UNIX commands

`ls`	list the contents of a directory
`ls -l`	list the content of a directory with more details
`mkdir <directory>`	create the directory <directory>
`cd <directory>`	change to the directory <directory>
`cd ..`	move back one directory
`cp <file1> <file2>`	copy the file <file1> into <file2>
`mv <file1> <file2>`	move the file <file1> to <file2>
`rm <file>`	remove the file <file>
`rmdir <directory>`	delete the directory <directory>
`man <command>`	display the manual page for <command>
`module load netcdf`	load the netcdf commands to use
`module load ferret`	load ferret
`module load name`	load the module “name” to use its commands
`vi <file>`	read the content of the file <file>
`vimdiff <file1> <file2>`	show the differences between files <file1> and <file2>
`pwd`	show current directory
`tar –czvf file.tar.gz file`	compress one or multiple files into file.tar.gz
`tar –xzvf file.tar.gz`	extract the compressed file file.tar.gz
`./name`	execute the executable called name
`qsub scriptname`	submits a script to the queuing system
`qdel #`	cancel the submitted job number # from the queue
`qstat`	show queued jobs
`qstat –u zName`	show only your queued jobs

Inside vi

`ESC, then :q!`	Quit without saving
`ESC, then :wq`	Quit with saving
`ESC, then i`	Get in insert mode to edit text
`ESC, then /word`	Search content for word
`ESC, then :%`	Go to end of document
`ESC, then :0`	Go to beginning of document
`ESC, then :set nu`	Add line numbers
`ESC, then :#`	Go to line number #

N.B.: If inside vimdiff, you have 2 files opened, so you need to quit vi twice.

Ferret commands

`use file.nc`	Use the variables in the file.nc
`show data`	List the data which is available
`list <variable>`	List the values of <variable>
`plot <variable>`	Produce a line plot of <variable>
`shade <variable>`	Produce a shade plot of <variable>
`fill <variable>`	Produce a filled plot of <variable>
`contour <variable>`	Produce a contour plot of <variable>
`@ave, @max, @min`	Average, max, min for a variable dimension
`show transform`	List the possible transformations
`/levels=(-inf)(min,max,dl)(inf)`	Set colorbar levels between min and max every dl. (-inf) and (+inf) says to fill in the values under min and above max
`ylimits=min:max:delta` `xlimits=min:max:delta`	Define the axis. To reverse an axis put the higher number as min (e.g. ylimits=1000:0:100 plots y from 1000 to 0 with ticks every 100)
`/title="Figure title"`	Change the title of the plot
`go land`	Add land contour
`go script`	Run you ferret script script.jnl
`d=#`	Look for variable in the opened file number # (add as a dimension for variable read)
`frame/file=myfile.gif`	Save plot as a gif
`let sum = a+b`	Create a variable sum which is the sum of a and b
`/palette=color_palette`	Change the color scheme of the figure (e.g.: blue_darkred, white_centered, blue_green_yellow, blue_green, blue_darkorange, land_sea)
`set window 2`	Open new figure window
`cancel mode logo`	Don't show ferret info on plot (upper right corner)
`exit or q`	Exit ferret

N.B.: When there is a / in front, you add after the plotting type and before the variable.

Example:

```
fill/YLIMITS=1000:0:100/LEVELS=(-inf)(-3,3,0.15)(inf)/palette=blue_darkred/title=
"Zonal wind velocity at 146.3W (m/s)" u[i=39,l=@ave]
```

(one line)

This would produce a fill plot with the y axis from 1000 to 0 with ticks every 100, colour levels from -3 to 3 every 0.15, fill in to the lowest (highest) colours for the data under the minimum (above the maximum), change the colour palette for blue to red, change the title and define the variable to plot as u at index i=39 and the average of the l dimension.

