

**The CCSM CVWG Web Page:
A guide to existing model runs and datasets**

http://www.cesm.ucar.edu/working_groups/Variability/experiments.html

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Thanks to Clara Deser and Mike Alexander

Motivation: A web page that provides details about what CAM runs have been done, the location of any post-processed data, and what variables were saved would be a great community resource.

Quick overview of web page:

- Provides details on recent CAM/CCSM experiments.
- Links to sources of observational comparison datasets
- Lists FAQ's about model / data processing

[CVWG Home](#) -> Experiments

Climate Variability Working Group: Experiments

This page highlights experiments conducted with CAM by the CVWG or CCSM development team. Links are also provided to related CCSM3 integrations and "observational" comparison datasets. Click on the "Details" links for further information. Answers to Frequently Asked Questions (FAQ) are located [below](#).

| Model | Run Type | Res | Short Description |
|-------|-------------|-----|---|
| CAM3 | Control | T42 | 200 year control run forced by observed SST (climatological seasonal cycle). Details |
| CAM3 | Control | T85 | 100 year control run forced by observed SST (climatological seasonal cycle). Details |
| CAM3 | GOGA | T42 | 5 member GOGA ensemble forced by global observed time-varying SSTs from January 1950 through November 2001. Details |
| CAM3 | GOGA (IPCC) | T42 | 5 member GOGA ensemble forced by global observed time-varying SSTs from January 1950 through November 2001 plus volcanic, greenhouse gas, aerosol and solar forcings used in the CCSM3 "Climate of the 20th century" integrations. Details |
| CAM3 | GOGA | T85 | 5 member GOGA ensemble forced by global observed time-varying SSTs from January 1950 through November 2001. Details |
| CAM3 | GOGA (IPCC) | T85 | 5 member GOGA ensemble forced by global observed time-varying SSTs from January 1950 through November 2001 plus volcanic, greenhouse gas, aerosol and solar forcings used in the CCSM3 "Climate of the 20th century" integrations. Details |
| CAM3 | TOGA | T85 | 5 member TOGA ensemble forced by tropical (20N-20S) observed time-varying SSTs from January 1950 through November 2001. Climatological seasonal cycle of SSTs used polewards of 30°, with linear interpolation between 20° and 30°. Details |
| CAM2 | GOGA | T42 | 15 member GOGA ensemble forced by global observed time-varying SSTs from February 1949 through September 2001. Details |
| CCSM3 | Control | T42 | 1000 year control run, fully coupled. Details |
| CCSM3 | Control | T85 | 700 year control run, fully coupled. Details |

- 8 CAM experiments
- 2 CCSM3 control runs

CAM3 T85 TOGA Ensemble

| | |
|--------------------------------|--|
| Description | 5 member T85 TOGA (Tropical Ocean Global Atmosphere) ensemble forced by tropical (20N-20S) observed time-varying SSTs from January 1950 through November 2001. Climatological seasonal cycle of SSTs used polewards of 30°, with linear interpolation between 20° and 30°. |
| Model Version | cam2_0_2_dev63 |
| Variables Saved | Monthly: Defaults + TMQ, + ISCCP variables Daily (all averages, except where noted): U200, V200, U850, V850, T850, T500, T300, Z1000, Z700, Z500, Z300, FLNS, FSNS, FLNT, LHFLX, SHFLX, QFLX, OMEGA850, OMEGA500, TAUX, TAUY, TS, PSL, TREFHT, PRECT, TREFHTMN (min), TREFHTMX (max), TSMN (min), TSMX (max), TMQ 4X Daily (A=average, I=instantaneous): FLUT:A, OMEGA500:A, PRECT:A, U200:A, U850:A, Z500:A, PSL:I, Z700:I, Z300:I, TS:I |
| Mass Store Paths | /ASPHILLI/csm/eul128x256_d63vamip_trpsst_01 /ASPHILLI/csm/eul128x256_d63vamip_trpsst_02 /ASPHILLI/csm/eul128x256_d63vamip_trpsst_03 /ASPHILLI/csm/eul128x256_d63vamip_trpsst_04 /ASPHILLI/csm/eul128x256_d63vamip_trpsst_05 |
| Postprocessed Data Location | local (atm): on SCD machines tempest/bluesky: /ccsm/cvar/cam3toga01 local (atm): on SCD machines tempest/bluesky: /ccsm/cvar/cam3toga02 local (atm): on SCD machines tempest/bluesky: /ccsm/cvar/cam3toga03 local (atm): on SCD machines tempest/bluesky: /ccsm/cvar/cam3toga04 local (atm): on SCD machines tempest/bluesky: /ccsm/cvar/cam3toga05 |
| Postprocessed Data Description | Monthly atmospheric data only. One variable per file, 51 years per file (1950-01 -> 2000-12). The following variables are available: CLDLow, FLNS, FSNS, LHFLX, OMEGA, PRECC, PRECL, PS, PSL, SHFLX, T, TAUX, TAUY, TREFHT, TS, U, UBOT, V, VBOT, Z3. |
| Notes | The namelists are available on SCD machines tempest/bluesky: /cgd/cas/asphilli/cam3_runs/toga/eul128x256_d63vamip_trpsst_0*/namelist, *=1,2,3,4, or 5. (5/27/05) The fifth ensemble member is about to be submitted, expected completion time is late June, 2005. The following file was corrupted, and removed: /ASPHILLI/csm/eul128x256_d63vamip_trpsst_01/atm/hist/eul128x256_d63vamip_trpsst_01.cam2.h0.2001-10.nc In the mass store data transfer process some files were incompletely written to the mass store, resulting in files that fully or partially contain 0's. The files are not recoverable. The following files are known to have this problem: eul128x256_d63vamip_trpsst_01.cam2.h1.1959-03-15-00000.nc eul128x256_d63vamip_trpsst_01.cam2.h2.1964-08-29-00000.nc The parts of these files that are not filled with 0's can be used. atmospheric history file nomenclature: "h0" in the file name (ex. eul128x256_d63vamip_trpsst_01.cam2.h0.1962-09.nc) denotes monthly data, "h1" denotes daily data, "h2" denotes 4X daily data. |

