

# CESM Postprocessing

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# Quick look tools.

```
module load ncview
```

```
module load nco
```

```
module load netcdf
```

```
ncview file.nc
```

```
ncra files.nc files_avg.nc
```

```
ncdump -h file.nc | less
```

```
ncdiff file1.nc file2.nc diff.nc
```

# Some canned plots.

```
cd /glade/u/home/dbailey/polar_tutorial
```

```
ice_north.ncl / ice_south.ncl
```

```
ice_north.py / ice_south.py
```

```
module load ncl
```

```
ncl ice_north.ncl
```

# Some canned plots (2).

Open a geyser window:

```
execgy
```

```
module load python/2.7.14
```

Open python virtual environment:

```
ncar_pylib
```

```
python ice_north.py
```

\* Note that Python 2.7 only works here.



[https://github.com/NCAR/CESM\\_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide](https://github.com/NCAR/CESM_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide)

The screenshot shows a web browser displaying the GitHub repository for NCAR/CESM\_postprocessing. The address bar shows the URL: [https://github.com/NCAR/CESM\\_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide](https://github.com/NCAR/CESM_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide). The repository name is NCAR / CESM\_postprocessing, with 20 Unwatch, 12 Star, and 12 Fork actions. The page is titled 'cheyenne and geyser quick start guide' and was edited by Alice Bertini 26 days ago with 5 revisions. The page content includes a section 'Cheyenne and geyser Quick-Start Guide' with instructions for users to follow steps to get started in using the CESM python based post processing tools. A list of steps is provided, starting with setting up the shell environment. For tcsh users, instructions are given to add lines to the .tcshrc file. A code block shows the specific commands for setting up the environment.

GitHub, Inc. [US] | [https://github.com/NCAR/CESM\\_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide](https://github.com/NCAR/CESM_postprocessing/wiki/cheyenne-and-geyser-quick-start-guide)

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github.com

NCAR / CESM\_postprocessing

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## cheyenne and geyser quick start guide

Alice Bertini edited this page 26 days ago · 5 revisions

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Cheyenne and Geyser Quick Start Guide

Processor-counts, load-balancing and memory management on Cheyenne and Geyser

CESM Python Post Processing User's Guide

CESM Python Post Processing Developer's Guide

CESM Python Post Processing Git Workflow

Cheyenne/geyser users may follow these steps to get started in using the CESM python based post processing tools:

1. Set up your shell environment with variables POSTPROCESS\_PATH and POSTPROCESS\_PATH\_GEYSER to point to the pre-installed virtualenv's and an alias to activate the virtualenv on cheyenne before running create\_postprocess. This step only needs to be done once.

For tcsh users, in your .tcshrc add the following lines:

```
### CESM Postprocessing
setenv POSTPROCESS_PATH /glade/p/cesm/postprocessing_ch
setenv POSTPROCESS_PATH_GEYSER /glade/p/cesm/postprocessing_geyser
setenv PATH /glade/apps/contrib/virtualenv/12.0.7:$PATH
alias cesm_pp_activate 'source $POSTPROCESS_PATH/cesm-env2/bin/activate.csh'
```

# CESM Postprocessing Quick Start

`cesm_pp_activate`

`create_postprocess --caseroot $CASEROOT`

Edit `env_postprocess.xml` for standalone case.

Edit `env_diags_($comp).xml` file.

`qsub ($comp)_averages`

Check logs in `logs` subdirectory.

`qsub ($comp)_diagnostics`

\* I will have ascii instructions in:

`/glade/u/home/dbailey/polar_tutorial/polar3.txt` and `polar4.txt`

# CESM Postprocessing Exercise

1. Set up standalone post-processing for your first model case. Note, you have only 5 days in your simulation.
2. Run the diagnostic suite for your component of interest (atm, ice, lnd, ocn).
3. Copy the html files back to your laptop and use a web browser to look at them.

# CESM Postprocessing

## Exercise cont

But Dave, I only have 5 days! That's o.k. because like a cooking show, I have already baked some simulations for you!

`/glade/scratch/dbailey/archive/polar_case1`

`/glade/scratch/dbailey/archive/polar_case2`



# CESM Postprocessing

## Exercise cont

4. Set up standalone post-processing for your second model case. Note, you have only 5 days in your simulation.
5. Run the diagnostic suite, but this time comparing polar\_case2 back to polar\_case1, for your component of interest (atm, ice, lnd, ocn).
6. Copy the html files back to your laptop and use a web browser to look at them.

# CESM Postprocessing

## Exercise cont

What if my diagnostics did not come out? Again, like a cooking show, I have already baked some diagnostic plots for you:

[http://webext.cgd.ucar.edu/B1850/polar\\_case1](http://webext.cgd.ucar.edu/B1850/polar_case1)

[http://webext.cgd.ucar.edu/B1850/polar\\_case2](http://webext.cgd.ucar.edu/B1850/polar_case2)

