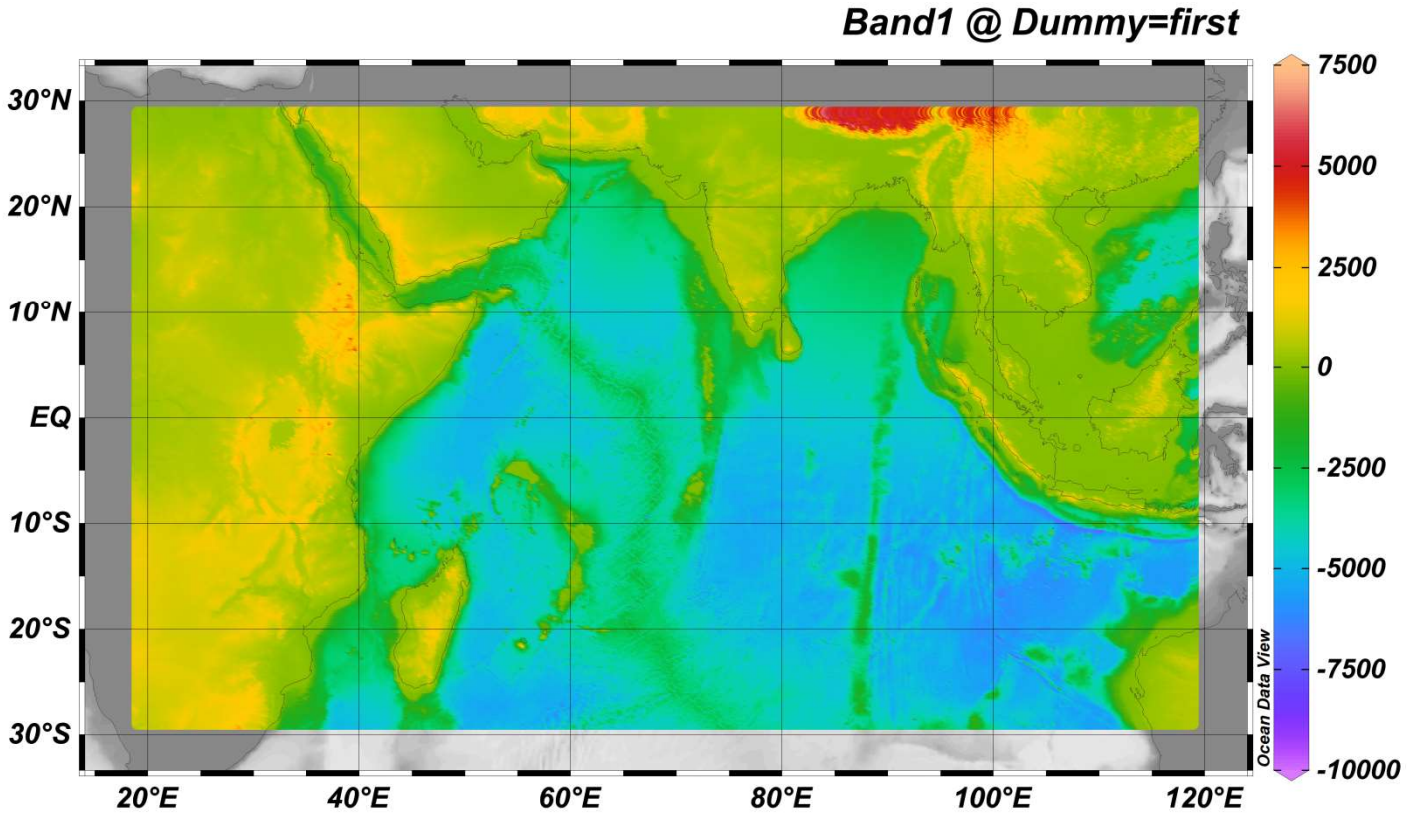
Examples

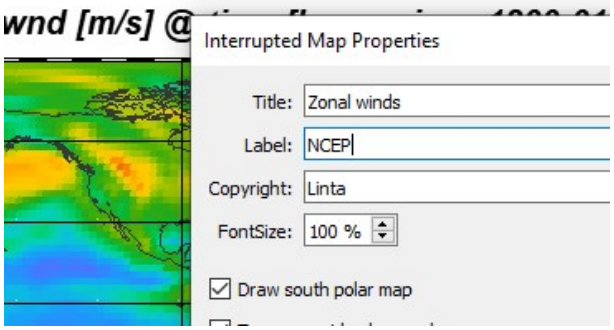
Etopo1 bathymetry

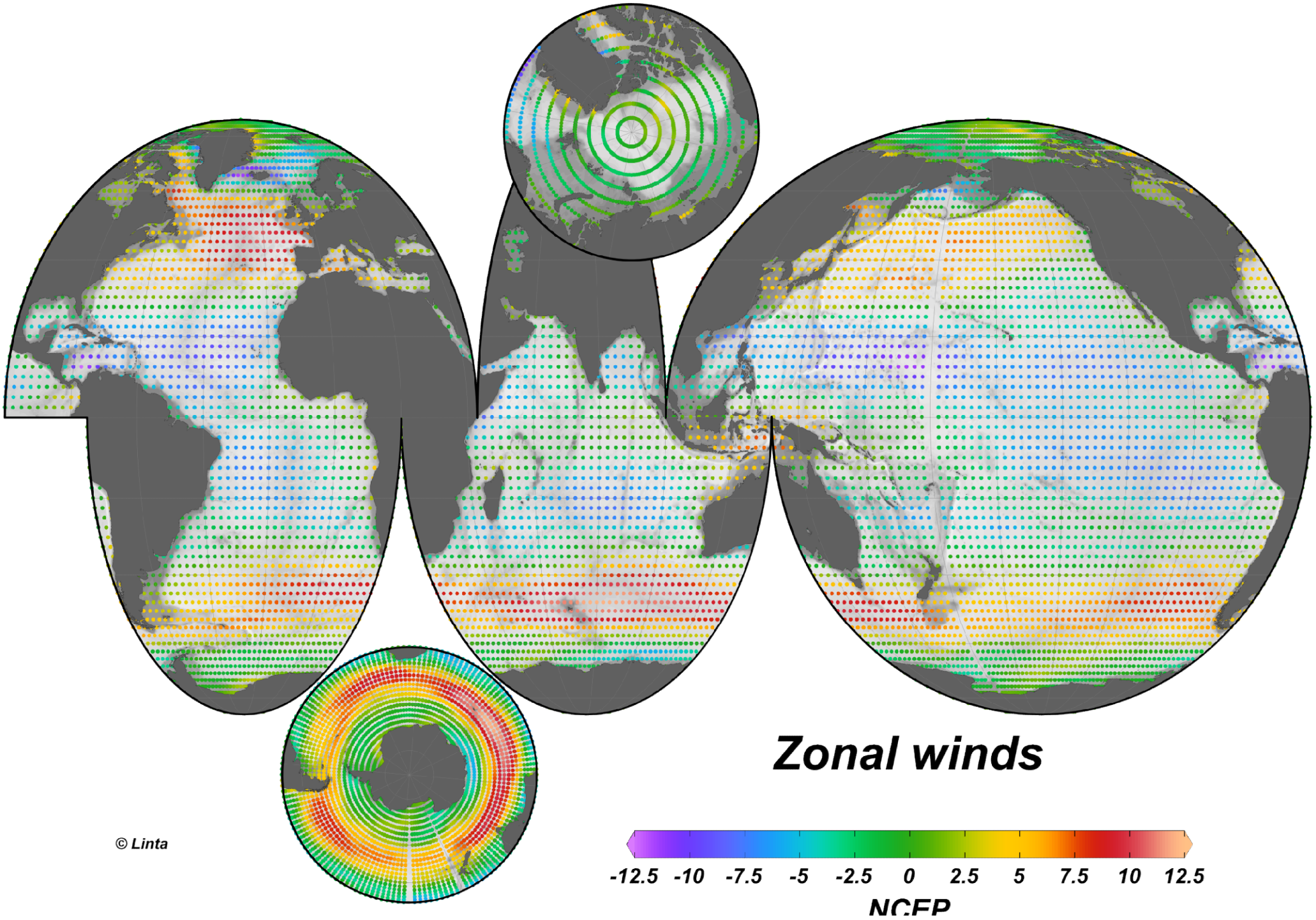
- Go to File > Open and select the nc file etopo1.nc
- Go through the 4 steps of netcdf setup and include the band1 (which is the bathymetry) to the meta variable list on RHS.
- Subset the dimensions in step 3 to Use All the increments of the data



