AMWG Diagnostic Set (Version 20140207):

Instructions for running with Chemistry: The most tested setting is to compare two model simulations. This includes comparisons of both model simulations with observations.

- Follow Script instruction to define control and test run: you need to define both control and test run, and they have to be different
- Produce climatology:
  set test_compute_climo = 0 # (0=ON,1=OFF)
  set cntl_compute_climo = 0 # (0=ON,1=OFF)
  after you created the climatology, you can set it to 1, if you want to run a new climatology, make sure to delete the *nc files in your test_path_diag and ctnl_path_diag directory to not take the old fields.
- setenv DIAG_HOME /glade/p/cesm/amwg/amwg_diagnostics_dev
- set names of your runs: make sure to set the following to get the run names you defined:
  set custom_names = 0 # (0=ON,1=OFF)
  # if needed set the names
  set test_name = SD-CAM5-Chem # test case name
  set cntl_name = SD-CAM4-Chem # control case name
- to keep ps files for better plots: set delete_ps = 1 # (0=ON,1=OFF) delete postscript files

Chemistry Specific:

- use model to model comparison setting
  #set CNTL = OBS # observed data (reanalysis etc.)
  set CNTL = USER # user defined model control (see below)
  If you want to compare to OBS, some of the chemistry diagnostics won't work
- set strip_off_vars = 1 # (0=ON,1=OFF) #set to OFF for running with Chemistry or the chemistry variables will be not used

Select Chemistry Set:

- set wset_1 = 0 # (0=ON,1=OFF) vertical zonal mean contour plots (log scale)
- set cset_1 = 0 # (0=ON,1=OFF) tables of global budgets
- set cset_2 = 0 # (0=ON,1=OFF) vertical zonal mean contour plots (log scale)
- set cset_3 = 0 # (0=ON,1=OFF) Ozonesonde comparisons
- set cset_4 = 0 # (0=ON,1=OFF) Column Ozone/CO Comparisons
- set cset_5 = 0 # (0=ON,1=OFF) NOAA Aircraft comparisons
- set cset_6 = 0 # (0=ON,1=OFF) Emmons Aircraft climatology
- set cset_7 = 0 # (0=ON,1=OFF) surface comparisons (ozone, co, improve) ; co and ozone currently not available

- Known Problems:
    - some sets do have problems if Ozone and Z3 is not included in the output
    - set sig_lvl = 0.05 #does not work for chemistry comparisons currently
    - NOAA climatology does not work in comparison to OBS