Exercise: Managing metadata

AIM: To show you how to format your variable and file metadata for compliance with the CF Metadata Conventions.

Issues covered:

- CF Conventions
- Variable attributes
- File level attributes

Instructions

1. Open the data file '~/my_cdat_files/data/metadata_poor.ctl'.
2. Examine the CF-metadata standard global attributes (Conventions, title, institution, source, history, references, comment).

Use the "hasattr" builtin function to test for attribute existence. e.g. hasattr(object, attribute).

3. Extract the variable 'no10u' from the file and examine the variable attributes.
4. Open a new file called '~/my_cdat_files/output/metadata_rich.nc' for us to write our enriched variable to.
5. Add the file level (global) attributes that we know about the data:
   title: "Eastward wind component data from EQUINOX 2003"
   institution: "Produced by U.I.D."
   source: "Measured by Bill's anemometer network."
   references: "Steab, A. (2003). Some stuff."
   comment: "For more details see: <http://www.yyy.zzz>."
6. Add the following useful variable information to the variable:
   standard_name: "eastward_wind"
   units: "m s-1"
   long_name: "Eastward component of wind speed at 10-metre height above sea level"
   comment: "5-minutely obs averaged over hourly periods."
7. Write the variable to the output file.
8. Have a look at the header in the NetCDF file using the 'ncdump –h' command.