U wind from NCEP

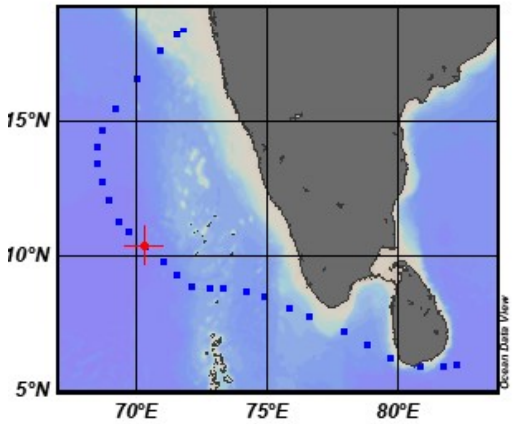
- Go to File > Open and select the nc file uwind_monthly_mean.nc
- Go thought the 4 steps of netcdf setup and include the uwind variable to the meta variable list on RHS.
- Use time as primary selected variable
- After plotting, right click and Save as Interrupted Map.

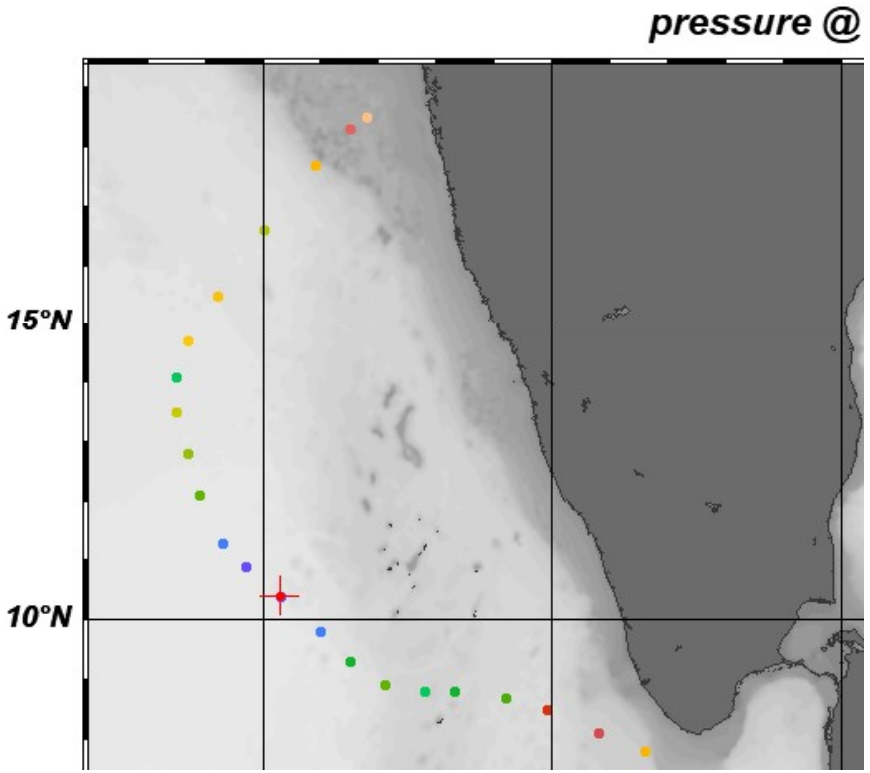



Zonal winds
-12.5 -10 -7.5 -5 -2.5 0 2.5 5 7.5 10 12.5
NCEP
© Linta
Ocean Data View

