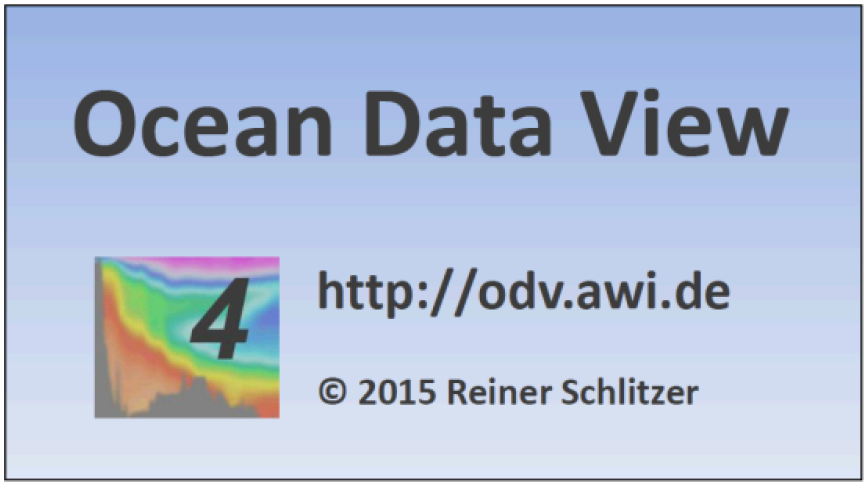
OCN 623 How to use ODV



ver. 4.7.4

http://odv.awi.de/

Currently **46,300** users,
~20 new users every day!!

Feb 4, 2016

What is ODV?

- *"Ocean Data View (ODV) is a software package for the interactive exploration, analysis and visualization of oceanographic and other geo-referenced profile, time-series, trajectory or sequence data. ODV runs on Windows (8, 7, Vista, XP), Mac OS X, Linux, and UNIX (Solaris, Irix, AIX) systems."*

Free, Easy-to-use, visual, practical…etc..

Prof. Reiner Schlitzer
Alfred Wegener Institute

His Research Interests: Modeling; Nutrient and Carbon Cycles; Information Systems; Productivity and Particle Fluxes; Radionuclides

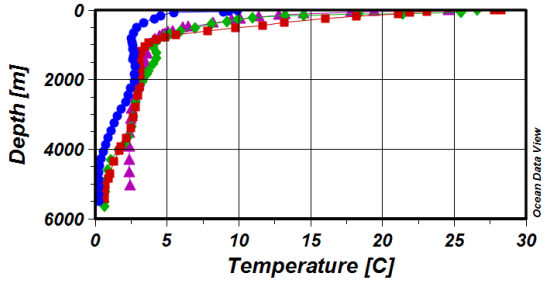
What can you do with ODV?

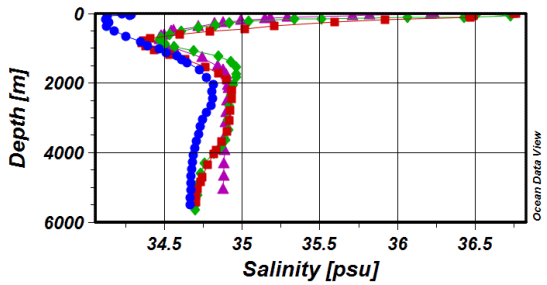
- property/property plots of selected stations
- scatter plots for sets of stations

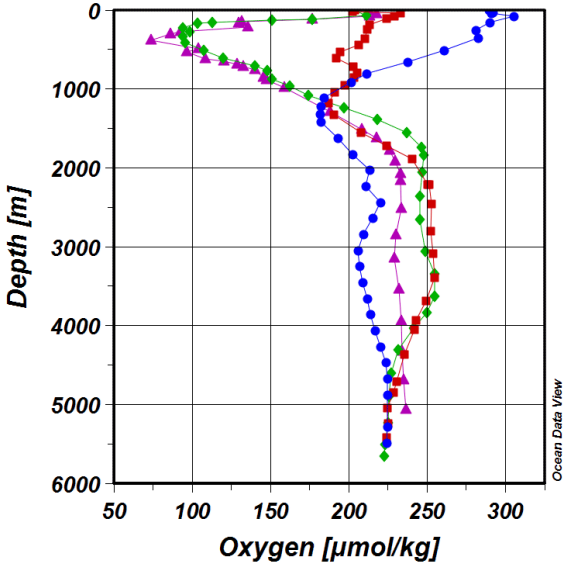
- color sections along arbitrary cruise tracks
- color distributions on general isosurfaces

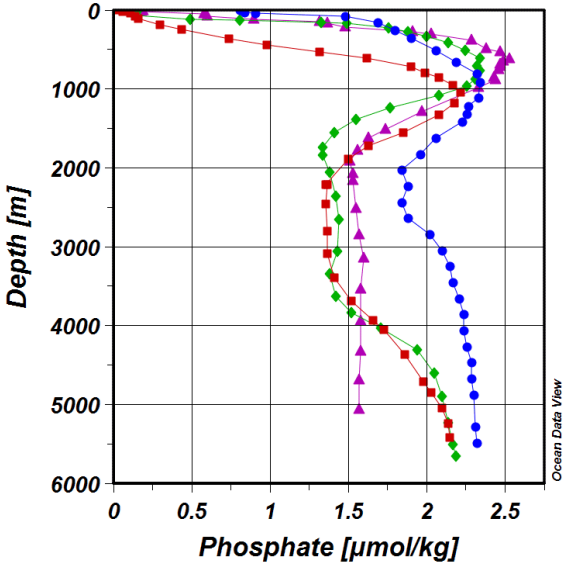
- geostrophic velocity sections
- temporal evolution plots of tracer fields
- differences of tracer fields between repeats
- Animations
- interrupted maps.

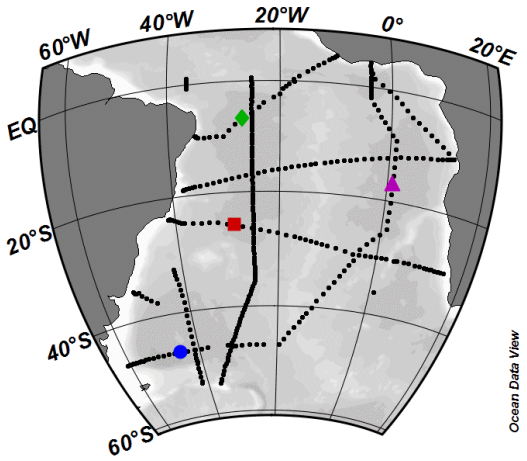
Example. property/property plots of selected stations

