



What's new in the AMWG diagnostics package ?

- **New datasets/diagnostics are available**
- **Dataset information is on Climate Data Guide**
- **Swift version of the AMWG diagnostic package**

Cécile Hannay, Dennis Shea, Jen Kay, Andrew Mai (NCAR)
Ben Hillman (University of Washington)
Sheri Mickelson, Robert Jacob (Argonne National Laboratory)

and also Rich Neale, Mariana Vertenstein, John Dennis, Matthew Woitaszek,
Taleena Sines, David Schneider, and many others

AMWG Meeting, Boulder, 1 - 3 February

AMWG diagnostic package webpage

- It is **not new** but it is **regularly updated**.

<http://www.cgd.ucar.edu/amp/amwg/diagnostics>

Navigation: CESH Administration Working Groups Models Events News Publications

Community Earth System Model

THE AMWG DIAGNOSTICS PACKAGE

- Package overview
- What's new ?
- Where to find the code ?
- AMWG dataset information
- Support ?
- Mailing list
- Known Bugs/Problems

AMWG LINKS

- CAM webpage
- CAM development webpage
- CESM webpage
- CESM post processing

USEFUL LINKS

- NCL

THE AMWG DIAGNOSTICS PACKAGE

About the AMWG diagnostics package

The AMWG diagnostics package produces over 600 plots and tables from CCSM (CAM) monthly netcdf files.

The diagnostics package computes climatological means of the simulations and produced [plots and tables](#) of the mean climate in a variety of formats. The diagnostics package can be used to compare two CCSM (CAM) model simulations or for comparing a model simulation to the [observational and reanalysis data](#). (Information about the AMWG datasets can be found in the [Climate Data Guide](#).)

Examples of the webpages created by the diagnostics package

Included in the package are HTML files which provide the infrastructure for a basic website for the display of all your plots and tables. The c-shell script has a switch for creating webpages automatically. When this is used the end result of running the script is a tar file of all the plots in gif, jpg or png format and the needed html files organized in the proper subdirectories. The user can then untar this file in a directory of their choosing and create a link to it.

- Model fields compared with observational data [plots](#)
- Comparison of two different models [plots](#)

AMWG diagnostic package webpage

- It is **not new** but it is **regularly updated**.

<http://www.cgd.ucar.edu/amp/amwg/diagnostics>

The screenshot shows the AMWG diagnostic package webpage. The navigation bar at the top includes links for CESM, Administration, Working Groups, Models, Events, News, and Publications. The main content area features a sidebar with several sections: 'THE AMWG DIAGNOSTICS PACKAGE' (highlighted with a red box), 'AMWG LINKS', and 'USEFUL LINKS'. The 'THE AMWG DIAGNOSTICS PACKAGE' section contains a list of topics: Package overview, What's new?, Where to find the code?, AMWG dataset information, Support?, Mailing list, and Known Bugs/Problems. The 'AMWG LINKS' section includes links to CAM webpage, CAM development webpage, CESM webpage, and CESM post processing. The 'USEFUL LINKS' section includes a link to NCL. The main content area also features a section titled 'THE AMWG' with sub-sections for 'About the AMWG' and 'Examples of the AMWG'. A red box highlights a list of topics, with an arrow pointing from the 'Where to find the code?' link in the sidebar to the 'Where to find the code?' item in the list. The list of topics includes: Package overview, What's new?, Where to find the code?, AMWG Dataset information, Support?, Mailing list, and Known Bugs/Problems.

- Package overview
- What's new ?
- Where to find the code ?
- AMWG Dataset information
- Support ?
- Mailing list
- Known Bugs/Problems

New datasets/diagnostics

New Datasets (some coming soon)

- **COSP simulator diagnostics (see: Jen Kay's talk)**
- **ERA-Interim**
- **MERRA**
- **Uwisc LWP**
- **...**

Updated datasets

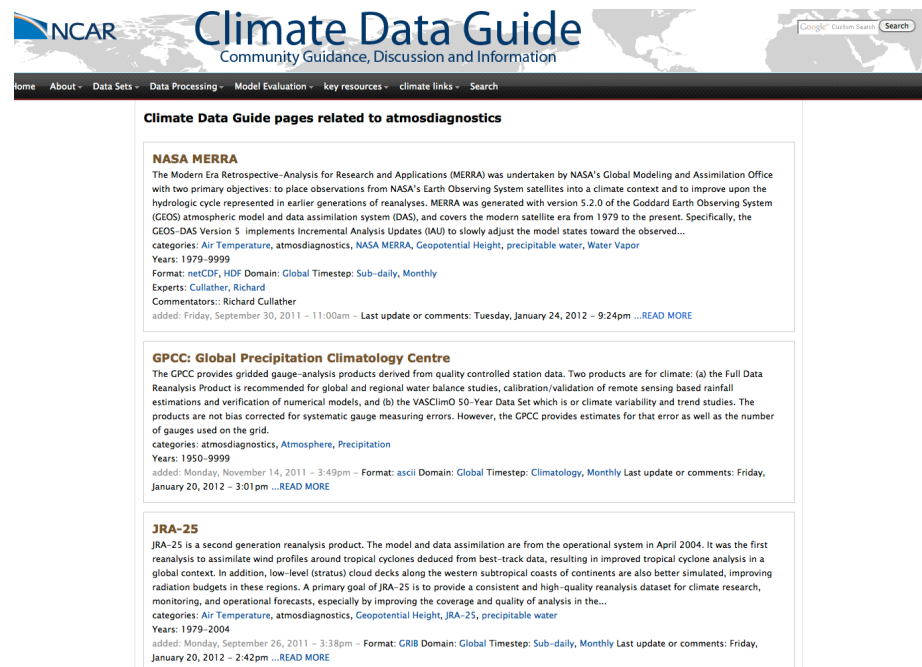
- **TRMM, GPCP, CloudSat, CERES-EBAF...**

