

Last Millennium 850AD Control Setup: Instructions for using the B1850CNCN Compset

850AD :: Control

REQUIRED: The following namelist changes will produce an 850AD control simulation from a B1850C5CN compset.

1. For use with CESM model versions: **cesm1.1, cesm1.2**
2. `./create_newcase -case /myPath/myCase -mach yellowstone -compset B1850C5CN f19_g16`
3. `cd /myPath/myCase`
4. `./cesm_setup`
5. Edit `env_run.xml` using `xmlchange`:

e.g.: `prompt> ./xmlchange -file env_run.xml -id RUN_STARTDATE -val 0850-01-01`

```
./xmlchange -file env_run.xml -id RUN_STARTDATE -val 0850-01-01
./xmlchange -file env_run.xml -id RUN_REFCASE -val b.e11.B1850C5CN.f19_g16.0850cntl.001
./xmlchange -file env_run.xml -id RUN_REFDATE -val 0850-01-01
```

6. **Edit user_nl_cam:**

Note: `solar_data_ymd` needs to be set to “08500101” for the control simulation

```
solar_data_file = '/PATH/atm/cam/solar/SOLAR_SPECTRAL_VK_Lean_849-2008_annual_c130909.nc'
solar_data_type = 'FIXED'
solar_data_ymd  = 08500101
co2vmr          = 279.265e-6
ch4vmr          = 674.6e-9
n2ovmr          = 266.9e-9
f11vmr          = 12.48e-12
f12vmr          = 0.0
bnd_topo       = '/glade/p/cesmdata/cseg/inputdata/atm/cam/topo/consistent-topo-fv1.9x2.5_c130424.nc'
```

7. **Edit user_nl_clm :: fsurdat and fpftdyn** (PATH = /glade/p/cesm/cseg/inputdata)

```
! surface dataset
fsurdat = '/PATH/lnd/clm2/surfddata/surfddata_1.9x2.5_simyr0850_c130710.nc'

! LULC
fpftdyn = '/PATH/lnd/clm2/surfddata/surfddata.pftdyn_1.9x2.5_hist_simyr0850-1100_c130710.nc'
```

8. **Edit user_nl_cpl:**

Note: This `orbital_ityear_align` assignment works with: `RUN_STARTDATE = 0850-01-01`

```
orb_iyear = 850
orb_iyear_align = 850
orb_mode = 'fixed_year'
```

9. **Edit user_nl_rtm**

```
finidat_rtm = 'b.e11.B1850C5CN.f19_g16.0850cntl.001.rtm.r.0850-01-01-0000.nc'
```

10. **Compile and run model as usual**