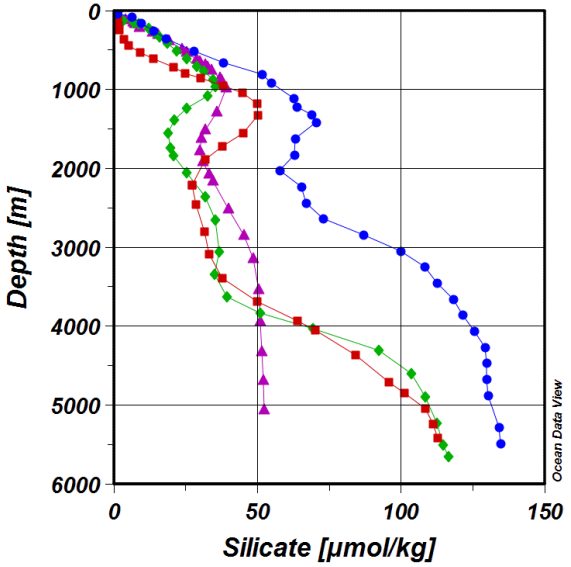


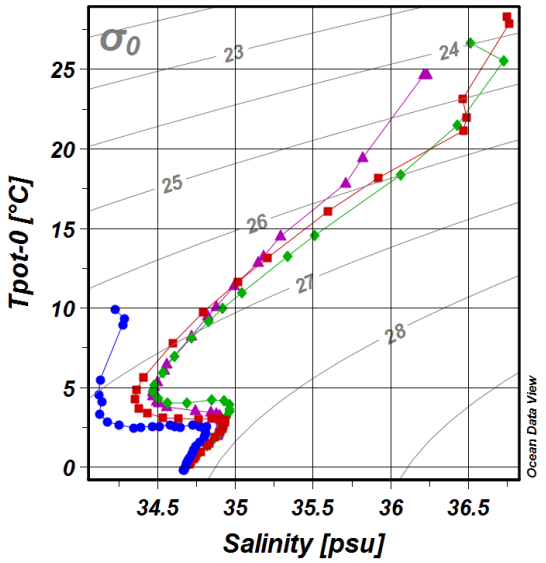




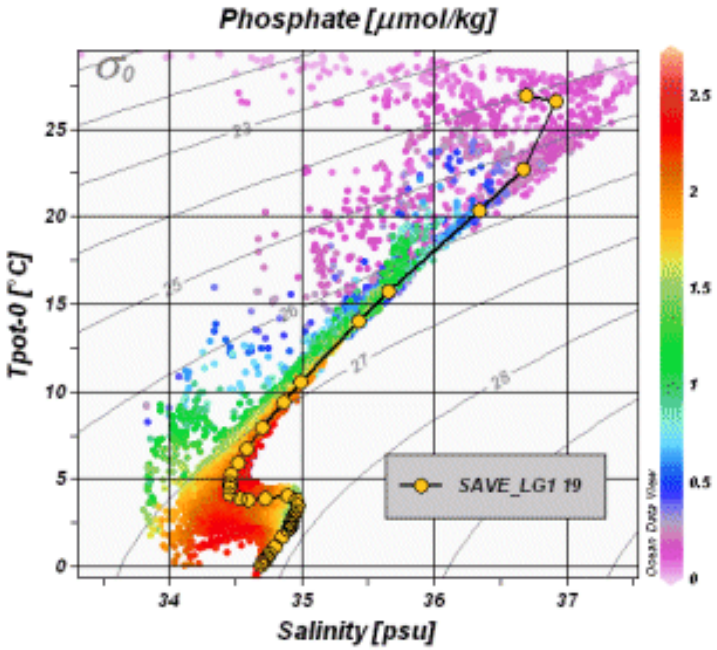


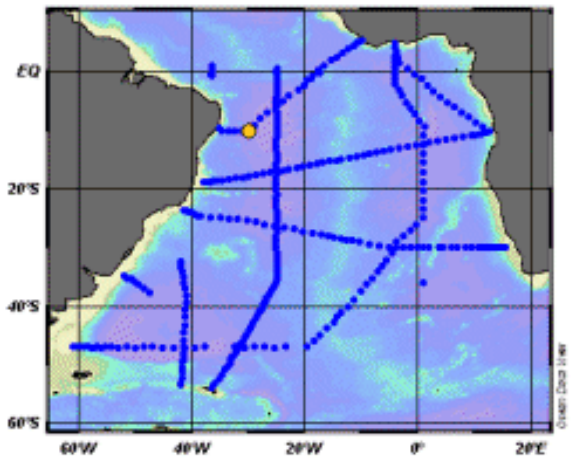


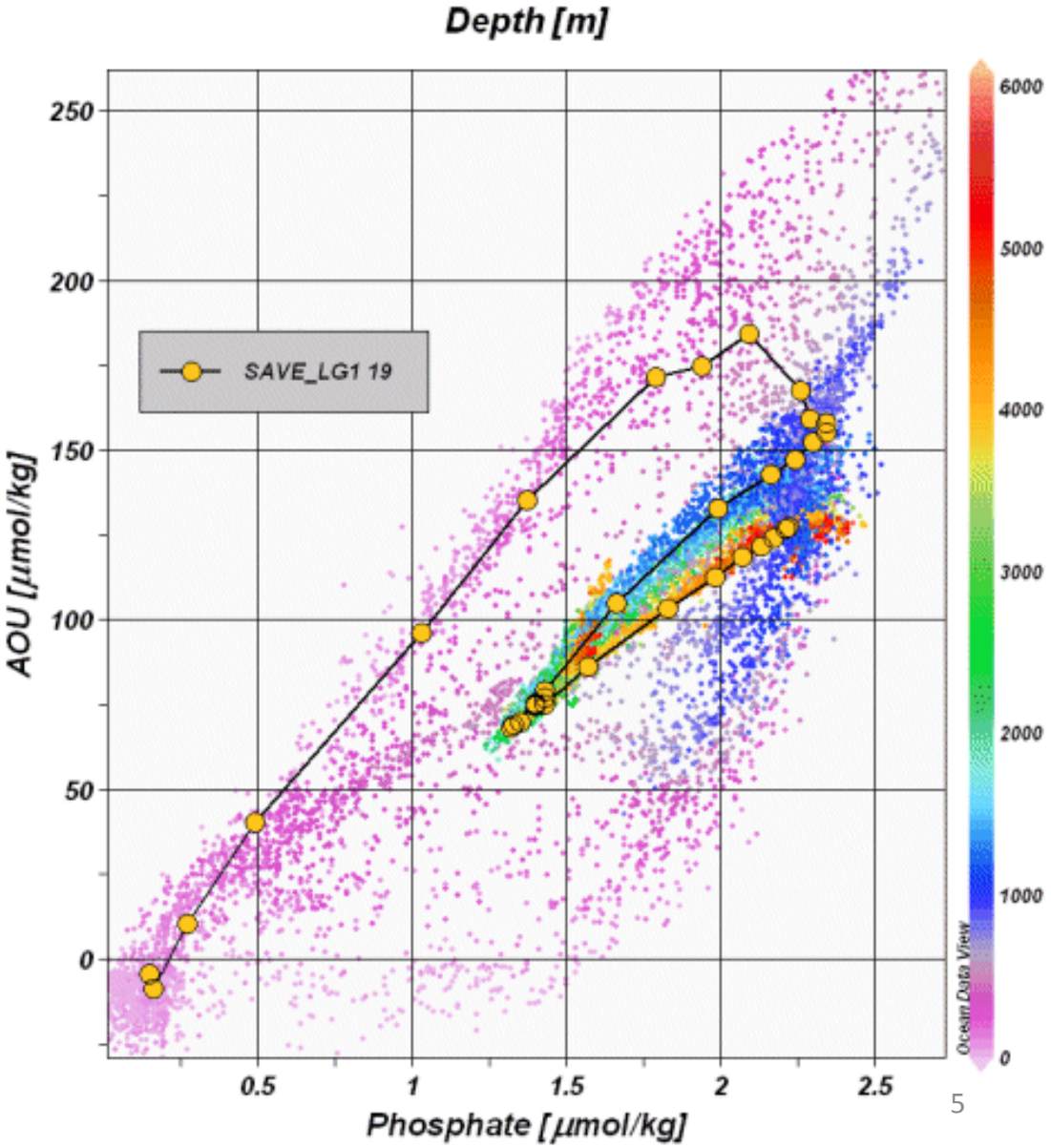




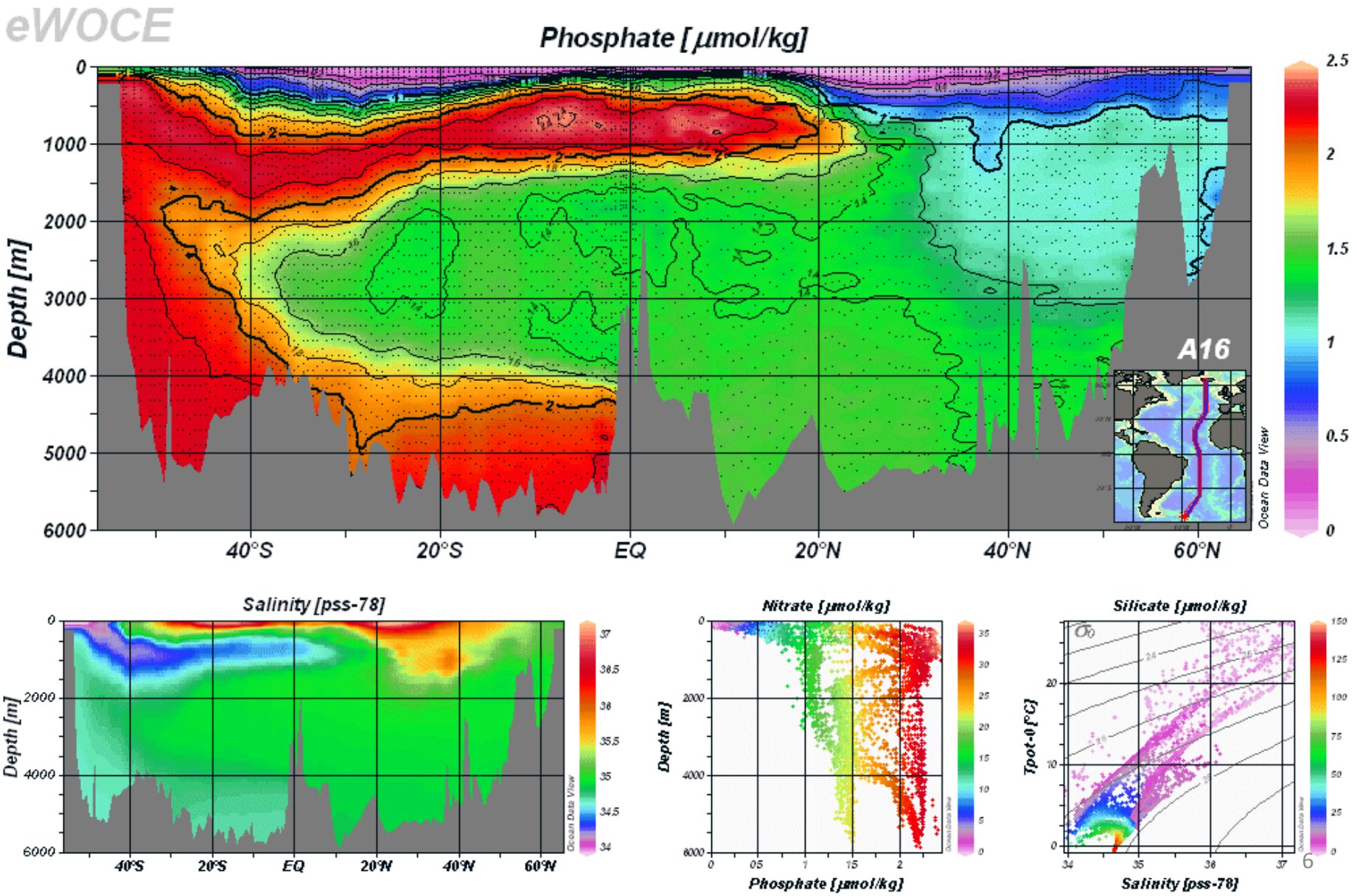
Example. scatter plots for sets of stations



