

Stage-1-6

Move surbrtize branch changes of dynpkg onto cam_dev

Move changes from cam2_0_2_dev14_brnch_subrtize branch for dynpkg and following to latest cam_dev. Do a cvs diff of cam3_0_27_brnchT_subrtize21 with cam3_0_27 on the following files to get an idea of the changes. dycore_is_first method created. Create private module data such as:

```
h3.
h3.  Private module data
h3.
  real(r8) :: gw(plat)           ! Gaussian weights
  real(r8) :: detam(plev)        ! intervals between vert full levs.
  real(r8) :: cwava(plat)        ! weight applied to global integrals
  real(r8) :: coslat(plon)       ! Cosine of latitude
  real(r8) :: rcoslat(plon)      ! Inverse of cosine of latitude
  real(r8) :: rpmid(plon,plev)   ! Inverse of mid-point pressure
  real(r8) :: etamid(plev) = nan ! vertical coords at midpoints
  real(r8) :: deltime = nan      ! twice time step unless nstep=0
```

private to the dynpkg module. Make initial the same for all dycores and move to the control directory.

Ideal Engineering Time: 2 weeks

dynpkg becomes a module, with dyn_get_, dyn_set, dyn_alloc, dyn_parameter_init, dyn_init, dyn_run, dyn_final public methods.

Approx 900 lines of changes. Create 1-init, 2-run methods for CAM.

- cam.F90
- stepon.F90 – partial
- dynpkg.F90
- commap.F90
- spmd_dyn.F90