Monthly mean AMIP		
SPCAM: netcdf spcam30_4km_32c.cam2.h0.1986-01		
CAM: netcdf eul64x128_d50amip.cam2.h0.1986-01		
Variable	SP-CAM	CAM
P0 = reference pressure	х	х
lat = latitude	х	х
lon = longitude	х	х
$crm_x = crm horiz.$ distance in x	х	
crm_y = crm horiz. distance in y	х	
crm_z = crm nominal pressure levels	х	
lev = hybrid level at midpoints (1000*(A+B))	х	х
ilev = hybrid level at interfaces (1000*(A+B))	х	х
isccp_prs = Mean ISCCP pressure	х	х
isccp_tau = Mean ISCCP optical depth	х	х
isccp_prstau = Mean pressure (mb).mean optical depth (unitless)/1000	х	х
time = time	х	х
time_bnds = time interval endpoints	х	х
ntrm = spectral truncation parameter M	х	х
ntrn = spectral truncation parameter N	х	х
ntrk = spectral truncation parameter K	х	х
ndbase = base day	х	х
nsbase = seconds of base day	х	х
nbdate = base date (YYYYMMDD)	х	х
nbsec = seconds of base date	х	х
mdt = timestep	х	х
nlon = number of longitudes	х	х
wnummax = cutoff Fourier wavenumber	х	х
hyai = hybrid A coefficient at layer interfaces	х	х
hybi = hybrid B coefficient at layer interfaces	х	х
hyam = hybrid A coefficient at layer midpoints	х	х
hybm = hybrid B coefficient at layer midpoints	х	х
gw = gauss weights	х	х
ndcur = current day (from base day)	х	х
nscur = current seconds of current day	х	х
date = current date (YYYYMMDD)	х	х
datesec = current seconds of current date	х	х
nsteph = current timestep	х	х
CLDHGH = Vertically-integrated high cloud ptop < 400 mb	х	х
CLDICE = Grid box averaged ice condensate amount		х
CLDLIQ = Grid box averaged liquid condensate amount		х
CLDLOW = Vertically-integrated low cloud ptop > 700 mb	х	х
CLDMED = Vertically-integrated mid-level cloud 700 mb > ptop > 400 mb	х	х
CLDTOT = Vertically-integrated total cloud if lwp>0.02 kg/m2	х	х
CLOUD = Cloud fraction	х	х
CLOUDR = Cloud fraction based on -30dBZ radar reflectivity	х	
CLOUDTOP = Cloud Top PDF	х	
CLOUDY = Binary flag for daytime cltot >=cldmin	х	х
CMFDQ = Q tendency - Hack convection		х
CMFDQR = Q tendency - shallow convection rainout		х

Variable	SP-CAM	<u>CAM</u>
CMFDT = T tendency - Hack convection		х
CMFMC = Moist convection mass flux		х
CONCLD = Convective cloud cover		х
DCQ = Q tendency due to moist processes	х	х
DPRES = Pressure thickness of layer	х	
DTCOND = T tendency - moist processes	х	х
DTH = T horizontal diffusive heating	х	х
DTV = T vertical diffusion	х	х
FICE = Fractional ice content within cloud	х	х
FISCCP1 = grid box fraction covered by each ISCCP D level cloud types	х	х
FLNS = Net longwave flux at surface	х	х
FLNSC = Clearsky net longwave flux at surface	х	х
FLNSOI = FLNS over open ocn and ice	х	х
FLNT = Net longwave flux at top of model	х	х
FLNTC = Clearsky net longwave flux at top of model	х	х
FLUT = Upwelling longwave flux at top of model	х	х
FLUTC = Clearsky upwelling longwave flux at top of model	х	х
FLWDS = Downwelling longwave flux at the surface	х	
FLWDSC = Clearsky downwelling longwave flux at the surface	х	
FSDS = Downwelling solar flux at surface	х	х
FSDSC = Clearsky downwelling solar flux at surface	х	х
FSNS = Net solar flux at surface	х	х
FSNSC = Clearsky net solar flux at surface	х	х
FSNSOI = FSNS over open ocn and ice	х	х
FSNT = Net solar flux at top of model	х	х
FSNTC = Clearsky net solar flux at top of model	х	х
FSNTOA = Net solar flux at top of atmosphere	х	х
FSNTOAC = Clearsky net solar flux at top of atmosphere	х	х
FSUTOA = Upwelling shortwave flux at the TOA	х	
FSUTOAC = Clearsky upwelling shortwave flux at the TOA	х	
GCLDLWP = Grid-box cloud water path	х	х
HCLDAREA = High cloud area (ISCCP)	х	
HEIGHT = Height above surface	х	
ICEFRAC = Fraction of sfc area covered by sea-ice	х	х
ICLDLWP = In-cloud cloud water path	х	х
LANDFRAC = Fraction of sfc area covered by land	х	х
LCLDAREA = Low cloud area	х	
LHFLX = Surface latent heat flux	х	х
LHFLXOI = LHFLX over open ocn and ice	х	х
LWCF = Longwave cloud forcing	х	х
MCLDAREA = Middle cloud area (ISCCP)	х	
MEANPTOP = Mean cloud top pressure	х	х
MEANTAU = Mean optical thickness	х	х
MEANTTOP = Mean cloud top temperature	Х	х
OCNFRAC = Fraction of sfc area covered by ocean	Х	х
OMEGA = Vertical velocity (pressure)	х	х
OMEGAT = Vertical heat flux	Х	х
PBLH = PBL height	Х	х