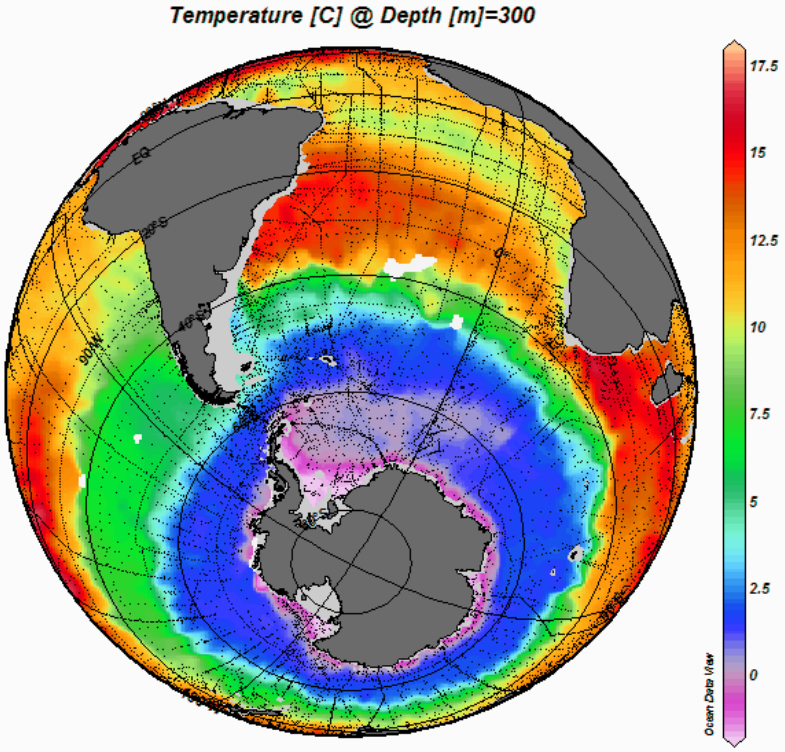


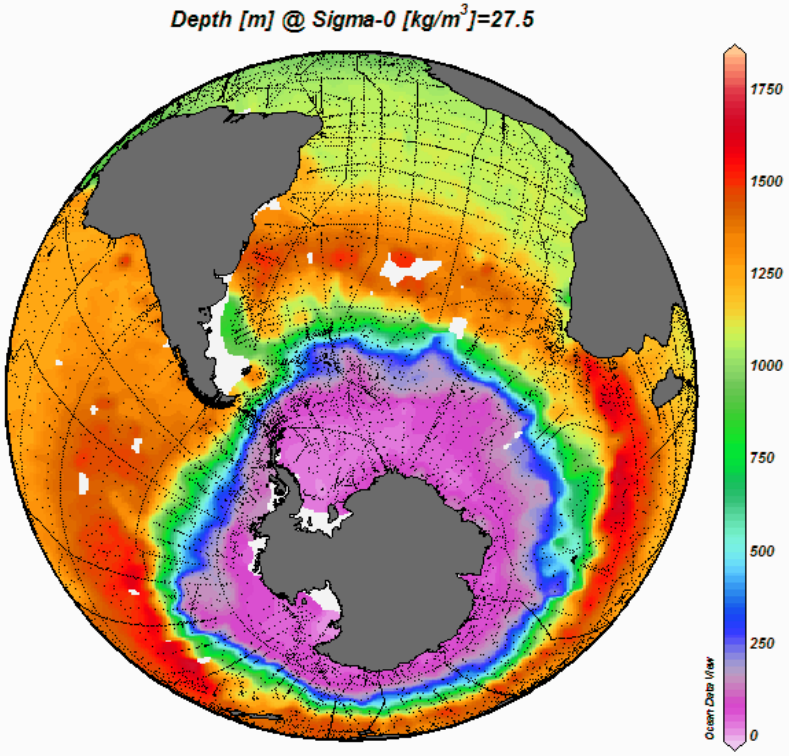


Example. color sections along arbitrary cruise tracks

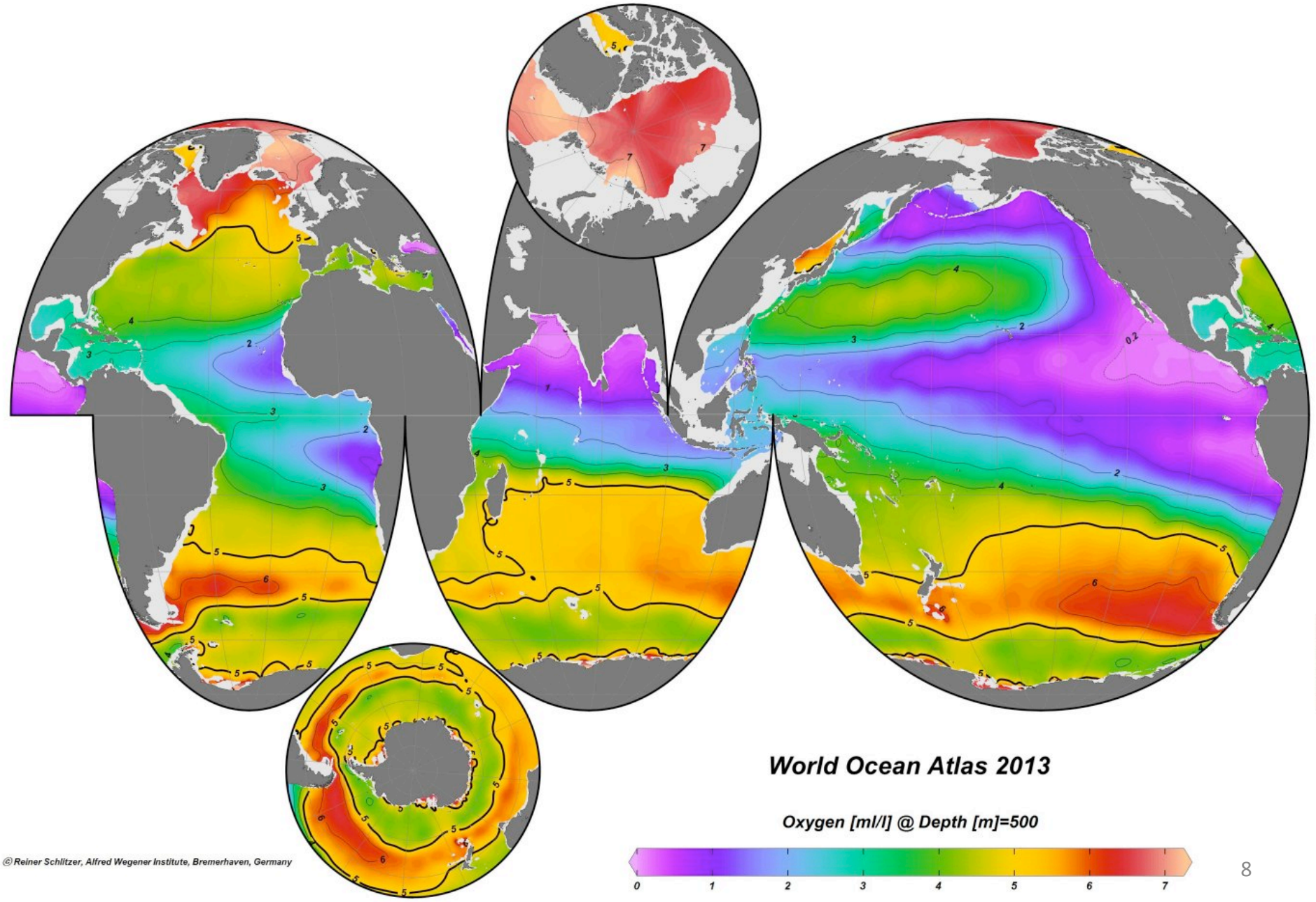


Example. color distributions on general isosurfaces



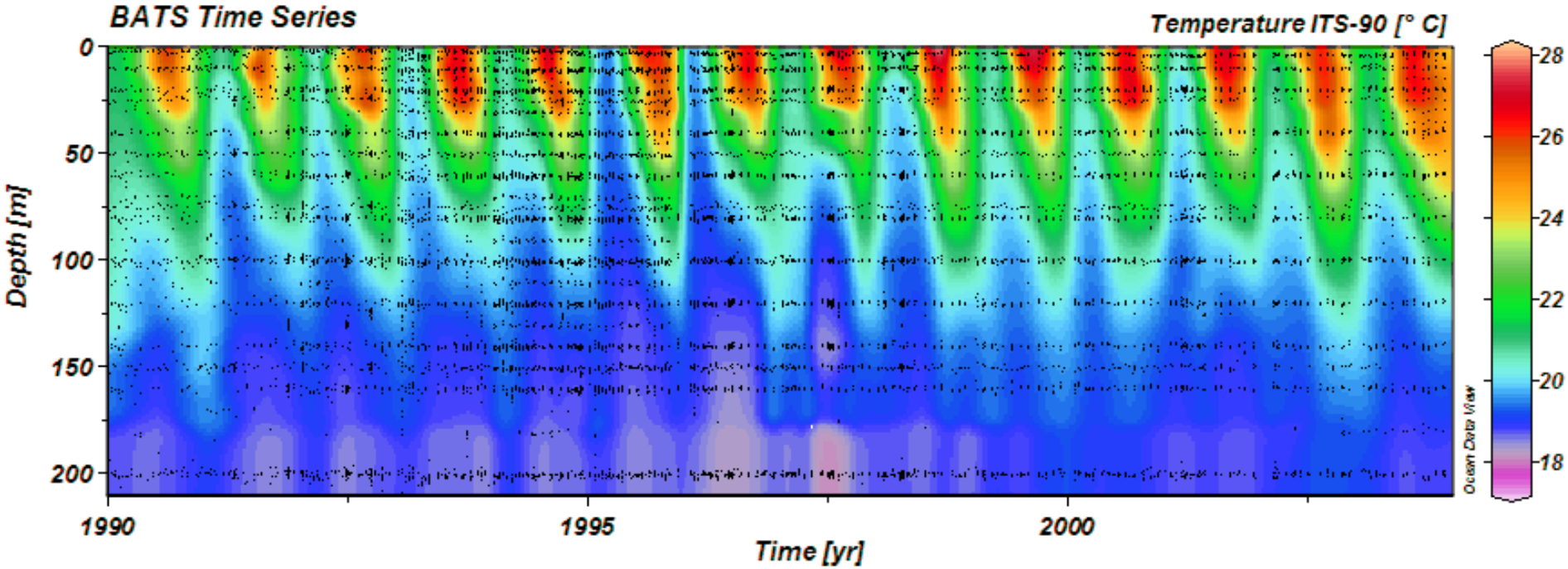


Example. interrupted maps



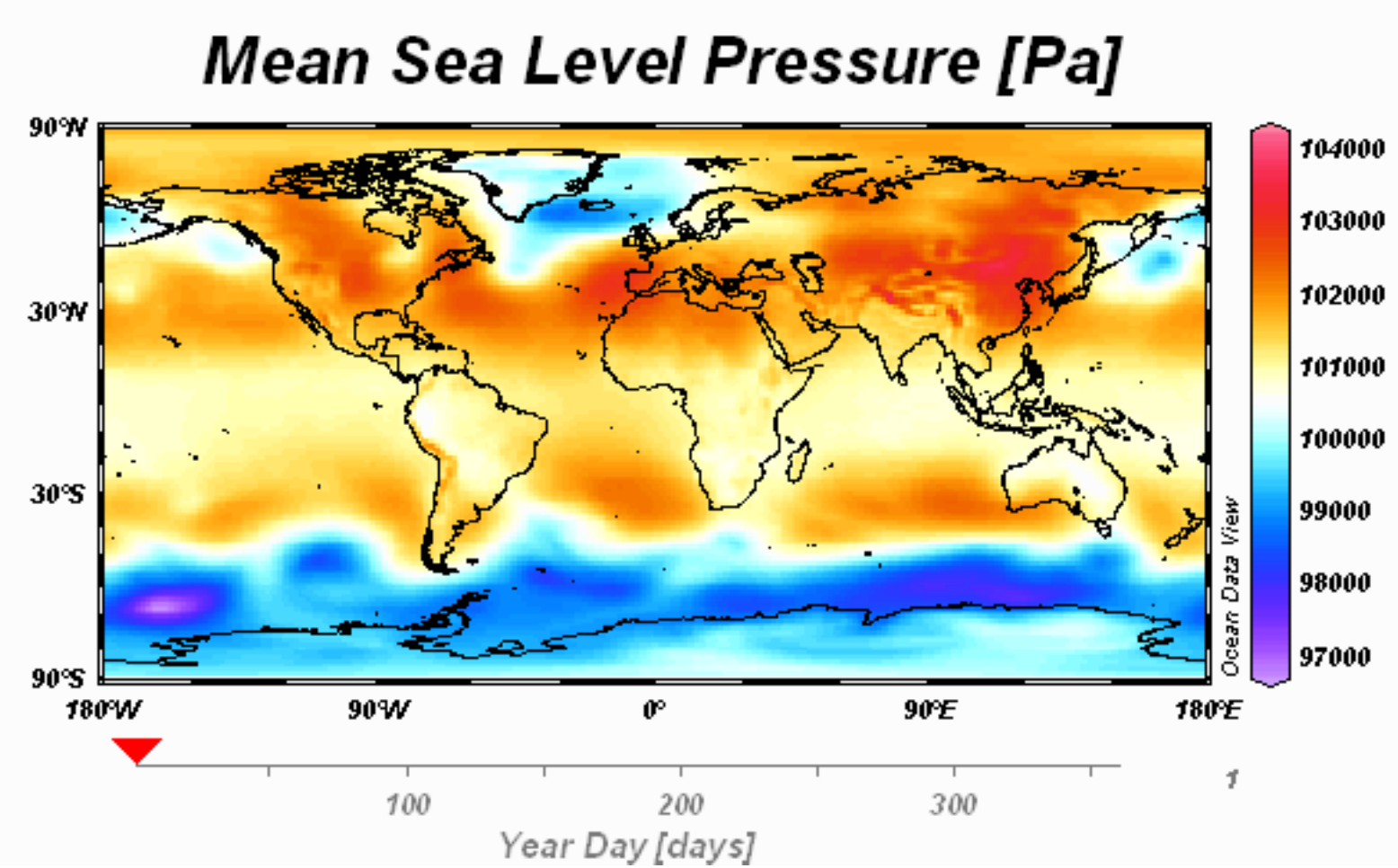
Example.

