

# CURRENT AND FUTURE CVCWG SIMULATIONS

2013

Single forcing simulations (CCSM4 complete, CESM1 underway)

Single forcing: idealized black carbon and sulfate

CFMIP (completed)

0.25° CAM5-SE AMIP and coupled

Hurricane effects, CESM4 1°

Large ensemble

Perturbed physics: single column and AMIP/fully-coupled

2014

Single forcing simulations

BGC RCP runs at 1°

Hurricane effects, CESM4 1°

CESM1 at 0.25° (long term runs)

CESM1/GLIMMER-CISM (ice sheets)

Decadal Prediction

CESM1/IAM at 1°

Time slices at 0.25°

Perturbed physics: land and atmos

2015

Single forcing at 0.25°

Improved BGC

RCPs at 0.25°

CESM1 at 0.25° RCPs

CESM1/GLIMMER-CISM

Decadal prediction at 0.5°

CESM1/IAM

Time slices at 0.125°

# CURRENT AND FUTURE CVCWG SIMULATIONS

2015-2016

CMIP6 for IPCC AR6

CAM5-SE at 0.0125°

Decadal prediction with CESM1 at 0.5°

CESM1 at 0.25° RCP runs

CESM1/GLIMMER-CISM

CESM1/BGC, RCP runs

CESM1/IAM

CESM2 at 0.25°

CESM2/BGC at 0.25°

Decadal prediction with CESM2 at 0.25°

Time slices with CAM6-SE at 0.0625° and 0.0125°

# CESM/CAM5 (1°) 1920-2080 30-Member Ensemble (historical + RCP8.5 forcing)

*led by Clara Deser and Jen Kay*

Wiki page

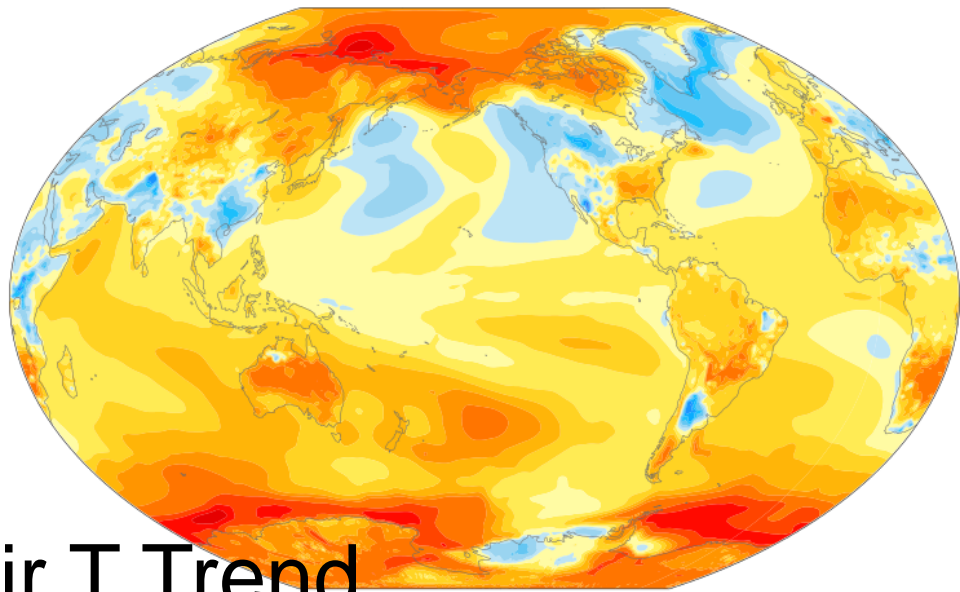
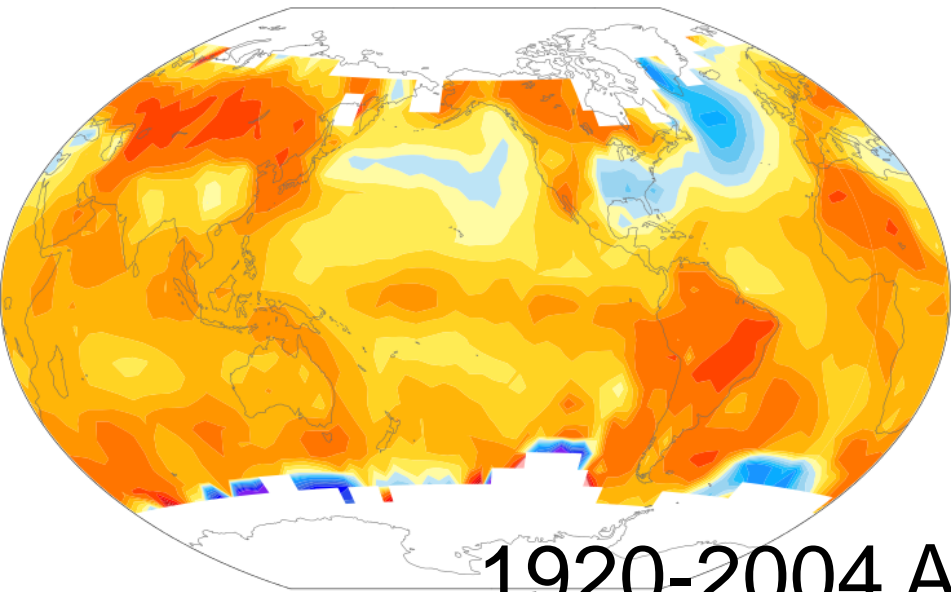
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Email list

