

CVCWG Update & Plans

Susan Bates

June 2017

Co-chairs (alphabetically)

Susan Bates (NCAR)

Clara Deser (NCAR)

Peter Gleckler (PCMDI/LLNL)

Jerry Meehl (NCAR)

Shang-Ping Xie (Scripps)

Liaisons

Adam Phillips (NCAR)

Gary Strand (NCAR)



NCAR is sponsored by the
National Science Foundation



U.S. DEPARTMENT OF
ENERGY

Office of Science

Simulations

Completed and Available on ESG

- AMIP – prescribed SST/sea ice from LENS control
 - CESM1-CAM5.2, 200yrs
- GOGA AMIP
 - 10-member ensemble, CESM1-CAM5.2 1°
 - 1880-2014 (ERSSTv3b)
- Low Warming Runs (stabilizes at 1.5°)
 - 10-member ensemble CESM1-CAM5-BGC 1°
 - 1880-2014
 - LENS-like with different GHG concentrations
- 20th Century Transient
 - 3 members (one MOAR), CESM1-CAM5
- Low resolution pre-industrial control
 - CESM1-CAM5 2°, 1 member

Simulations

Completed and Available

- “All but one” single forcing (1850-2005)
 - CESM1-CAM5
 - GHGs, aerosols, land use, ozone, solar, volcano
 - 3 members each
- CAM5 decadal prediction hindcasts
 - 61 start dates (1954–2014)
 - 10 members for each start date
 - 10 years in length
- CAM5 decadal prediction hindcasts – No Volcano Forcing

Simulations Underway

- Fully coupled CESM1 1/4° Atmos - 1° Ocean
 - 1850 PI control, 20th Century, 1% CO₂
 - RCP2.6, RCP8.5
- CESM1-CAM5 decadal prediction hindcasts
 - Additional 30 members
 - Data available early next year

Planned Simulations

All simulations will be run with the nominal 1° configuration.

- CMIP6 simulations with CESM2
 - Flux Anomaly MIP (FAFMIP)
 - Detection/Attribution MIP (DAMIP)
 - Decadal Climate Prediction Project (DCPP)
- Other CESM2 simulations
 - F-case Control (2000+ years)
 - FAMIP-TOGA ensemble (10 members, 1880-2016)
 - Pacemaker Tropical Pacific ensemble (10 members, 1880-2016)

Useful Webpages

- CVCWG Website <http://www2.cesm.ucar.edu/working-groups/cvcwg>
- CVCWG published simulations <https://www2.cesm.ucar.edu/working-groups/cvcwg/cvcwg-simulations-finished-and-published>
- Climate Variability Diagnostics Package (CVDP) <http://www2.cesm.ucar.edu/working-groups/cvcwg/cvdp>
- Large Ensemble simulations <http://www.cesm.ucar.edu/experiments/cesm1.1/LE/>
- Last Millennium Ensemble <https://www2.cesm.ucar.edu/models/experiments/LME>



NCAR is sponsored by the
National Science Foundation



U.S. DEPARTMENT OF
ENERGY
Office of Science

Discussion/Input from you!

- Simulations?
- Additions to the *Climate Variability Diagnostics Package*?
- Additions to the *Climate Data Guide*?