temporal evolution plots of tracer fields - Time-series data at BATS station



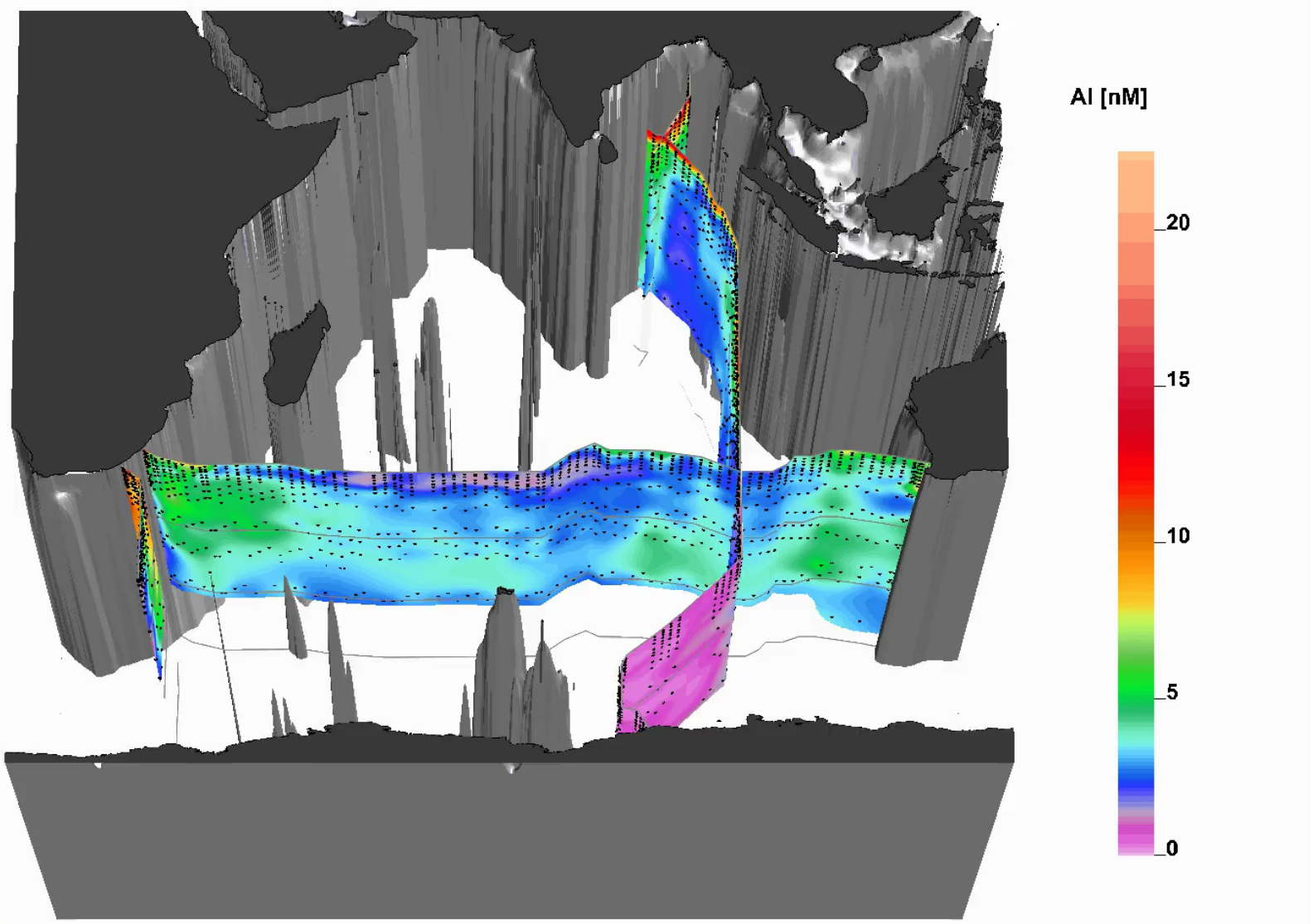
Example.

animations



Example.

animation 2



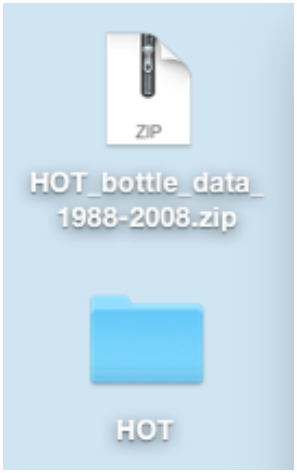
Data: Maxime Grand, Christopher Measures, Mariko Hatta, William Landing, Peter Morton, Clifton Buck, William Hiscock, Joseph Resing Graphics: Reiner Schlitzer