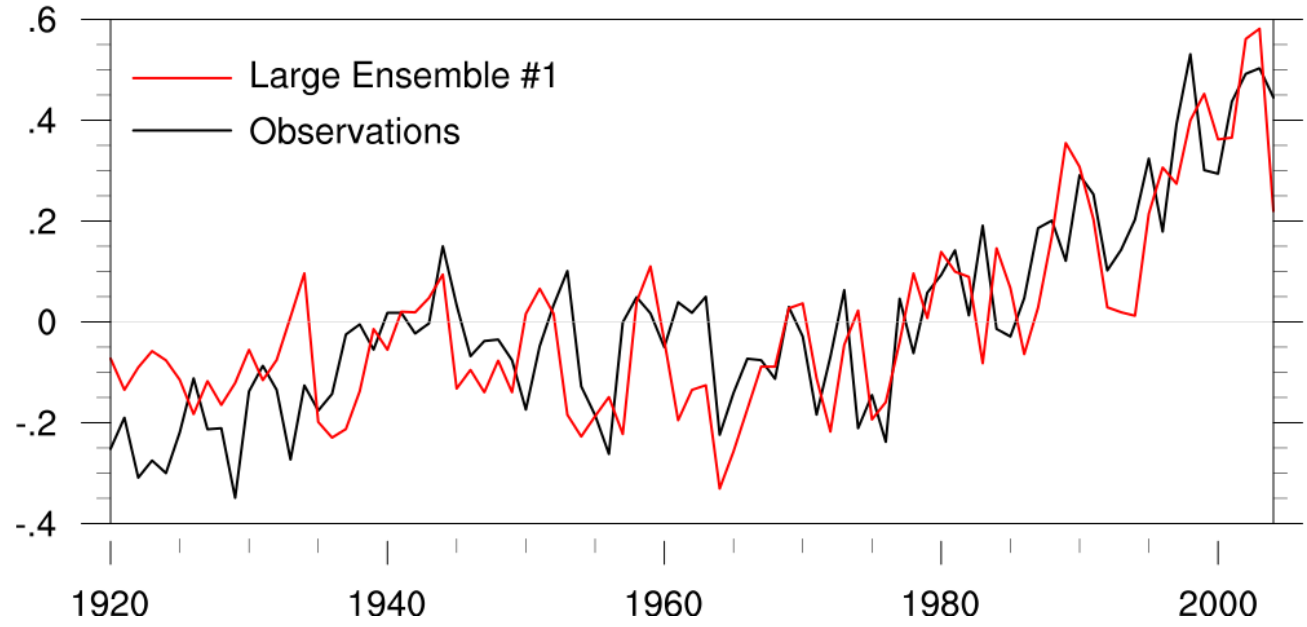
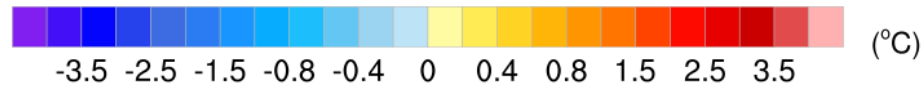
[http://mailman.cgd.ucar.edu/mailman/listinfo/cesmcam5\\_lrgens](http://mailman.cgd.ucar.edu/mailman/listinfo/cesmcam5_lrgens)