Cyclone track from JTWC

- Go to File > Open and select the csv file ockhi_cyclone_track.csv
- Associate the variable and assign data fields.
- Create isosurface variable of pressure at time equals first

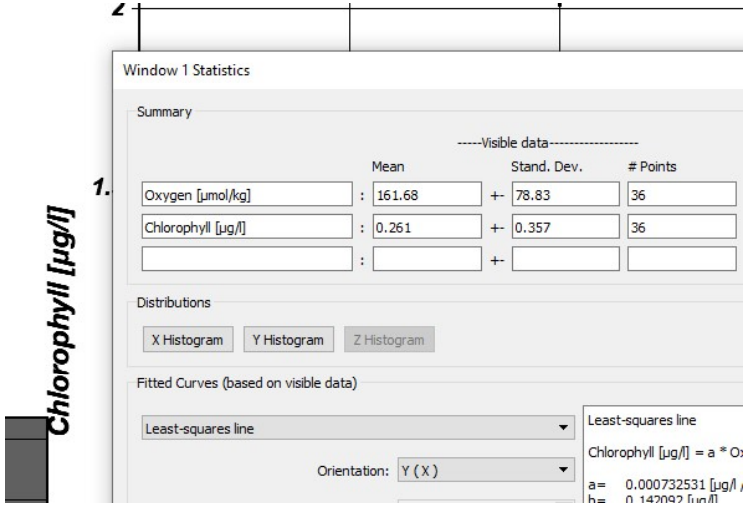


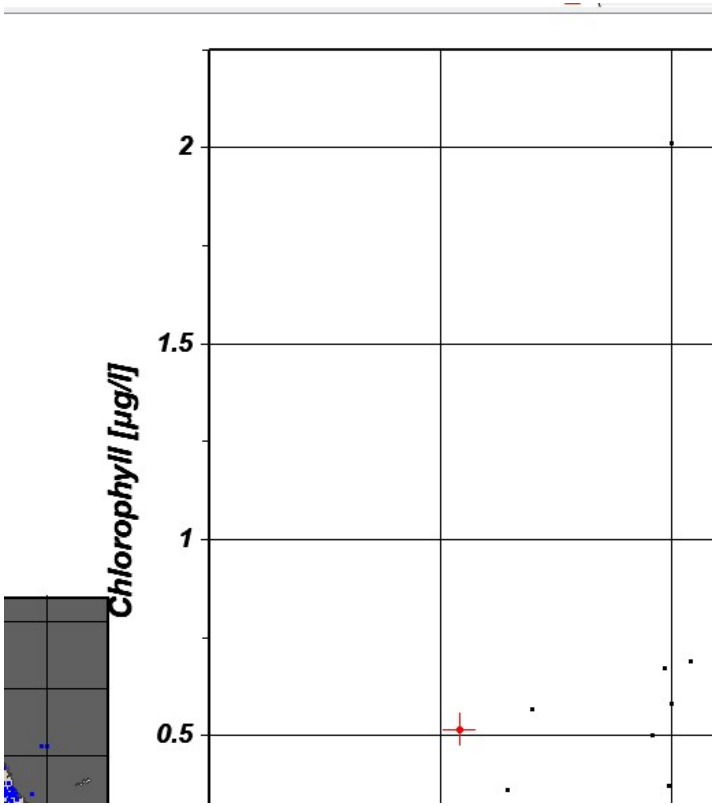


Additional options in ODV

Part 1:
Basic Statistics

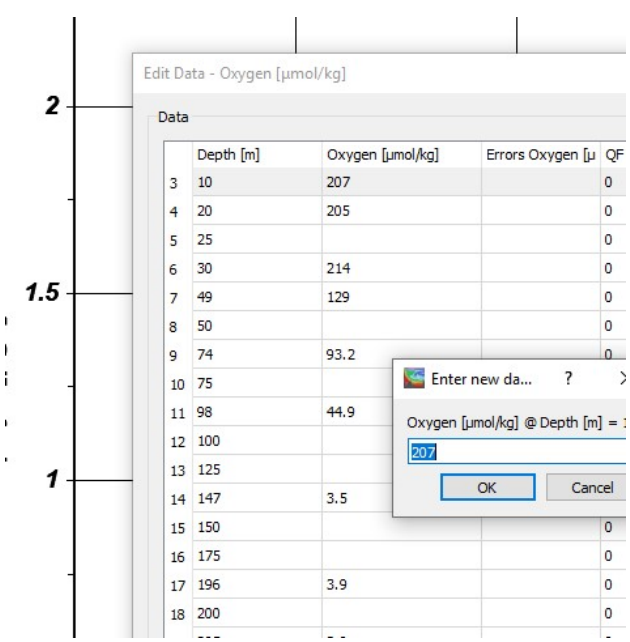
- To view the basic statistics, make a scatter plot of Chlorophyll vs oxygen
- Right click on the figure, select Extras > Statistics
- Select Y Histogram to see the distribution of chlorophyll
- Select X/Y distribution to see the data distribution
- For curve fitting, select Linear Least Square fit , construct curve and show curve
- After closing the statistics toolbox, to remove the fitted line from the figure, right click on the line and select delete object

