Read and Write Data

Viewing NetCDF: Ncview and ncBrowse

Tools, tools, tools

- NetCDF is such a popular format that there are thousands of tools that can read it.

- Here are a couple that allow you to quickly plot and view the contents of a NetCDF file.

- They both allow selection and quick view/plotting functionality that can be useful when working with data.

ncview

ncview:

- Visual browser for netCDF

- View simple animations along various dimensions

- Change look of graphs/maps
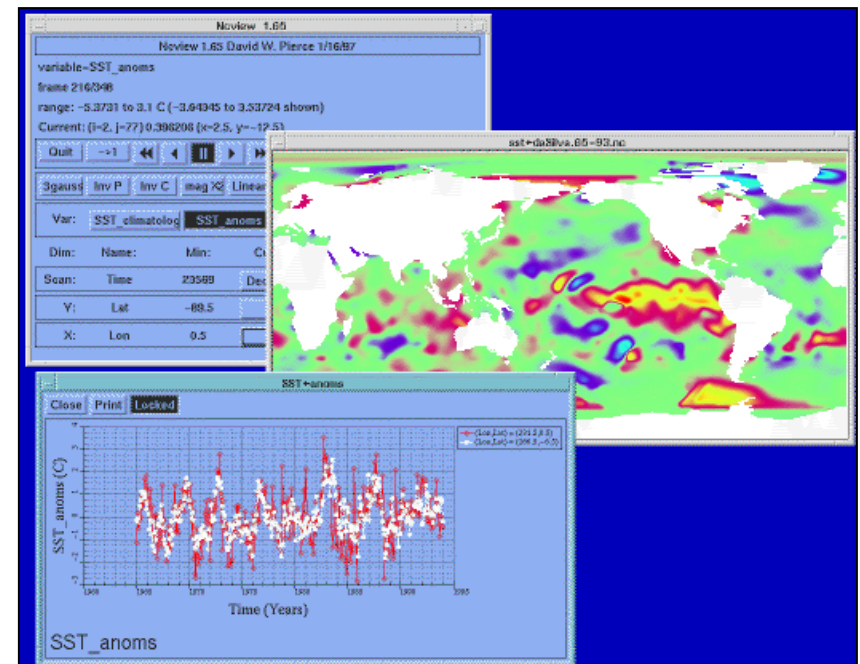
ncview – getting started

- To run ncview type:

  $ `ncview <data_file>`

- E.g.:

  $ `ncview example_data/ggas2014121200_00-18.nc &`

ncview – getting started

You are presented with:

- An information panel

- A control panel for visualization

- A variable selection panel
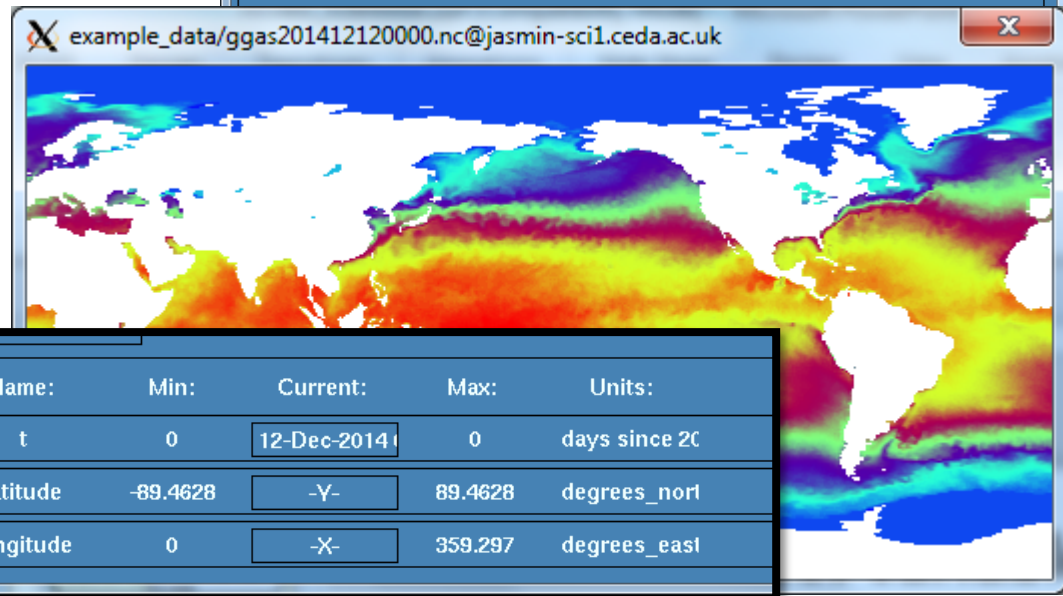
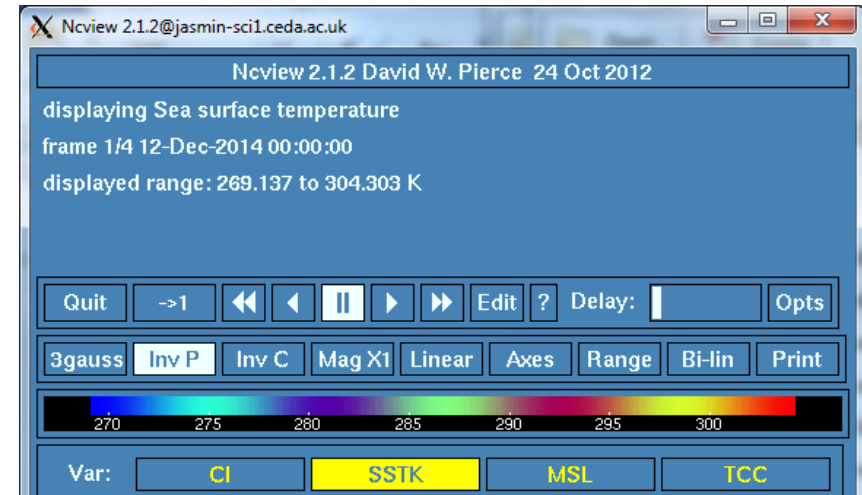- Details of dimensions for the selected variable

