENSO.
- North Pacific Decadal Climate Variability in CCSM3 by Young-Oh Kwon (NCAR)
    Robust decadal (16-20 yr) variability of SSTs along the Kuroshio Extension, that are forced by geostrophic currents, leads to upward surface heat fluxes and a local atmospheric response.

Business Items

- Adam Phillips (NCAR) gave a brief presentation on "The CCSM CVWG Web Page" A Guide to existing model runs and data sets:
http://www.ccsm.ucar.edu/working_groups/Variability/experiments.html

- Sumant Nigam (U. of Maryland) will replace Michael Alexander (NOAA/Climate Diagnostic Center) as the co-chair of the working group as of 8/1/05

Ideas for New CVWG Simulations
- CAM3 forced with prescribed observed SST
    − 3 basin tropical: Atlantic, Pacific, Indian Separate
    − Extend back to 1900 (currently 1950-2001)
    − Keep land surface and snow cover fixed at climatology

- CAM3 forced with sea ice from 21st Century CCSM3 runs

- Large ensemble CCSM3 T42 scenario simulations

    – Potential design: 30 members, 2000-2050,
    – 10-year CAM3 branch runs from 2050 (3-hourly output). For extreme event analyses and forcing of regional models)

- CAM3 coupled to prognostic depth mixed layer ocean model
    – Specify observed tropical SSTs with mixed layer model elsewhere
    – Make code available to scientific community

Participants:
Ernest Afiesimama, Nigerian Meteorological Agency
Paula Agudelo, GaTech
Ahsan Ahmed, BUP Centre for Water and Environment
Bruce Anderson, Boston University
Joseph Barsugli, NOAA/CIRES Climate Diagnostics Center
Uma Bhatt, University of Alaska, Geophysical Institute
Philip Cameron-Smith, Lawrence Livermore National Lab
Antonietta Capotondi, NOAA/CIRES Climate Diagnostics Center
John Chiang, University of California
Irene Cionni, University of L'Aquila
Jonathan Collier, Scripps
Clara Deser, NCAR (Co-Chair)
Gerald Geernaert, Los Alamos National Lab
Andrew Gettelman, NCAR
Arthur Greene, University of Columbia, IRI
Carlos Hoyos, GaTech
Michael Iacono, Atmospheric and Environmental Research
Renu Joseph, University of Maryland
Daniel Kirk-Davidoff, University of Maryland
Young-Oh Kwon, NCAR
S-J Lin, NOAA/CIRES Climate Diagnostics Center
Zhengyu Liu, University of Wisconsin-Madison
Jiping Liu, GaTech
Paulo Lucio, Center of Geophysics of Evora
Salil Mahajan, Texas A&M University
Eric Maloney, Oregon State University
Raimund Muscheler, NCAR
Sumant Nigam, University of Maryland
Pan Xiaohua, George Mason University/COLA
Adam Phillips, NC AR
William Putman, NASA/GSFC
Juliana Rew, NCAR
Ed Schneider, George Mason University/COLA
Christine Shields, NCAR
Amy Solomon, NOAA/CIRES Climate Diagnostics Center
Ying Sun, NOAA
Haiyan Teng, NCAR
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