

CVCWG Activities Update

27 Feb 2019

1. Newly available simulations

- Tropical SST AMIP ensembles with CAM5-1° 1880-2017 (10 member ensembles with ERSSTv3b, v4 and v5)
- Global SST AMIP ensemble with ERSSTv4 (10 members)
- Single-forcing ensembles with LENS tag (20 XGHG & 20 XAER 1920-2080; 15 XBMB & 5 LULC 1920-2029)

http://www.cesm.ucar.edu/experiments/cesm1.1/LE/#prescribed_sst

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1. Newly available simulations (continued)

CESM2 Project (1 degree)

- 1850 CAM Control (years 100-1200)
- 1850 WACCM Control (years 300-349)
- CAM Historical (1850-2014)
- WACCM Historical (1850-2014)
- CAM AMIP (1950-2014)
- WACCM AMIP (1850-2014)

<http://www.cesm.ucar.edu/experiments/>

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2. Underway simulations

CESM1.3 High Resolution Suite

(1/4° atm/Ind coupled to 1° ocn/ice, periods of high-frequency output)

- 1850 PI control (200 years)
- 20th Century (3 members, 1850-2005)
- RCP2.6 (3 members, 2006-2100)
- RCP4.5 (1 member, 2006-2100)
- RCP6.0 (1 member, 2006-2100)
- RCP8.5 (3 members, 2006-2100)
- 1% CO₂ (140 years)
- 4xCO₂ (140 years)

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2. Underway simulations

Pacemaker Simulations (1 degree, LENS tag)

(relax SST to idealized +/- states)

- IOD Historical (10 members, 1920-2005)
- IOD RCP8.5 (10 members, 2006-2013)
- IPO 1850 conditions (10 members, 30 years each)
- Southern Ocean Historical (1 member, 1930-2005)
- Southern Ocean RCP4.5 (1 member, 2006-2013)

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3. Upcoming simulations

CMIP6 MIPs (1 degree, CESM2.1)

- Flux Anomaly MIP
- Polar Amplification MIP (underway; Lantao Sun)
- Detection/Attribution MIP
- Scenario MIP

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3. Upcoming simulations (continued)

**CESM2 (1 degree) Large Ensemble
(1850-2100, ~30-40 members)**

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4. CESM2 Special Issue Collection

- ENSO & Pacific Decadal Variability
(Capotondi, Deser, DiNezio, Larson, Okumura and Phillips)
- Monsoons
(Meehl, Shields, Neale, Annamalai, Bates and Cook)

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5. Climate Variability Diagnostics Package (Adam Phillips)

- *new sortable metrics table*
- *new version for multi-model large ensembles (in development)*

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6. Climate Data Guide (75 expert contributions)

- *Record audience in Jan 2019 (31,000 unique visitors)*
- *Guidance forthcoming from Kevin Cowtan (air temperature/SST), Paul Dirmeyer (soil moisture), Zeke Hausfather (air temperature/SST), George Huffman (GPM), Ben Livneh (precip), Jennifer Marlon (paleofire), Gerard van der Schier (E-Obs), and others.*

<http://climatedataguide.ucar.edu>

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7. CLIVAR Working Group on Large Ensembles

- *data repository from 8 models (Flavio Lehner)*
- *summer workshop (July 24-26 2019 at NCAR)*

Abstracts due March 8

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6. Open discussion

- CAM6 lid (Gettelman)
- your input/requests

Extra

Example from new metrics table

40-member CESM1 Large Ensemble sorted according to pattern correlation with observed ENSO composite of global air temperature anomalies.

0.75

0.49