ncview – select variable

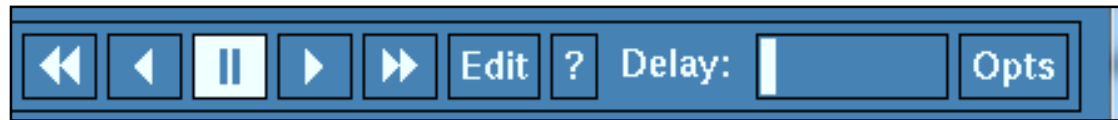Select variable: in this case we have selected Sea Surface Temperature ("SSTK").

ncview:

- displays information in the top panel

- Populates the colour bar

- Plots the first time step of the variable

- Displays information about dimensions

ncview – animate

Use the animation panel to click through time steps or animate the plot.

Press the button to run the animation. Adjust the "Delay" to slow it down.

ncview – other options

The plotting panel has a range of useful functions that are best investigated by manually testing each.

| 3gauss | Inv P | Inv C | Mag X1 | Linear | Axes | Range | Bi-lin | Print |

E.g.: **3gauss**: click to select a different colour scale

Inv P: Invert the plot.

Inv C: Invert the colour scale

Mag X1: right/left click to zoom in/out

Axes: modify axes of plot

Print: print to a file or printer

ncBrowse

ncBrowse:

- Visual browser for netCDF

- View/select contents of files

- Tree View of file contents

- Various plotting options
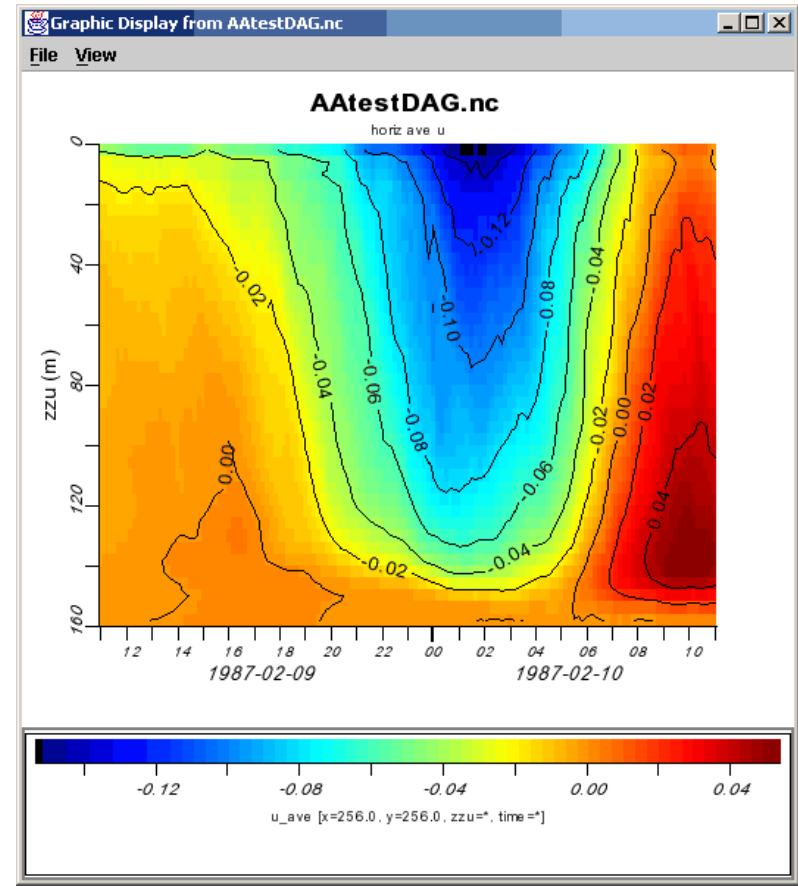
ncBrowse – getting started