Model outputs

Output File Name	Content
com.expname.yyyy.nc	All ocean outputs for year yyyy
sals_expname.nc	Surface albedo
sc##_expname.nc	Cloud at sigma level ##
sclc_expname.nc	Convective cloud
scld_expname.nc	Total cloud
sclh_expname.nc	High cloud
scli_expname.nc	Liquid cloud fraction
scll_expname.nc	Low cloud
sclm_expname.nc	Middle cloud
sevp_expname.nc	Evaporation (mm/day)
sfw1_expname.nc	Fresh water flux : Precip-Evap (mm/day)
sfw2_expname.nc	Fresh water flux : Ice water A (mm/day)
sfw3_expname.nc	Fresh water flux : Ice water B (mm/day)
sfw4_expname.nc	Fresh water flux : River outflow (mm/day)
sg##_expname.nc	Geopotential height at pressure level ##
sgro_expname.nc	Monthly ice growth (m)
shfl_expname.nc	Sensible heat flux (W/m^2)
sicd_expname.nc	Ice depth * concentration (m)
sich_expname.nc	Ice advection (m)
sico_expname.nc	Ice concentration
sicu_expname.nc	Ice zonal velocity (m/s)
sicv_expname.nc	Ice meridional velocity (m/s)
sinr_expname.nc	Interception (mm/day)
sire_expname.nc	Ice redistribution (m)
sisf_expname.nc	Ice-ocean salt flux (m)
sitf_expname.nc	Ice-ocean heat flux (W/m^2)
siwp_expname.nc	Ice water path (kg/m^2)
sl##_expname.nc	Latent heat at sigma level ## (K/day)
slwp_expname.nc	Liquid water path (kg/m^2)
sper_expname.nc	Soil percolation (mm/day)
spev_expname.nc	Potential evaporation (mm/day)
spmc_expname.nc	Moisture puddles (mm)
spsl_expname.nc	Mean sea-level pressure (hPa)
spwc_expname.nc	Precipitable water (mm)
sq##_expname.nc	Specific humidity at pressure level ## (kg/kg)
sr##_expname.nc	Relative humidity at pressure level ##
sref_expname.nc	Effective radius for liquid clouds (um)
srev_expname.nc	Rain evaporation (mm/day)
srgc_expname.nc	Net LW ground clear (W/m^2)
srgd_expname.nc	Downward LW ground (W/m^2)
srgn_expname.nc	Net LW at ground (W/m^2)
srnc_expname.nc	Convective rainfall (mm/day)

srnd_expname.nc	Precipitation (mm/day)
srtc_expname.nc	LW out clear sky (W/m^2)
srtu_expname.nc	LW out at top (W/m^2)
srun_expname.nc	Runoff (mm/day)
ssev_expname.nc	Scaling evap (mm/day)
ssgc_expname.nc	Net SW ground clear (W/m^2)
ssgd_expname.nc	Downward SW ground (W/m^2)
ssgn_expname.nc	Net SW at ground (W/m^2)
ssid_expname.nc	Sea-ice depth (m)
ssnd_expname.nc	Snow depth (cm)
ssno_expname.nc	Snowfall (mm/day)
ssoc_expname.nc	SW out clear sky (W/m^2)
ssot_expname.nc	SW out at top (W/m^2)
sssb_expname.nc	Snow sublimation (mm/day)
st##_expname.nc	Temperature at pressure level ## (K)
stax_expname.nc	Surface stress east (N/m^2)
stay_expname.nc	Surface stress north (N/m^2)
stb2_expname.nc	Soil temp level 2 (K)
stb3_expname.nc	Soil temp lowest level (K)
stgf_expname.nc	Vegetation ground temp (K)
stgg_expname.nc	Bare ground temp (K)
sthd_expname.nc	Mean daily max temp (K)
sthf_expname.nc	Vegetation ground Tmax (K)
sthg_expname.nc	Bare ground Tmax (K)
sthm_expname.nc	Extreme max temp (K)
stld_expname.nc	Mean daily min temp (K)
stlf_expname.nc	Vegetation ground Tmin (K)
stlg_expname.nc	Bare ground Tmin (K)
stlm_expname.nc	Extreme min temp (K)
stsc_expname.nc	Screen temperature (K)
stsu_expname.nc	Surface Temperature (K)
su##_expname.nc	Zonal wind at pressure level ## (m/s)
sv##_expname.nc	Meridional wind at pressure level ## (m/s)
svmo_expname.nc	Surface wind speed (m/s)
swdf_expname.nc	Divergence removed by rheology (s^{-1})
swfb_expname.nc	Soil moisture lower
swfg_expname.nc	Soil moisture upper
swls_expname.nc	Ice residual divergence (s^{-1})

N.B.: LW = Long Wave
SW = Short Wave