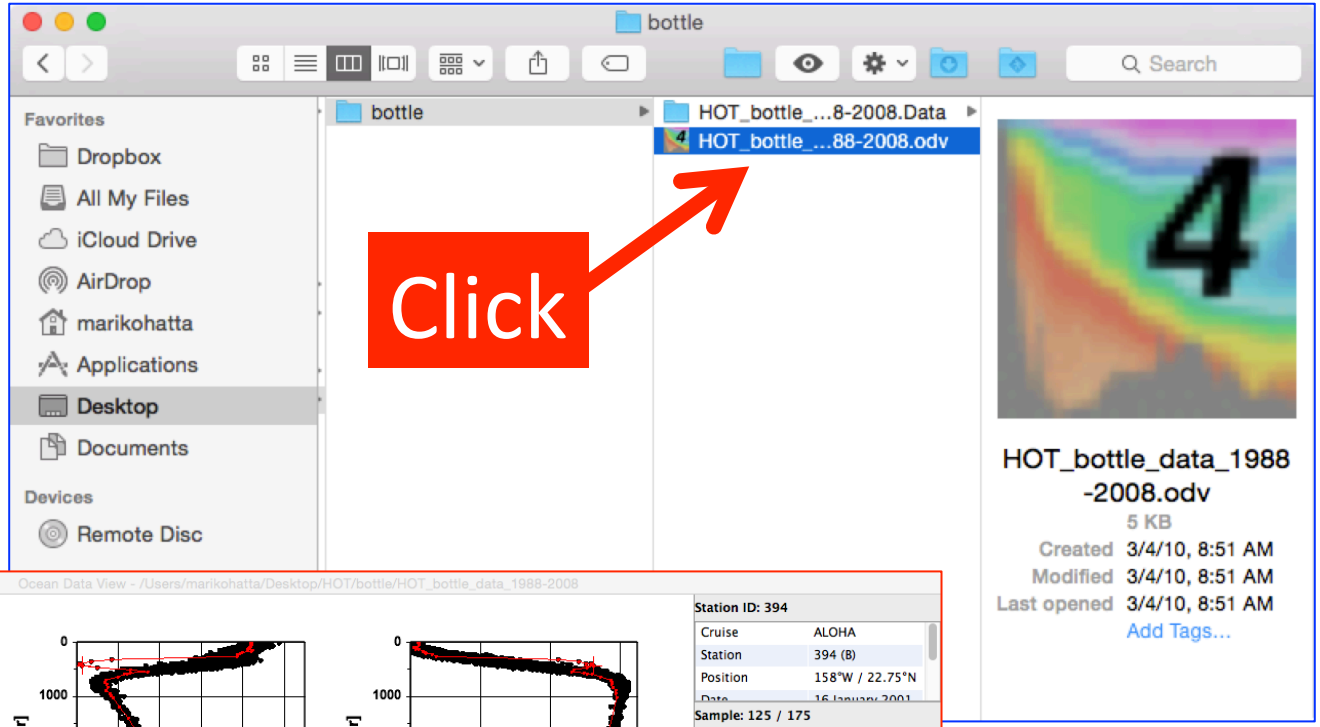
Let's get started

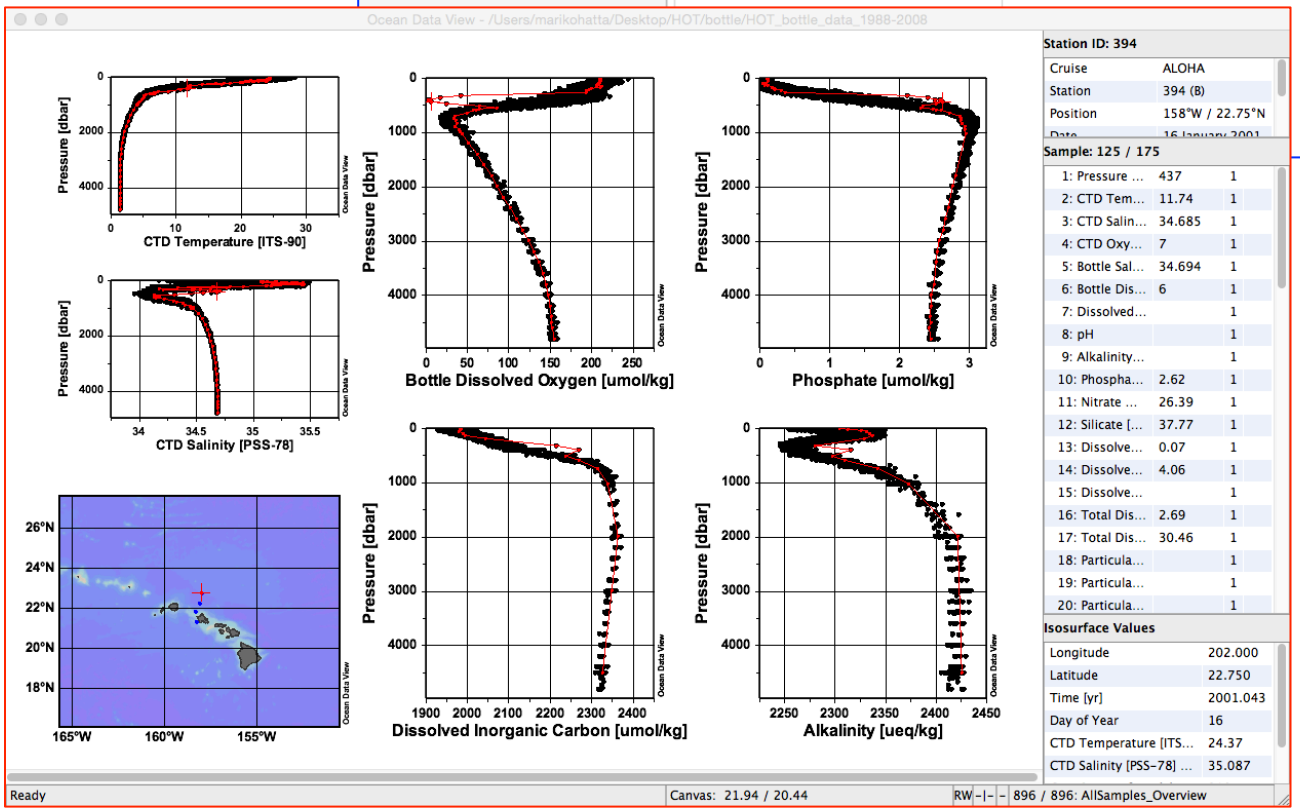
Installation http://odv.awi.de/en/software/download/

1. Download data and open it
2. Modify views
3. Create your own data file
4. Open new ODV & import your data file
5. Make T-S diagram and derived variable
6. How to save figures and views

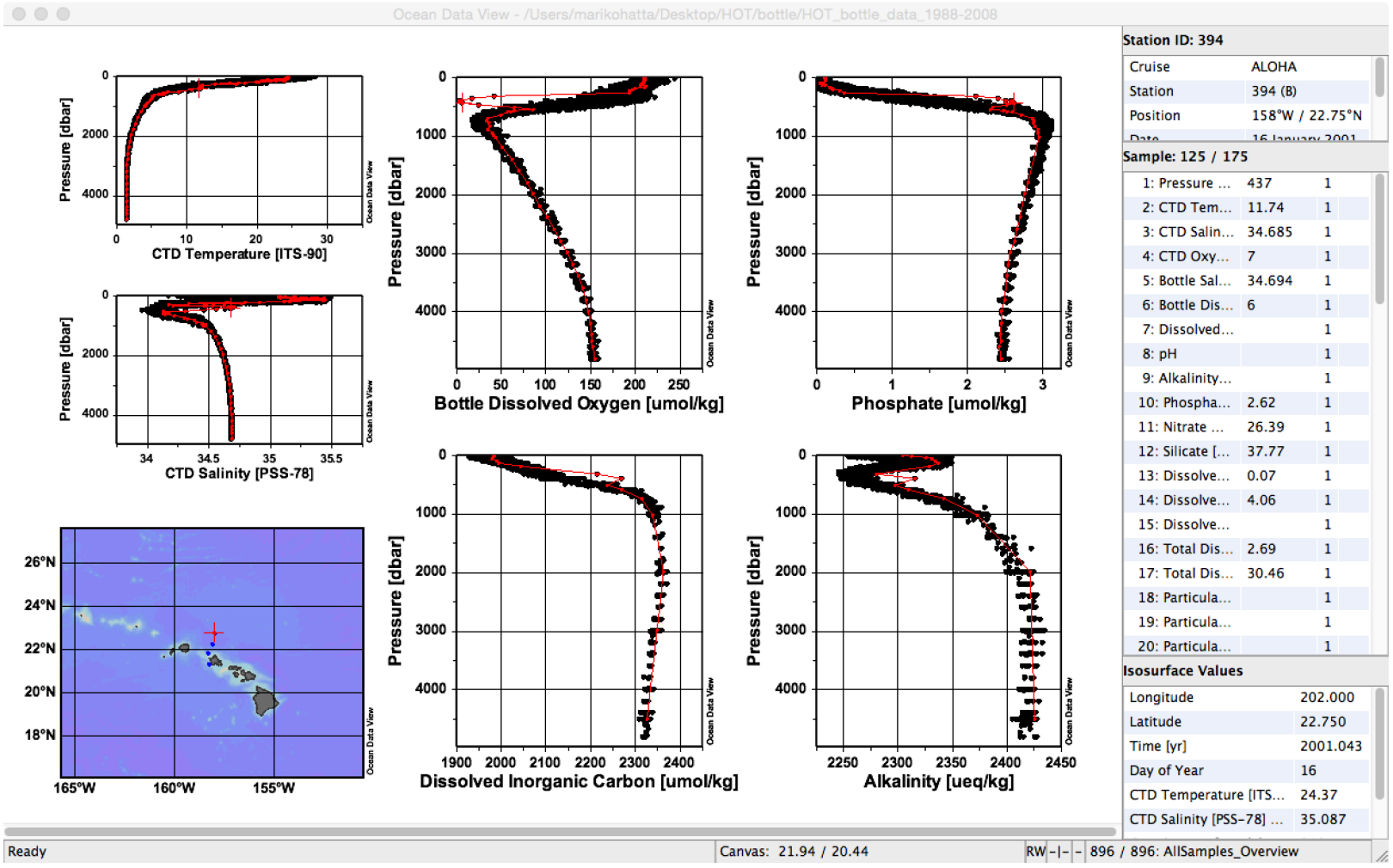
Find where you have put ODV data files on your computer.


ZIP
HOT_bottle_data_1988-2008.zip
HOT


bottle
Search
Favorites
Dropbox
All My Files
iCloud Drive
AirDrop
marikohatta
Applications
Desktop
Documents
Devices
Remote Disc
bottle
HOT_bottle_...8-2008.Data
HOT_bottle_...88-2008.odv
Click
4
HOT_bottle_data_1988-2008.odv
5 KB
Created 3/4/10, 8:51 AM
Modified 3/4/10, 8:51 AM
Last opened 3/4/10, 8:51 AM
Add Tags...

