

Exercise: Reading data

AIM: To show you how to access data in files.

Issues covered:

- Opening data files
- Examining files and variables
- Selecting variables
- Selecting spatio-temporal subsets

Instructions

1. Open the data file '~/my_cdat_files/data/var1.nc'
2. Query the 'f' cdms file object to see what you can do with it.
3. List all the variables in the file.
4. Extract the metadata for the 'temp' variable.



Remember that calling the cdms file object (with "()") will extract the actual data whereas slicing (with "[]") will extract only the metadata (i.e. axes, grids, attributes etc).

5. Examine the axes for the 'temp' variable.
6. Select a subset in the vertical dimension using the 'slice' object. Grab the vertical slice (0,2) of the data.
7. Further subset the extracted variable over the African region (45S-50N, 0-50E).
8. Print the value of the first time step on the second level at the fourth latitude and fifth longitude.
9. Print the variable attributes.
10. Extract just the longitude axis information.
11. Get the missing value used in the 'temp2' variable.