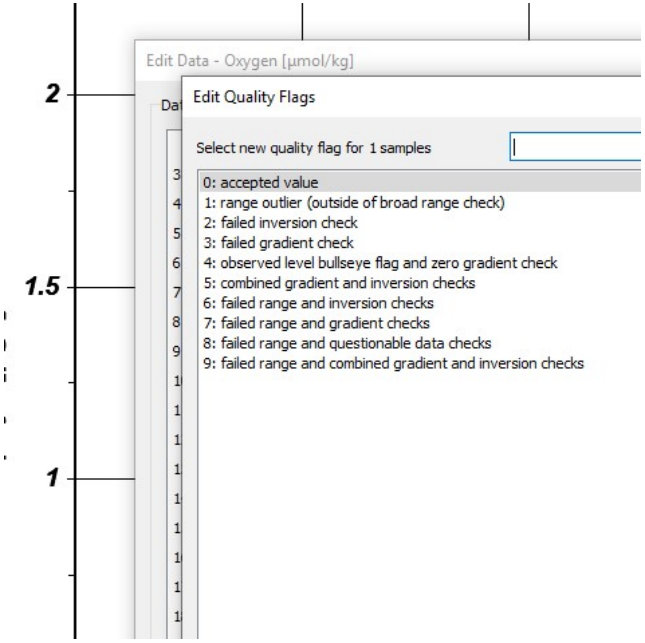




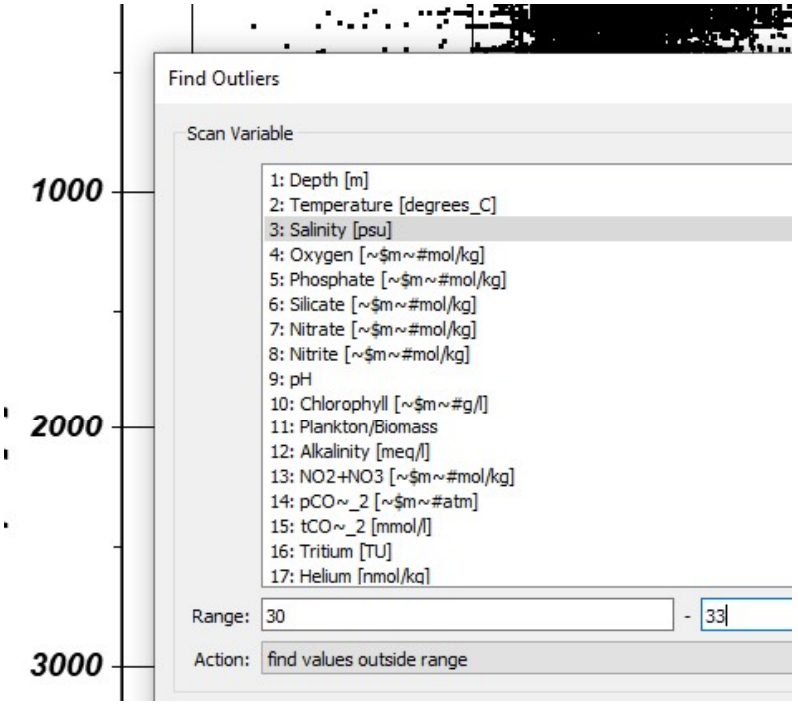
Part 2:
Quality control

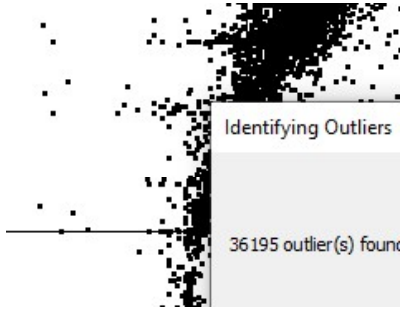
- To edit the data in a single profile, right click on the values in the Sample window on the right middle and select Edit Data.
- Change Value or change quality flag for the profile.
- Select Edit sample to modify all the variables for the specific location.
- We can also assign quality flags for the currents sample or all samples of the profile

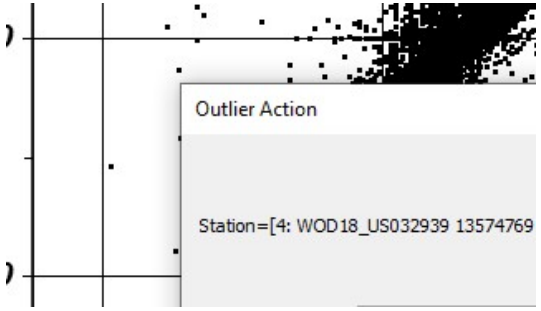




- To perform quality control first plot a depth vs salinty scatter plot
- Go to Tools > Find Outliers. Give a range 30 to 33 psu for salinity and select find values outside this range.
- An outlier list will be generated, which can be viewed later in notepad.
- Select View and Edit outliers and Flag them and Keep them, Apply to all. You can also delete them, which is not recommended.
- Inspect the profiles to see the flagged data points