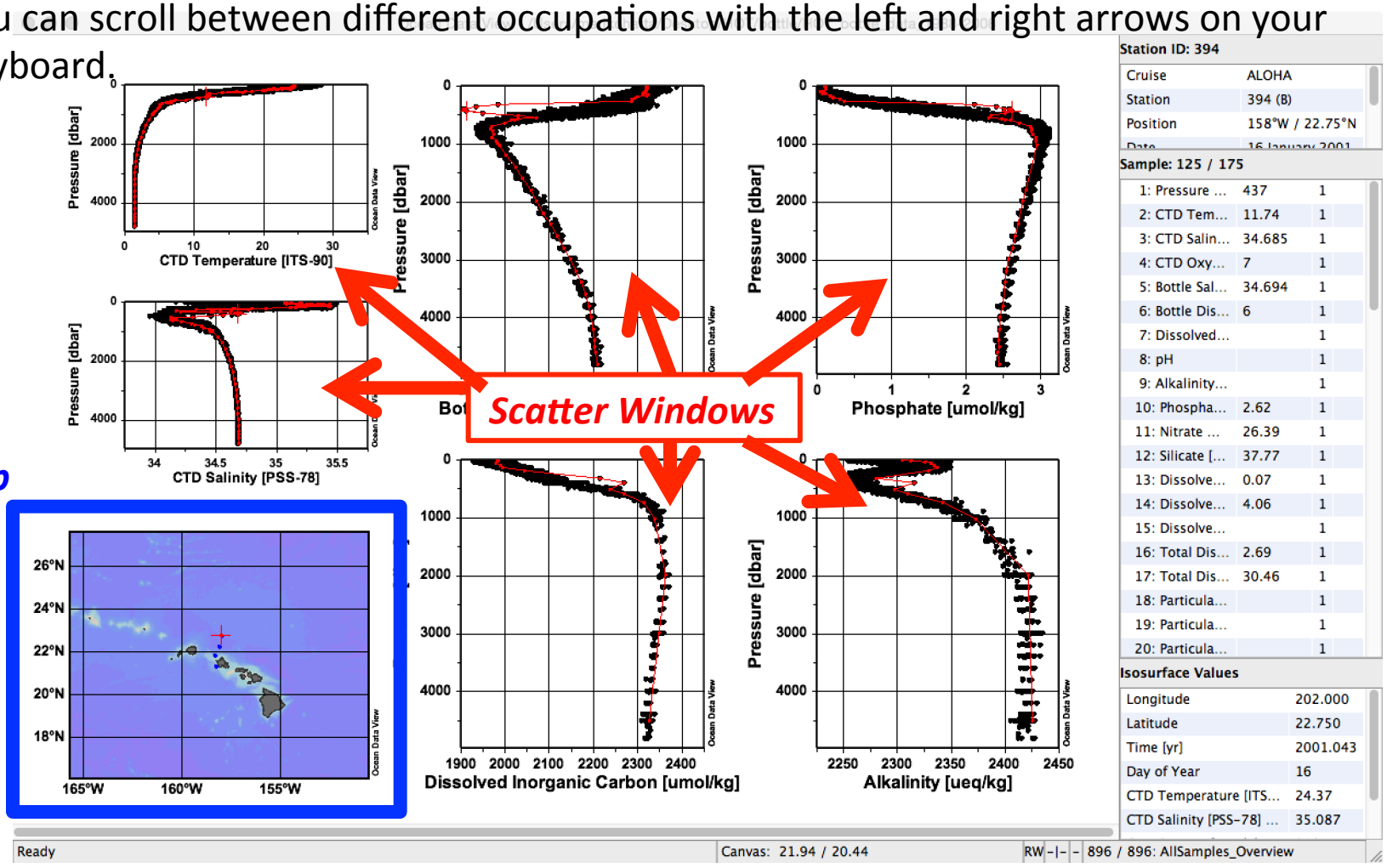

Ocean Data View - /Users/marikohatta/Desktop/HOT/bottle/HOT_bottle_data_1988-2008
Pressure [dbar]
CTD Temperature [ITS-90]
CTD Salinity [PSS-78]
Bottle Dissolved Oxygen [umol/kg]
Phosphate [umol/kg]
Dissolved Inorganic Carbon [umol/kg]
Alkalinity [ueq/kg]
26°N
24°N
22°N
20°N
18°N
165°W
160°W
155°W
Station ID: 394
Cruise ALOHA
Station 394 (B)
Position 158°W / 22.75°N
Sample: 125 / 175
1: Pressure ... 437 1
2: CTD Tem... 11.74 1
3: CTD Salin... 34.685 1
4: CTD Oxy... 7 1
5: Bottle Sal... 34.694 1
6: Bottle Dis... 6 1
7: Dissolved... 1
8: pH 1
9: Alkalinity... 1
10: Phospha... 2.62 1
11: Nitrate ... 26.39 1
12: Silicate [... 37.77 1
13: Dissolve... 0.07 1
14: Dissolve... 4.06 1
15: Dissolve... 1
16: Total Dis... 2.69 1
17: Total Dis... 30.46 1
18: Particula... 1
19: Particula... 1
20: Particula... 1
Isosurface Values
Longitude 202.000
Latitude 22.750
Time [yr] 2001.043
Day of Year 16
CTD Temperature [ITS... 24.37
CTD Salinity [PSS-78] ... 35.087
Ready
Canvas: 21.94 / 20.44
896 / 896: AllSamples_Overview

“6 Scatter Windows” mode



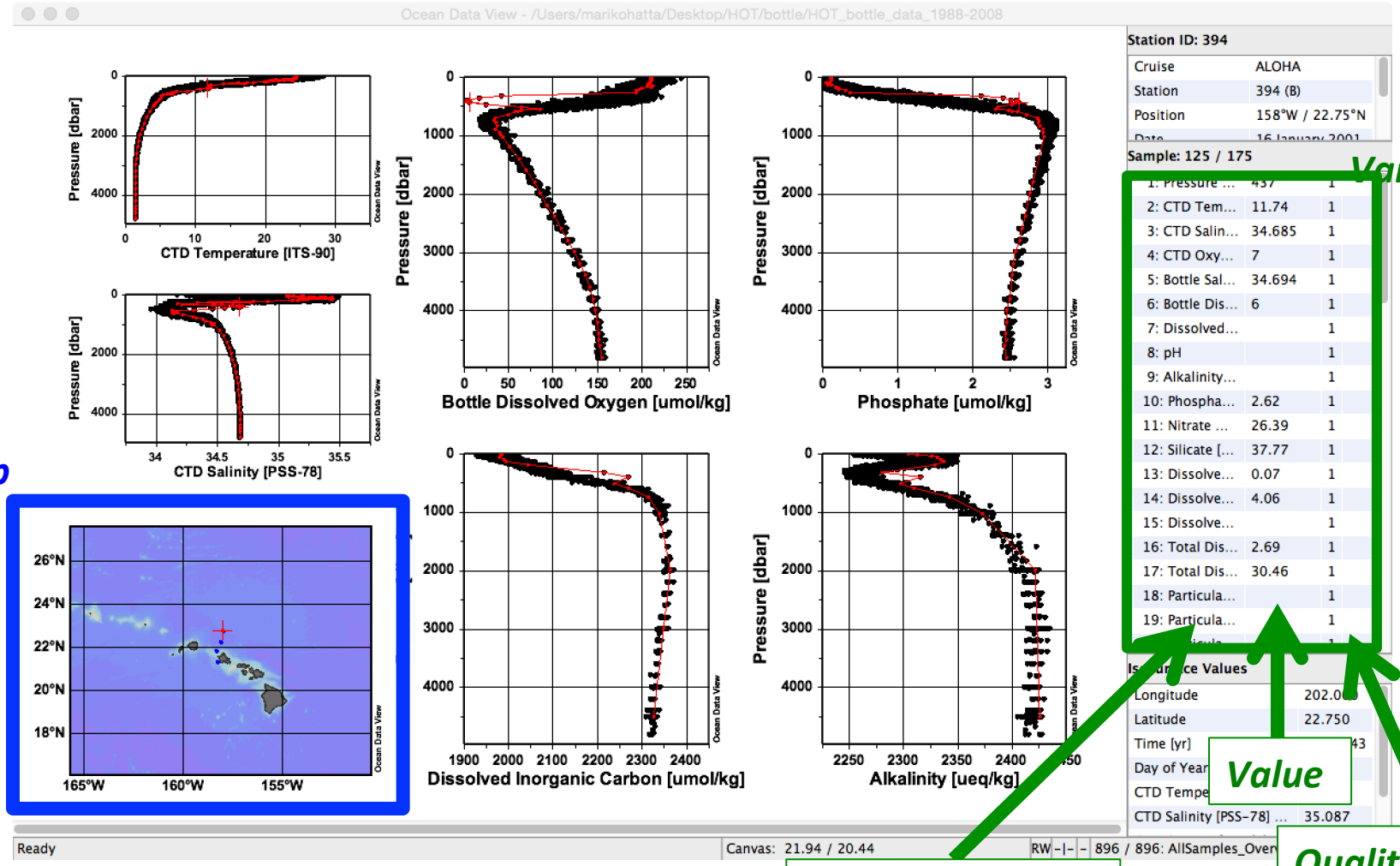
“6 Scatter Windows” mode

In scatter mode, all data within the map are shown. Clicking on a particular station, will highlight that station’s data in red. If the station has multiple occupations, like HOT, then you can scroll between different occupations with the left and right arrows on your keyboard.



“6 Scatter Windows” mode

You can move up and down the red highlighted profile with up and down keys. And the data corresponding to the point will be shown in the variables window.



Quality Flag (QF)

Quality flag document: http://odv.awi.de/en/documentation/

ODV flag:
QF

Flag Description	ODV
good quality	0
unknown quality	1
questionable quality	4
bad quality	8

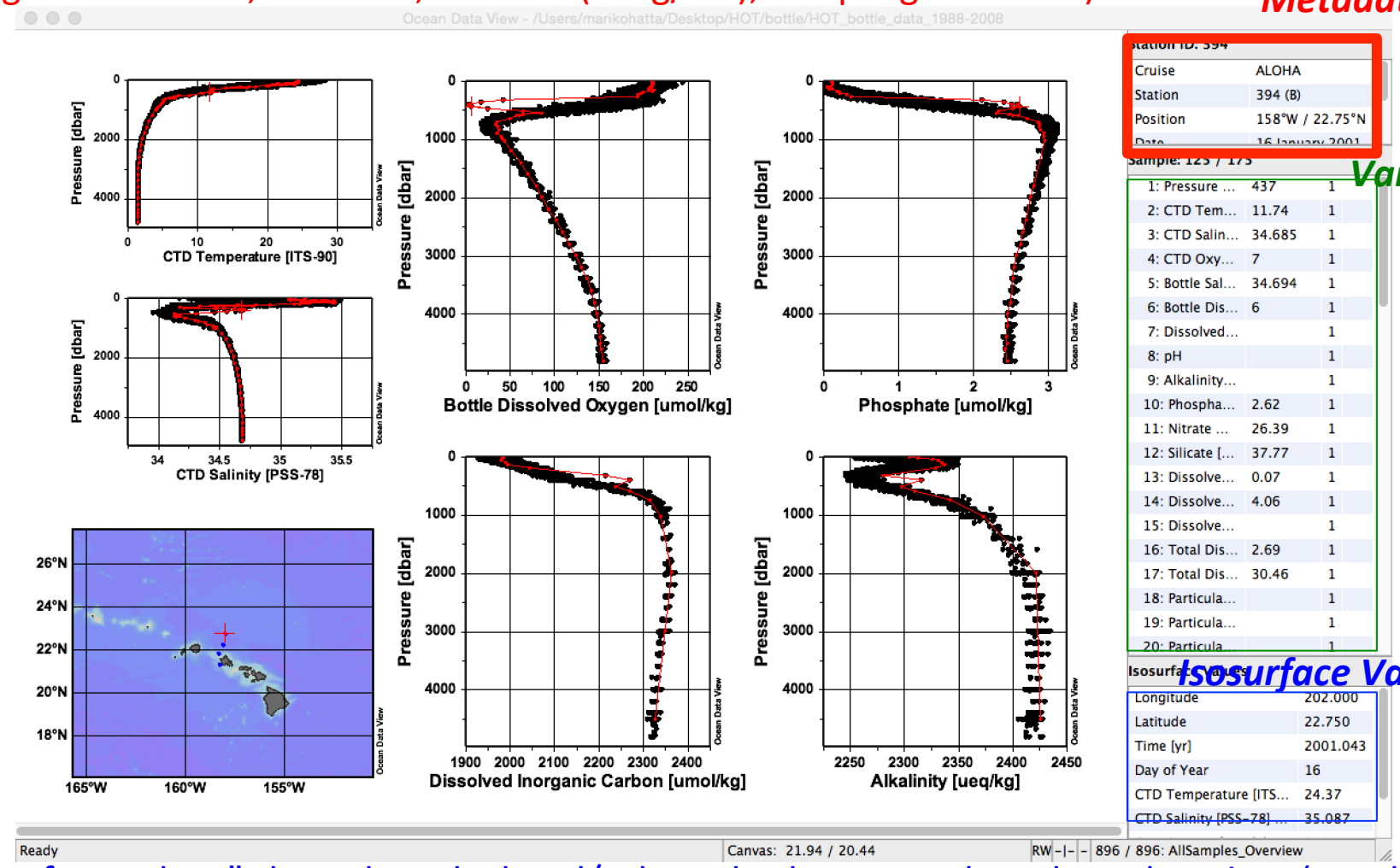
-Every parameter and each sample can have its own quality flag, good, unknown, questionable, or bad.