- To run ncBrowse type:

  `$` `ncBrowse <data_file>`

- E.g.:

`$` `ncBrowse example_data/ggas2014121200_00-18.nc &`

Centre for Environmental
Data Analysis
SCIENCE AND TECHNOLOGY FACILITIES COUNCIL
NATURAL ENVIRONMENT RESEARCH COUNCIL

National Centre for
Atmospheric Science
NATURAL ENVIRONMENT RESEARCH COUNCIL

National Centre for
Earth Observation
NATURAL ENVIRONMENT RESEARCH COUNCIL

ncBrowse – getting started

You are presented with:

- Basic file information

- A variable selection panel
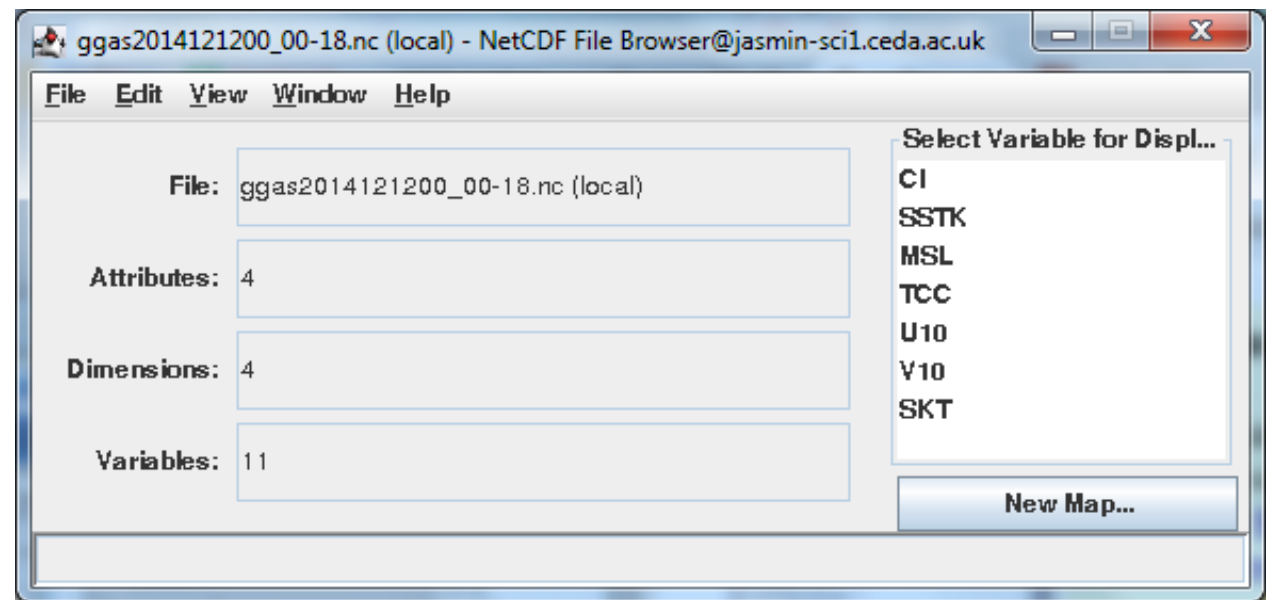
ncBrowse – view file as Tree