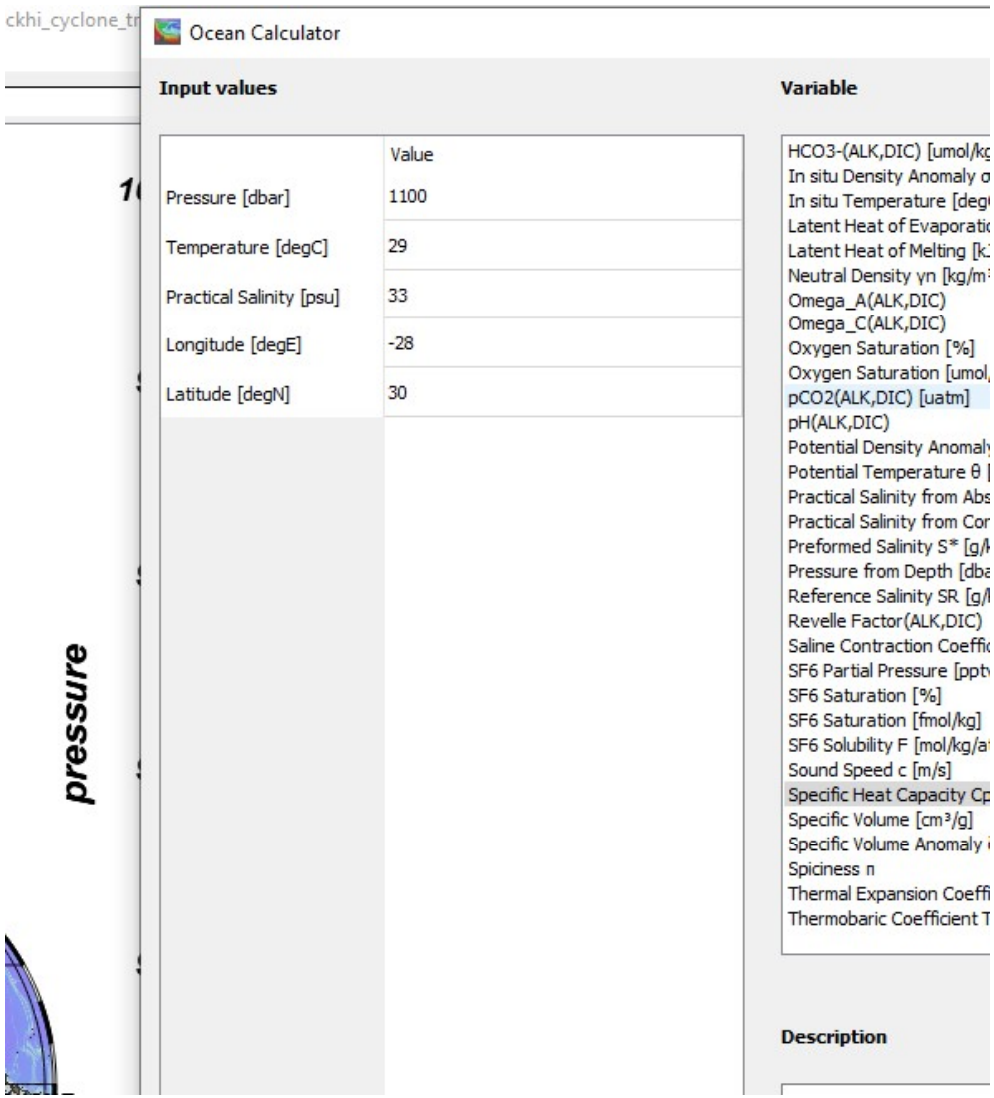


Part 3:
Export data

- Export the data using Export > Station Data > ODV Spreadsheet file
- Export the QC modified data in the scatter window using Export > XYZ Window data, into a text document
- Make a gridded surface plot of salinity at 300 m and save this isosurface data into a text file using Export > Isosurface data

Part 4:
Ocean Data Calculator

- Go to File > Tools and select Ocean Calculator
- Select variables form the RHS and provide input variable values on LHS to get the specified derived variables at specific locations.
- You can type any values under the Input values tab.

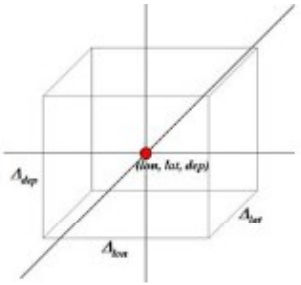


Other Options:

1. Tools > Palette editor. First plot a surface plot using previous collection with oxygen with gridding.
2. Station Filter > set time from 2000 to 2018. Then make the y axis of the figure in previous step to time
3. Box Averaging

The format of the box definition file is as follows:

- plain ASCII, one box definition per line, 6 numbers separated by (one or more) spaces,
- meaning of numbers (see figure):
  lon lat dep (box center) Δ_{lon} Δ_{lat} Δ_{dep} (box sizes). Longitudes and latitudes are in decimal degrees, and depth is in meters.



Once you have specified a box definition file, ODV will start working. Note that while averaging, ODV will check for data outliers and will use only data within 3 standard deviations of the mean. The output will be written to the directory of the box definition file. The output file names consist of the box definition file name, the label of the variable that is processed and the extension *.est*.

The format of the *.est* output file is as follows:

- plain ASCII, one line of output per line in the box definition file, 10 values separated by TABS,
- meaning of values:
  lon lat dep (same as in box definition file) $\overline{lon}$ $\overline{lat}$ $\overline{dep}$ $\overline{val}$ σ n_u n_r.

$\overline{lon}$ $\overline{lat}$ $\overline{dep}$ $\overline{val}$ are average longitude, latitude, depth and variable values of the data used, σ is the standard deviation of the variable values, n_u is the number of data points used and n_r is the number of data points rejected. A data point is rejected if its value differs from the mean $\overline{val}$ by more than 3 standard deviations σ.