Dataset information is on Climate Data Guide

- Provides information on the **strengths** and **limitations** of observational datasets and their applicability to model evaluations (including expert guidance, commentary, and questions)

<http://climatedataguide.ucar.edu>

- Page on the AMWG datasets



The screenshot shows the Climate Data Guide website interface. At the top, there is a navigation bar with the NCAR logo and the title "Climate Data Guide" with the subtitle "Community Guidance, Discussion and Information". Below the navigation bar, there is a search bar and a list of datasets related to atmospheric diagnostics. The datasets listed are NASA MERRA, GPCC: Global Precipitation Climatology Centre, and JRA-25. Each dataset entry includes a brief description, categories, years, format, and domain information.

Climate Data Guide pages related to atmosdiagnostics

NASA MERRA
The Modern Era Retrospective-Analysis for Research and Applications (MERRA) was undertaken by NASA's Global Modeling and Assimilation Office with two primary objectives: to place observations from NASA's Earth Observing System satellites into a climate context and to improve upon the hydrologic cycle represented in earlier generations of reanalyses. MERRA was generated with version 5.2.0 of the Goddard Earth Observing System (GEOS) atmospheric model and data assimilation system (DAS), and covers the modern satellite era from 1979 to the present. Specifically, the GEOS-DAS Version 5 implements Incremental Analysis Updates (IAU) to slowly adjust the model states toward the observed...
categories: Air Temperature, atmosdiagnostics, NASA MERRA, Geopotential Height, precipitable water, Water Vapor
Years: 1979-9999
Format: netCDF, HDF Domain: Global Timestep: Sub-daily, Monthly
Experts: Cullather, Richard
Commentators: Richard Cullather
added: Friday, September 30, 2011 - 11:00am - Last update or comments: Tuesday, January 24, 2012 - 9:24pm ...[READ MORE](#)

GPCC: Global Precipitation Climatology Centre
The GPCC provides gridded gauge-analysis products derived from quality controlled station data. Two products are for climate: (a) the Full Data Reanalysis Product is recommended for global and regional water balance studies, calibration/validation of remote sensing based rainfall estimations and verification of numerical models, and (b) the VASCLimO 50-Year Data Set which is or climate variability and trend studies. The products are not bias corrected for systematic gauge measuring errors. However, the GPCC provides estimates for that error as well as the number of gauges used on the grid.
categories: atmosdiagnostics, Atmosphere, Precipitation
Years: 1950-9999
added: Monday, November 14, 2011 - 3:49pm - Format: ascii Domain: Global Timestep: Climatology, Monthly Last update or comments: Friday, January 20, 2012 - 3:01pm ...[READ MORE](#)

JRA-25
JRA-25 is a second generation reanalysis product. The model and data assimilation are from the operational system in April 2004. It was the first reanalysis to assimilate wind profiles around tropical cyclones deduced from best-track data, resulting in improved tropical cyclone analysis in a global context. In addition, low-level (stratus) cloud decks along the western subtropical coasts of continents are also better simulated, improving radiation budgets in these regions. A primary goal of JRA-25 is to provide a consistent and high-quality reanalysis dataset for climate research, monitoring, and operational forecasts, especially by improving the coverage and quality of analysis in the...
categories: Air Temperature, atmosdiagnostics, Geopotential Height, JRA-25, precipitable water
Years: 1979-2004
added: Monday, September 26, 2011 - 3:38pm - Format: GRIB Domain: Global Timestep: Sub-daily, Monthly Last update or comments: Friday, January 20, 2012 - 2:42pm ...[READ MORE](#)

Swift version of the AMWG Diagnostic Package

- Same diagnostic plots using the **task-parallel Swift system**
- Task-parallelism **reduce the total time** needed to produce the plots.
- Development of this version was **sponsored** by the Office of Biological and Environmental Research of the U.S. Department of Energy's Office of Science.

Swift version of the AMWG Diagnostic Package

- Same diagnostic plots using the **task-parallel Swift system**
- Task-parallelism **reduce the total time** needed to produce the plots.
- Development of this version was **sponsored** by the Office of Biological and Environmental Research of the U.S. Department of Energy's Office of Science.

Release for friendly users:

See info on AMWG diagnostics package webpage:

<http://www.cgd.ucar.edu/amp/amwg/diagnostics/news.html>

Thanks !