1. Run script\_july.sh and script\_july2.sh for PS TS T CLOUD CLDICE CLDLIQ RHREFHT TREFHT FSDS FSNS CH4 CO2 N2O O3 Q SOLIN

2. cdo merge PS\_SST2Tet2\_0010\_0060.nc T\_SST2Tet2\_0010\_0060.nc TS\_SST2Tet2\_0010\_0060.nc CLOUD\_SST2Tet2\_0010\_0060.nc CLDLIQ\_SST2Tet2\_0010\_0060.nc CLDICE\_SST2Tet2\_0010\_0060.nc RHREFHT\_SST2Tet2\_0010\_0060.nc TREFHT\_SST2Tet2\_0010\_0060.nc FSDS\_SST2Tet2\_0010\_0060.nc FSNS\_SST2Tet2\_0010\_0060.nc CH4\_SST2Tet2\_0010\_0060.nc CO2\_SST2Tet2\_0010\_0060.nc N2O\_SST2Tet2\_0010\_0060.nc O3\_SST2Tet2\_0010\_0060.nc Q\_SST2Tet2\_0010\_0060.nc SOLIN\_SST2Tet2\_0010\_0060.nc SST2Tet2\_0010\_0060.nc

3. Do the following steps:

ncpdq -a -lat SST2Tet2\_0010\_0060.nc CCt1.nc

ncpdq -a -lev CCt1.nc CCt2.nc

cdo setzaxis,myzaxis.txt CCt2.nc CCt3.nc

cdo expr,'FSUS=FSDS-FSNS' CCt3.nc CCt4.nc

cdo setmissval,0 CCt4.nc CCt5.nc

cdo merge CCt3.nc CCt5.nc CCt6.nc

cdo expr,'DewPTemp=(243.04\*(log(RHREFHT/100)+((17.625\*(TREFHT-273.15))/(243.04+(TREFHT-273.15))))/(17.625-log(RHREFHT/100)-((17.625\*(TREFHT-273.15))/(243.04+(TREFHT-273.15)))))+273.15' CCt6.nc CCt7.nc

cdo setmissval,0 CCt7.nc CCt8.nc

cdo merge CCt6.nc CCt8.nc CCt9.nc

cdo expr,'ALBEDO=((FSDS-FSNS)/FSDS)' CCt3.nc ALBEDO.nc

cdo setmissval,1 ALBEDO.nc ALBEDO2.nc

cdo merge CCt9.nc ALBEDO2.nc SST2Tet2.nc

cdo aexpr,N2O=N2O\*1000000 SST2Tet2.nc LSnew1.nc

cdo aexpr,CO2=CO2\*1000000 LSnew1.nc LSnew2.nc

cdo aexpr,CH4=CH4\*1000000 LSnew2.nc LSnew3.nc

cdo aexpr,O3=O3\*47.9982/28.9644 LSnew3.nc LSnew4.nc

Then scp to own computer and do cloudconversion.py

**Whole time series:**

script\_january\_wholetseries.sh

script\_jul\_wholetseries.sh

ncpdq -a -lat T\_SST2Tet2\_0010\_0060\_jan\_\_wholetseries.nc HS2000Jan\_wholet1.nc

ncpdq -a -lev HS2000Jan\_wholet1.nc HS2000Jan\_wholet2.nc

cdo setzaxis,myzaxis.txt HS2000Jul\_wholet2.nc HS2000Jul\_wholet.nc