-You use the flag to identify data quality, you can then isolate bad data from your figure!

- ODV always assign quality flag = 1 i.e. unknown if you do not.

“6 Scatter Windows” mode

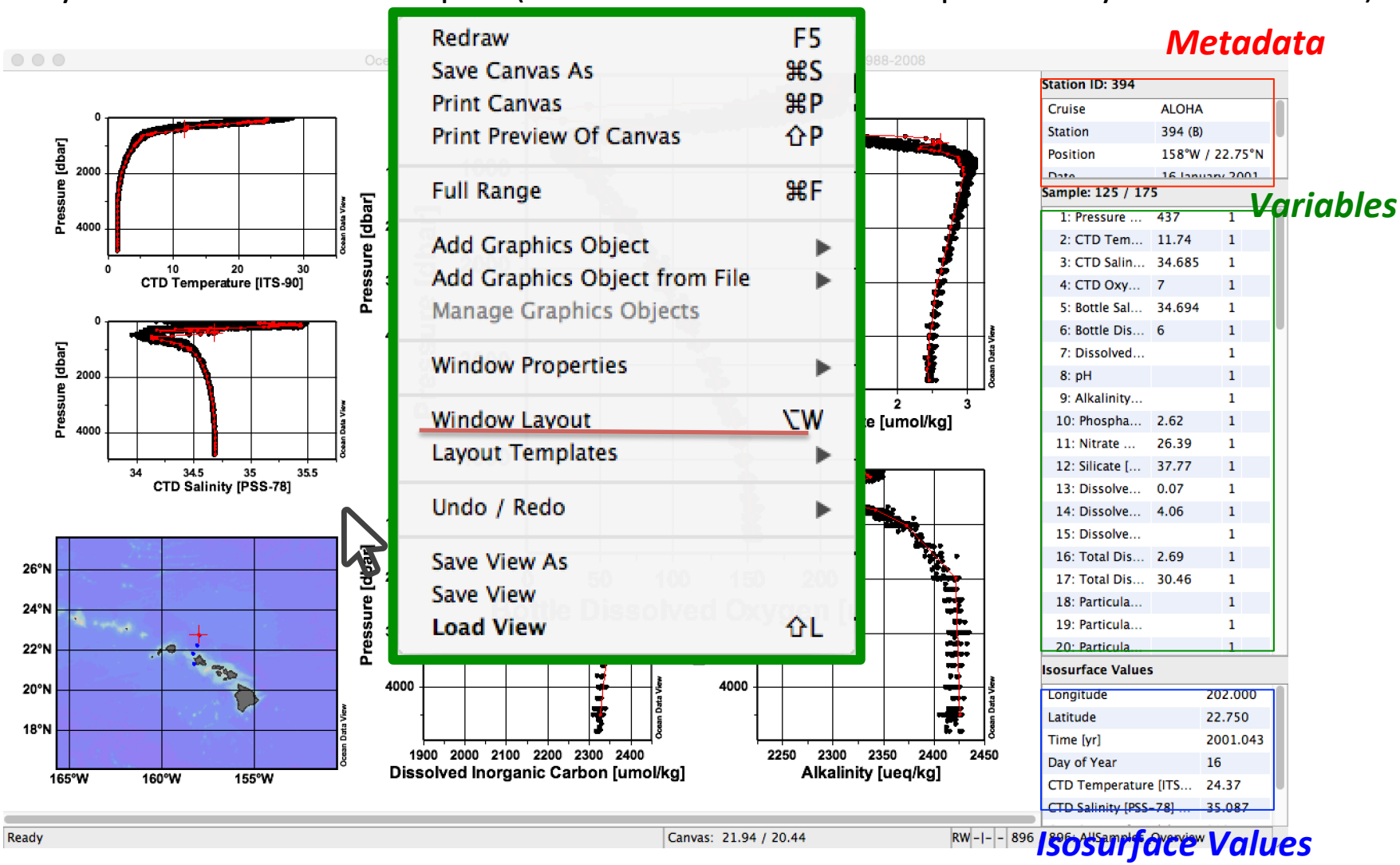
“Metadata” show the information of the selected station on the map
(e.g. Cruise name, Station #, Position (Long/Lat), sampling date etc.)



“Isosurface values” show the calculated/selected values at at the selected station. (see detail in the ODV manual)

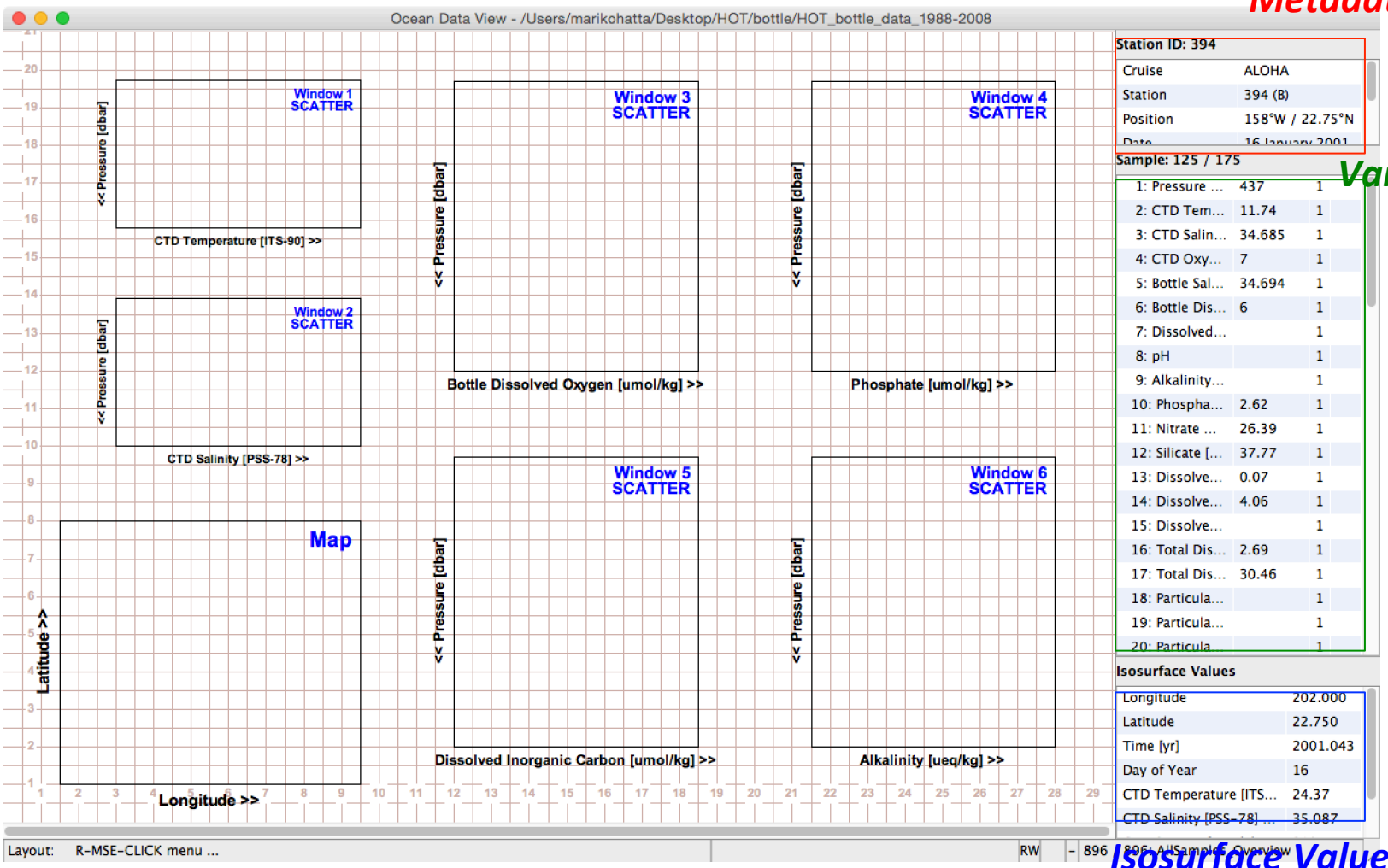
Let’s change the layout of the canvas

Move your cursor in the white part (it **should not** be on the map or on any scatter window)



Right click (“control” + click if you are Mac user), and select “Window Layout”.

