

```

%% import climatology
clima = ncread('NOAA_OI_climate_1983-2012.nc','seasonalT');
lon = ncread('NOAA_OI_climate_1983-2012.nc','lon');
lat = ncread('NOAA_OI_climate_1983-2012.nc','lat');
%% set date
yy = 1982;
mm = 4;
dd = 13;
%% read netcdf
sst1 = ncread(['oisst-avhrr-v02r01.',num2str(yy),',',num2str(mm,
'%02d'),',',num2str(dd, '%02d'),'.nc'],'sst');
%% Calculate anomalies
sst_anom = sst1-clima(:,:,103);
%% find coords

lon_start=187.6250; % closest to 187.5 in OISST grid
lat_start=62.6250; % closest to 62.5
idx_lon=find(lon==lon_start); % positioning
idx_lat=find(lat==lat_start);
idx1=find(lon>=lon(idx_lon)-1.25 & lon<=lon(idx_lon)+1.25) % coords range

```

```

idx1 = 11×1
    746
    747
    748
    749
    750
    751
    752
    753
    754
    755
    :

```

```

idx2=find(lat>=lat(idx_lat)-1.25 & lat<=lat(idx_lat)+1.25) % makes vector of 11
centered on lon/lat of interest

```

```

idx2 = 11×1
    606
    607
    608
    609
    610
    611
    612
    613
    614
    615
    :

```

```
%% confirm coords
lon(idx1)
```

```
ans = 11×1 single column vector
```

```
186.3750
186.6250
186.8750
187.1250
187.3750
187.6250
187.8750
188.1250
188.3750
188.6250
:
```

```
lat(idx2)
```

```
ans = 11×1 single column vector
```

```
61.3750
61.6250
61.8750
62.1250
62.3750
62.6250
62.8750
63.1250
63.3750
63.6250
:
```

```
%% SSTas on pixels around 187.6250,62.6250
sst2 = sst_anom(idx1,idx2)
```

```
sst2 = 11×11 single matrix
```

```
1.3076    1.0870    0.7991    0.3241   -0.0685   -0.2922   -0.3145 ...
1.2319    0.9216    0.6358    0.1719   -0.2131   -0.3457   -0.3432
1.0631    0.7561    0.3724   -0.0203   -0.3344   -0.3906   -0.3835
0.8818    0.5952    0.1277   -0.2156   -0.4560   -0.4443   -0.4208
0.6715    0.3938   -0.0289   -0.2799   -0.4696   -0.4450   -0.4225
0.4027    0.1002   -0.0976   -0.2944   -0.4770   -0.4543   -0.4379
0.3181   -0.0682   -0.1909   -0.3258   -0.4765   -0.4708   -0.4352
0.1739   -0.0989   -0.1891   -0.3009   -0.4396   -0.4466   -0.3782
0.1409   -0.0894   -0.1618   -0.2682   -0.3998   -0.4014   -0.3094
0.0761   -0.1294   -0.1936   -0.2828   -0.4014   -0.3829   -0.2409
:
```

```
pix_anom=squeeze(nanmean(nanmean(sst2)))
```

```
pix_anom = single
```

```
-0.1471
```