files are named stem.step.proc.nc

the name of the simulation

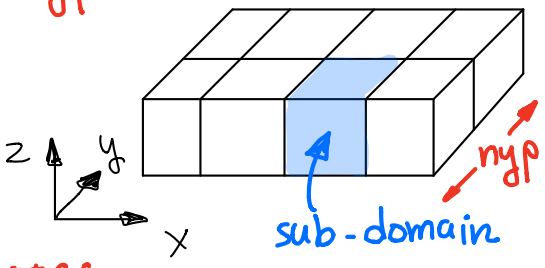
integer time step

integer number of sub-domain

```
% Copyright (C) 2019, Georgios Matheou, University of Connecticut

% Change these three lines
stem='dcbl';     % file stem
step=14203;      % time step
nfiles=64;       % number of files

%% Loop through files to figure out global grid dimensions
for nf=0:nfiles-1
    file=[stem '.' num2str(step) '.' num2str(nf) '.nc'];

    disp(file)

    if nf==0
       nxp=ncreadatt(file,'/','NXPROC');
       nyp=ncreadatt(file,'/','NYPROC');

       xoff=zeros(nxp,1);
       yoff=zeros(nyp,1);

       dx=mean(diff(ncread(file,'xm')));
       dy=mean(diff(ncread(file,'ym')));
       dz=mean(diff(ncread(file,'zm')));

    end

    mm=size(ncread(file,'theta'));

    rx=ncreadatt(file,'/','WRXID');
    ry=ncreadatt(file,'/','WRYID');

    xoff(rx+1)=mm(2);
    yoff(ry+1)=mm(3);

    fprintf(1,'%s %g %g\n', file, rx, ry);

end

% global grid dimensions
nx=sum(xoff);
ny=sum(yoff);
nz=mm(1);

% global grid
x=((1:nx)-nx/2-0.5)*double(dx);
y=((1:ny)-ny/2-0.5)*double(dy);
z=((1:nz)-0.5)*double(dz);

% index offsets of individual tiles
for i=nxp:-1:2
   xoff(i)=sum(xoff(1:i-1));
end
xoff(1)=0;

for i=nyp:-1:2
   yoff(i)=sum(yoff(1:i-1));
end
yoff(1)=0;


% allocate space for variables
theta=zeros(nz,nx,ny);  % potential temperature
```

change these

Number of tiles in x-y
nxp * nyp



coordinates of sub-domain

nxp

WRXID = 0, ..., nxp-1
WRYID = 0, ..., nyp-1

mm(1:3) is the grid dimensions of sub-domain

coordinates of cell centers

```
u=zeros(nz,nx,ny);      % zonal wind
v=zeros(nz,nx,ny);      % medirional wind
w=zeros(nz+1,nx,ny);    % vertical velocity
q=zeros(nz,nx,ny);      % total water mixing ratio
l=zeros(nz,nx,ny);      % liquid water mixing ratio
b=zeros(nz,nx,ny);      % buoyancy

for nf=0:nfiles-1
    file=[stem '.' num2str(step) '.' num2str(nf) '.nc'];

    fprintf(1,'%s\n', file);

    rx=ncreadatt(file,'/','WRXID')+1;
    ry=ncreadatt(file,'/','WRYID')+1;

    theta_local=ncread(file,'theta');
    u_local=ncread(file,'u');
    v_local=ncread(file,'v');
    w_local=ncread(file,'w');
    q_local=ncread(file,'q');
    b_local=ncread(file,'buoyancy');
    l_local=ncread(file,'l');

    mm=size(b_local);

    for i=1:mm(2)
        ii=xoff(rx)+i; % global index
        for j=1:mm(3)
            jj=yoff(ry)+j; % global index

            theta(:,ii,jj)=theta_local(:,i,j);
            u(:,ii,jj)=u_local(:,i,j);
            v(:,ii,jj)=v_local(:,i,j);
            w(:,ii,jj)=w_local(:,i,j);
            q(:,ii,jj)=q_local(:,i,j);
            b(:,ii,jj)=b_local(:,i,j);
            l(:,ii,jj)=l_local(:,i,j);

        end
    end
end

rho=ncread(file,'density'); % density

clear theta_local u_local v_local w_local q_local b_local l_local;

% save([stem '.' num2str(step) '.mat'])
```

ADD more here to read more variables

These are variables in the NetCDF file

contiguous variables

this is what we want

uncomment this to save