Variable	SP-CAM	CAM
PHIS = Surface geopotential	Х	х
PRECC = Convective precipitation rate	х	х
PRECL = Large-scale (stable) precipitation rate	х	х
PRECSC = Convective snow rate (water equivalent)	Х	х
PRECSH = Shallow Convection precipitation rate	Х	х
PRECSL = Large-scale (stable) snow rate (water equivalent)	х	х
PRES = Pressure	х	
PS = Surface pressure	х	х
PSL = Sea level pressure	х	х
Q = Specific humidity	х	х
QC = Q tendency - shallow convection LW export		х
QFLX = Surface water flux	х	х
QRL = Longwave heating rate	х	х
QRS = Solar heating rate	х	х
RELHUM = Relative humidity	х	х
SHFLX = Surface sensible heat flux	х	х
SHFLXOI = SHFLX over open ocn and ice	Х	х
SNOWHICE = Water equivalent snow depth	х	х
SNOWHLND = Water equivalent snow depth	X	x
SOLIN = Solar insolation	X	x
SPDQ = Q tendency due to CRM	X	
SPDQC = QC tendency due to CRM	X	
SPDQI = QI tendency due to CRM	X	
SPDT = T tendency due to CRM	X	
SPMC = Total mass flux from CRM	X	
SPMCDN = Downdraft mass flux from CRM	X	
SPMCUDN = Unsaturated downdraft mass flux from CRM	X	
SPMCUP = Updraft mass flux from CRM	X	
SPMCUUP = Unsaturated updraft mass flux from CRM	X	
SPPFLX = Precipitation flux from CRM	X	
SPQC = Cloud water from CRM	X	
SPQG = Graupel from CRM	X	
SPQI = Cloud ice from CRM	X	
SPQPEVP = Prec. water evaporation from CRM	X	
SPQPFALL = Prec. water fall-out from CRM	X	
SPQPFLX = Precip. water flux from CRM	X	
SPQPSRC = Prec. water source from CRM	x	
SPQPTR = Prec. water transport from CRM	x	
SPQR = Rain from CRM	x	
SPQS = Snow from CRM	x	
SPQTFLX = Nonprecip. water flux from CRM	x	
SPQTLS = L.S. Vapor Tendency from CRM	x	
SPQTTR = Nonprec. water transport from CRM	x	
SPTLS = L.S. LIWSE Tendency from CRM	x	
SRFRAD = Net radiative flux at surface	x	х
SWCF = Shortwave cloud forcing	x	x
T = Temperature	x	x
TAUX = Zonal surface stress	x X	x
	~	~

Variable	SP-CAM	САМ
TAUX_CRM = zonal CRM stress perturbation	x	
TAUY = Meridional surface stress	х	х
TAUY_CRM = merid CRM stress perturbation	х	
TCLDAREA = Total cloud area (ISCCP)	х	х
TGCLDIWP = Total grid-box cloud ice water path	х	х
TGCLDLWP = Total grid-box cloud liquid water path	х	х
TIMINGF = CRM CPU usage efficiency factor	х	
TMQ = Total (vertically integrated) precipitatable water	х	х
TPHYSTND = T physics tendency	х	
TREFHT = Reference height temperature	х	х
TS = Surface temperature (radiative)	х	х
TSMN = Minimum surface temperature over output period	х	х
TSMX = Maximum surface temperature over output period	х	х
TTEND = T tendency	Х	
U = Zonal wind	X	X
UU = Zonal velocity squared	X	x
V = Meridional wind	Х	X
VD01 = Vertical diffusion of Q	X	x
VQ = Meridional water transport	X	X
VT = Meridional heat transport VU = Meridional flux of zonal momentum	X	x
VV = Meridional velocity squared	X	x
ZOM = Momentum roughness length for CRM	X X	Х
Z3 = Geopotential Height (above sea level)	x	х
_CLDHGH = Vertically-integrated high cloud convenctional cloud param	X	^
_CLDLOW = Vertically-integrated low cloud convenctional cloud param	x	
	λ	
_CLDMED = Vertically-integrated mid-level cloud convenctional cloud param	х	
_CLDTOT = Vertically-integrated total cloud convenctional cloud param	х	
_CLOUD = Cloud fraction from convenctional cloud param	х	
_CLOUDY = Binary flag for cltot >=cldmin conventional cloud param	х	
_CONCLD = Convective cloud cover convenctional cloud param	х	
_FISCCP1 = grid box fraction covered by each ISCCP D level cloud types		
conventional cloud param	х	
_FLNS = Net longwave flux at surface	Х	
_FLUT = Upward LW flux at TOM	X	
_FSDS = Flux Shortwave Downwelling Surface FSNS = Net solar flux at surface	X	
—	X	
_FSNTOA = Net solar flx at top of Atmos _LWCF = LW cloud forcing	X	
_MNPTOP = Mean cloud top pressure conventional cloud param	X	
_MNTAU = Mean optical thickness conventional cloud param	X	
_MNTTOP = Mean cloud top temperature conventional cloud param	X X	
_QRL = Longwave heating rate	x	
_QRS = Solar heating rate	x	
_SWCF = SW cloud forcing	x	
_TCLDAR = Total cloud area conventional cloud param	x	