Click View →As Tree:
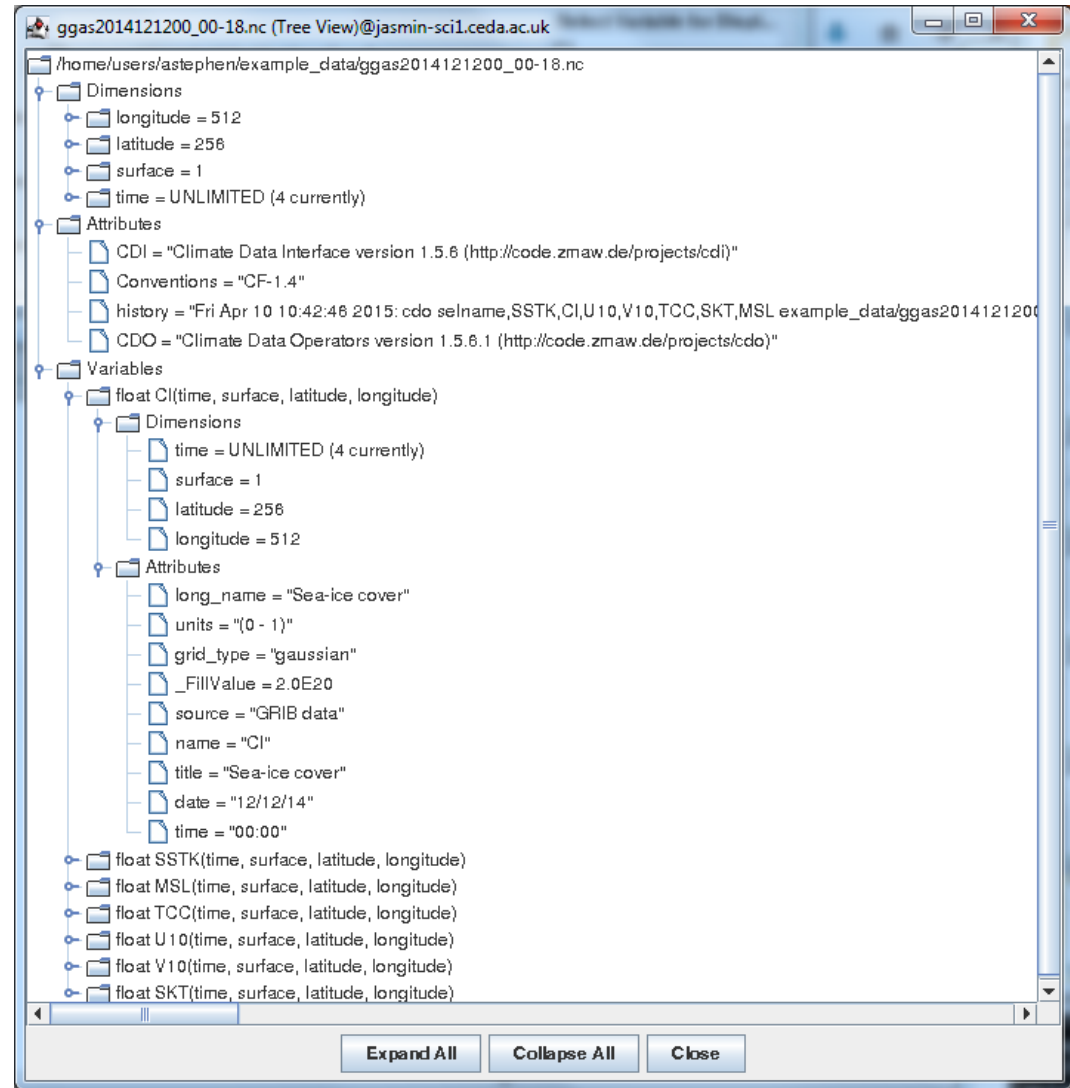
ncBrowse – examine a variable

Double click a variable to open the Domain Selector.

ncBrowse – plot a variable

Click "Graph Variable" to plot

ncBrowse – plot a variable (2)

Modify the axes selected and click "Graph Variable"

Further reading

- ncview:

http://meteora.ucsd.edu/~pierce/ncview_home_page.html

- ncBrowse:

https://www.nodc.noaa.gov/woce/woce_v3/wocedata_1/utils/netcdf/ncbrowse/index.htm