# Observations

# Member 1



## 1920-2004 Air T Trend



# CESM Climate Variability Diagnostics Package *(led by Adam Phillips and the Climate Analysis Section)*

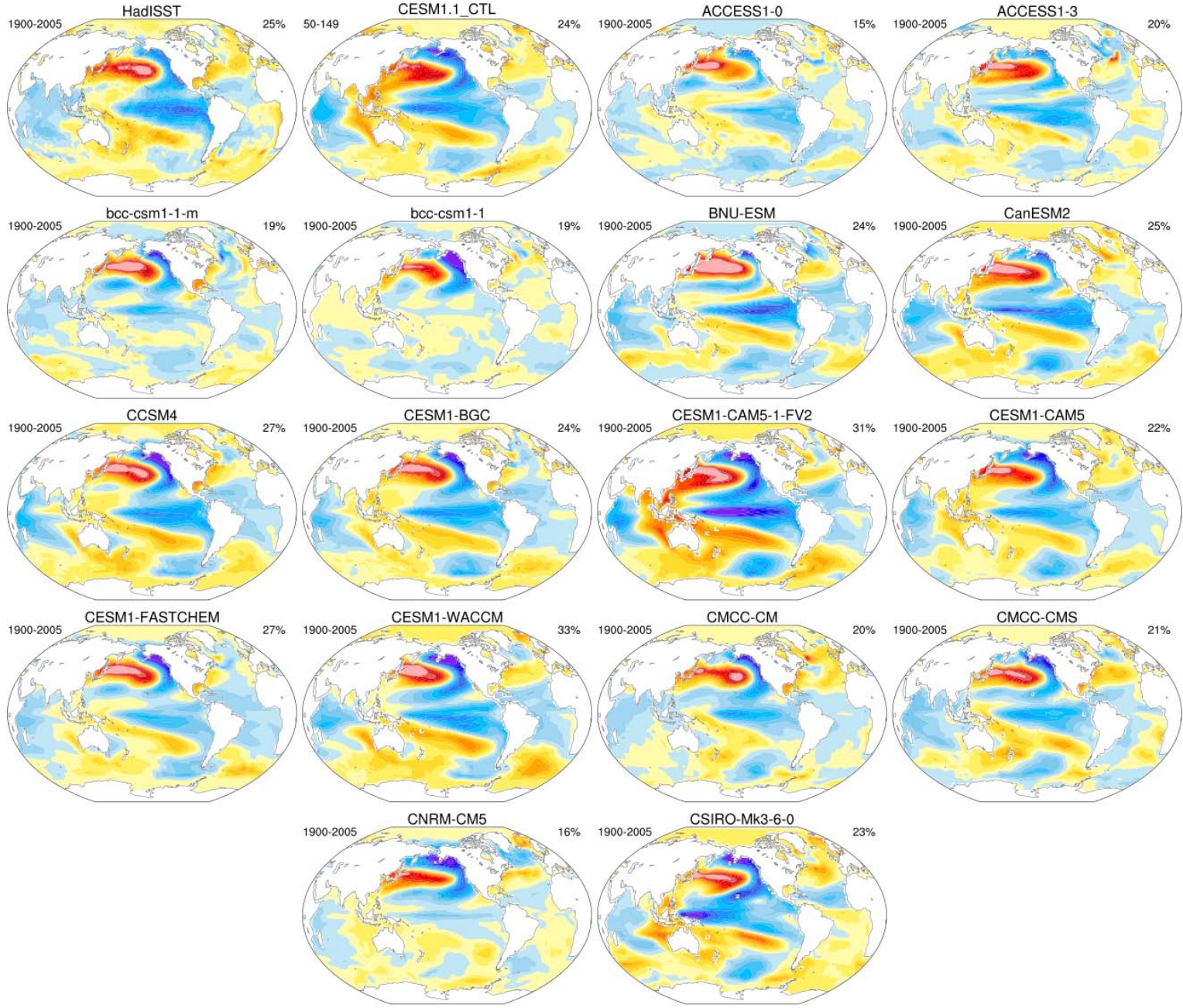
Purpose: To assess modes of coupled climate variability in CESM with comparison to observations and other CMIP5 models

We solicit your input!





# Pacific Decadal Oscillation



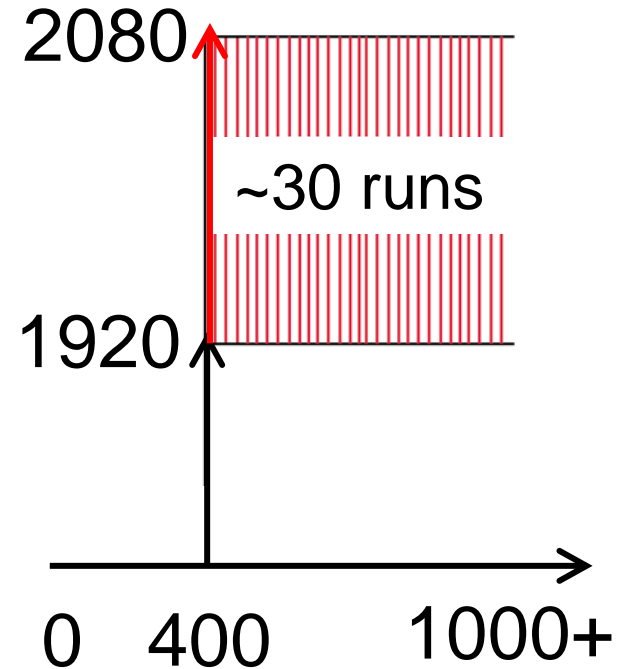
# CAM4-1° 1871-2012 AMIP 5-member ensembles (Global Ocean, Tropical Ocean)

[http://www.cesm.ucar.edu/working\\_groups/Climate/experiments/cesm1.0/](http://www.cesm.ucar.edu/working_groups/Climate/experiments/cesm1.0/)

*To be repeated with CAM5-1°,  
with and without IPCC radiative forcings*

# CESM/CAM5 (1°) 1920-2080 Large Ensemble

- Historical and RCP8.5 forcing
- Ensemble created with round-off error in air temp.
- Continuous daily and monthly output plus decades with 6-hourly output
- Archiving single variable time series
- Each member will take ~2 weeks on Yellowstone



## Status:

- 1850 control run at year 685
- First historical run complete (1850-2005)
- First RCP8.5 run started (2006-2080)