Team Meeting Oct. 29, 2009

1) Current status of the FVCubed Integration (Will & Brian, Bill)

- default values and resolution dependencies
  Bill claims default values can be used up to 0.25 degree, but
  it is not clear that they run with defaults on J/W test cases
- bug and/or IBM compiler problem in vertical remapping routine
- status of all test cases
  Test cases 1, 2 are working. Test case 5 runs with modification
  of n_split
- problems with the advection test case
  Bizarre! Trying to run test case 3 on Cray XT5 to get a
  different perspective. The advection blob is still being
  truncated in the first time step.
- order of the dynamics & physics, reversed ?
  Order is now reversed, in line with other dycores (physics first
  then dynamics). Brian will take a quick look to make sure.
- solved problems in inidat (Brian)
  issues with PIO (ldof); fixed.
  Test: read in initial file, commented out dycore, wrote out history; identical
  latitudes, longitudes on initial file are not correct
- status of restart I/O
  may have same issues as inidat with ldof function; Will will check
- status of ESMF clock
  removed
- are we in sync with NASA/GFDL, can we access the repository
  Will will contact Bill; Brian suggested he might be able to
  trickle these into the vendor branch.
- versions & version control at NCAR
  cam3_6_57

2) Open issues (Will, Brian, Jim)

- open issues since last call and earlier this year
  https://wiki.ucar.edu/display/ccsm/CAM+FVcubed+Open+Software+Engineering+Issues

Has been updated; several points have been resolved

- plans how to tackle them, priorities
- physics coupling
- time schedules

3) Performance or porting bottlenecks (Will, Pat?)

- can we run on the Cray system at high resolutions (memory problem solved?)
  Basically solved (although we still use load_balance -1)
- hybrid parallelization
  waiting to see
- plans for performance analysis
  some initial results on Cray XT3 sent by Will.
  For proper benchmarking: one month run with monthly averaging

4) Plan for future model tests:

- dry dycore tests
- physcis coupling, aqua-planet
- Mark's experience with NCAR's tri-grid coupling strategy

Latest AMIP runs with land and ocean; Jim reports that it is running.

5) Documentation on web page
https://wiki.ucar.edu/display/ccsm/Implement+FVCUBED+Dycore