CAM3 TOGA Ensemble Overview Page

Model Version

Variables Saved

Atmospheric / Oceanic (CCSM)
All timescales

Mass Store Path(s)

Postprocessed Data Location

Location on Mass Store
and/or SCD systems

Postprocessed Data
Description

Notes

Damaged/deleted files, sample
namelists, links to diagnostic
package results, etc.

CVWG Experiments Home Page

Observational Comparison Datasets

| | |
|----------------------|---|
| ERA 40 | ECMWF 40 year reanalysis. Data is available at T85 resolution in netCDF and grib format, as well as model resolution and 2.5 x 2.5 degree resolutions . Sep. 1957 - Aug 2003 |
| NCEP/NCAR Reanalysis | NCEP/NCAR reanalysis data is available on many different grids at: CDC (2.5° x 2.5° / T62, netCDF) NCAR's DSS (various grids, GRIB) IRI (2.5° x 2.5° / T62, netCDF) . Jan. 1948 - present |

FAQ

Q1 I do not have access to the mass store or SCD machines, how should I get the data? Can I ask the CVWG liason to get it for me?

- The CVWG currently doesn't have a liason. For small requests of post-processed data, you can email me (asphilli@ucar.edu), and I will be happy to copy the data to CGD's ftp site. For all other requests it is suggested that you get an SCD account, you can get that by clicking [here](#).

Q2 I noticed that the runs listed as CAM3 runs used a version of cam called cam2_0_2, and that in the history file names "cam2" is present, are these runs really CAM3 runs?

- Yes, cam2.0.2 is officially CAM3. Recent versions of CAM3 have been named cam3.1.* to avoid this type of confusion. Technically, all versions of cam2.0.2 -> cam3.0 are referred to as CAM3.0, while all versions of cam3.1 are referred to as as CAM3.1. CAM3.1 reproduces the same climate as CAM3.0. Please visit the [CAM webpage](#) for more details.

Q3 Some of the post-processed data is in 20-year chunks per netCDF file, how can I merge all these 20-year files together into one file?

- It is suggested that you use the [netCDF operators](#) to concatenate the files together. The operators are available on most CGD/SCD systems. In this case you would use nccat, which will concatenate a number of files into one file:
 - `nccat b30.009.cam2.h0.Z3.0400-01_cat_0419-12.nc b30.009.cam2.h0.Z3.0420-01_cat_0439-12.nc`
`/ptmp/asphilli/b30.009.cam2.h0.Z3.0400-0439.nc`

Q4a When I do a ncdump on a CAM3 monthly history file, the date inside the file doesn't match the file name, why?

Q4b When I read a CAM3 file into GrADS, GrADS says that the time is a different time from the file name. Which is correct?

ERA40 data now
available at T85
resolution in netCDF
or grib format

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CVWG Business Discussion

1) Experiments for next CSL allocation (due mid-Sep)

- Coupling CAM3 to a prognostic depth mixed layer model, then run TOGA AMIP experiments with prescribed SSTs in the tropical Pacific
- 21st century ensemble integrations of CCSM3 (T42)
(with Climate Change Working Group)
~30 member ensemble, 2000-2050, to investigate uncertainties in response
- Other experiments?? (TOGA T42 CAM3?)

2) CCSM Tropical Variability Task Team

formed to address causes of tropical biases in CCSM3

contact Phil Rasch (AMWG), Bill Large (OMWG) or Clara Deser (CVWG)

3) Sumant Nigam, new co-chair of CVWG