“6 Scatter Windows” layout mode



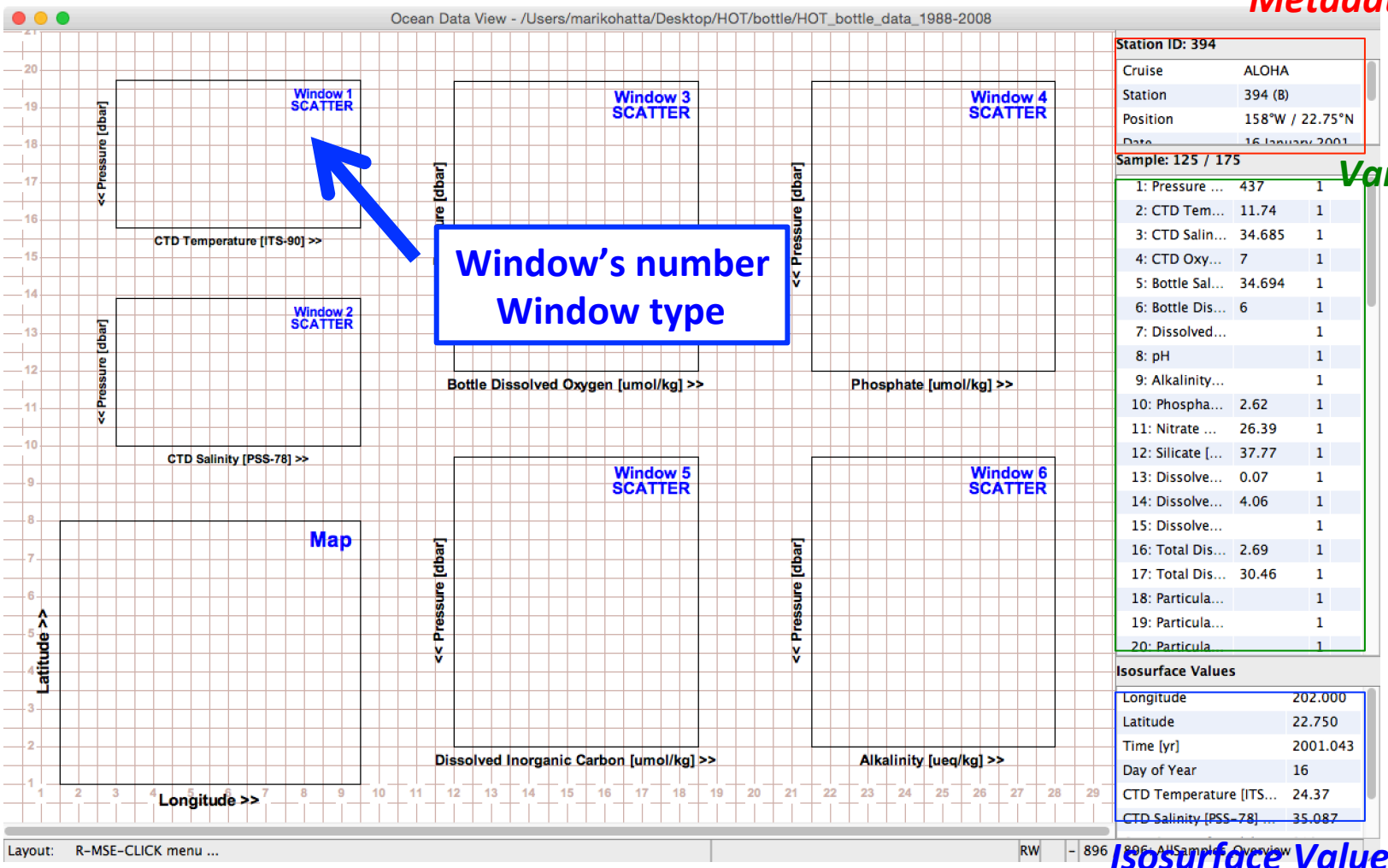
Metadata

Variables

Isosurface Values

“6 Scatter Windows” layout mode

This is “layout mode” of 6 scatter windows, and you can modify the layout of your windows (e.g. add new window, change the size, select different parameter etc.)



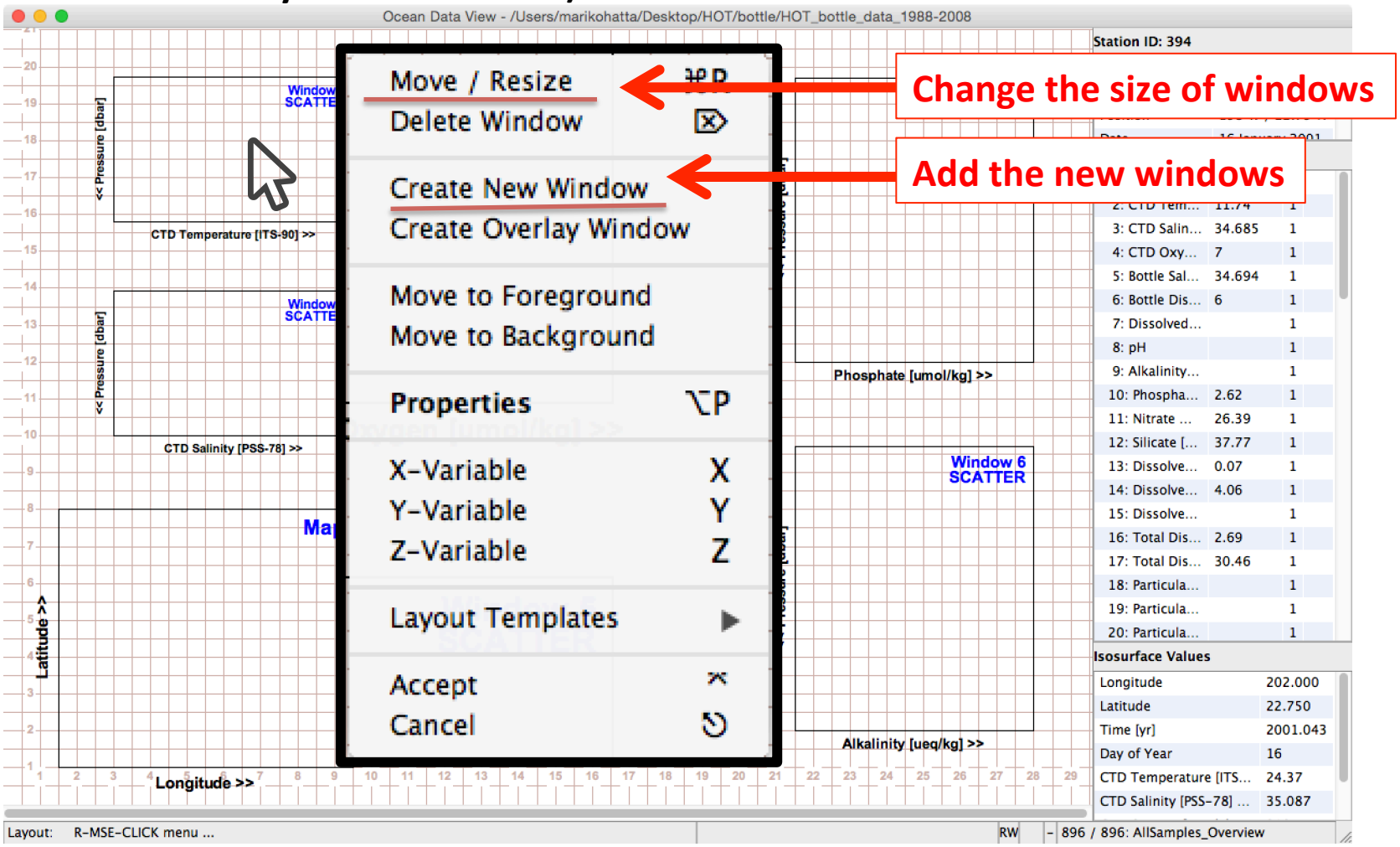
Metadata

Variables

Isosurface Values

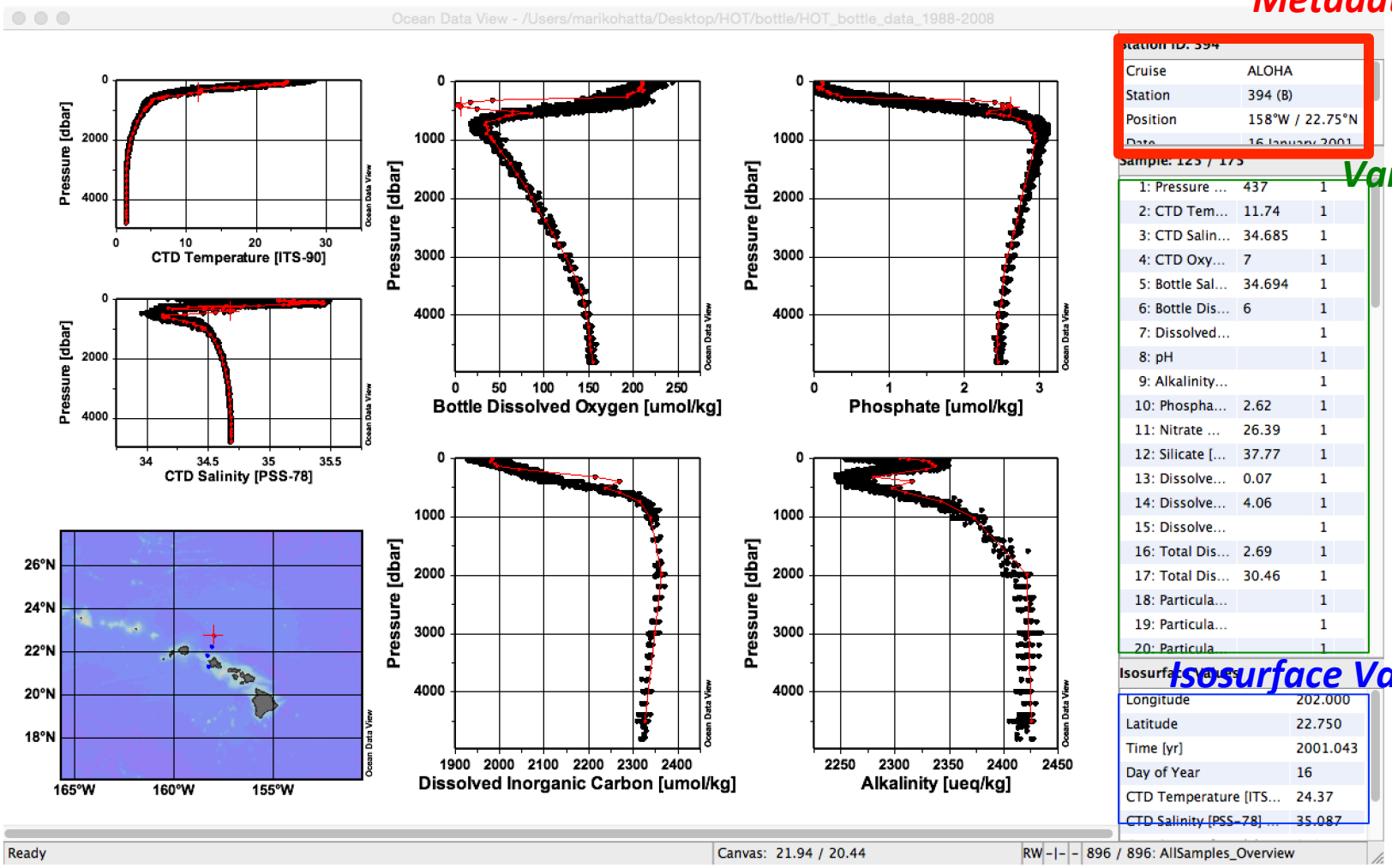
“6 Scatter Windows” layout mode

Move your cursor on the scatter window that you want to modify, and then **Right click (“control” + click if you are Mac user).**



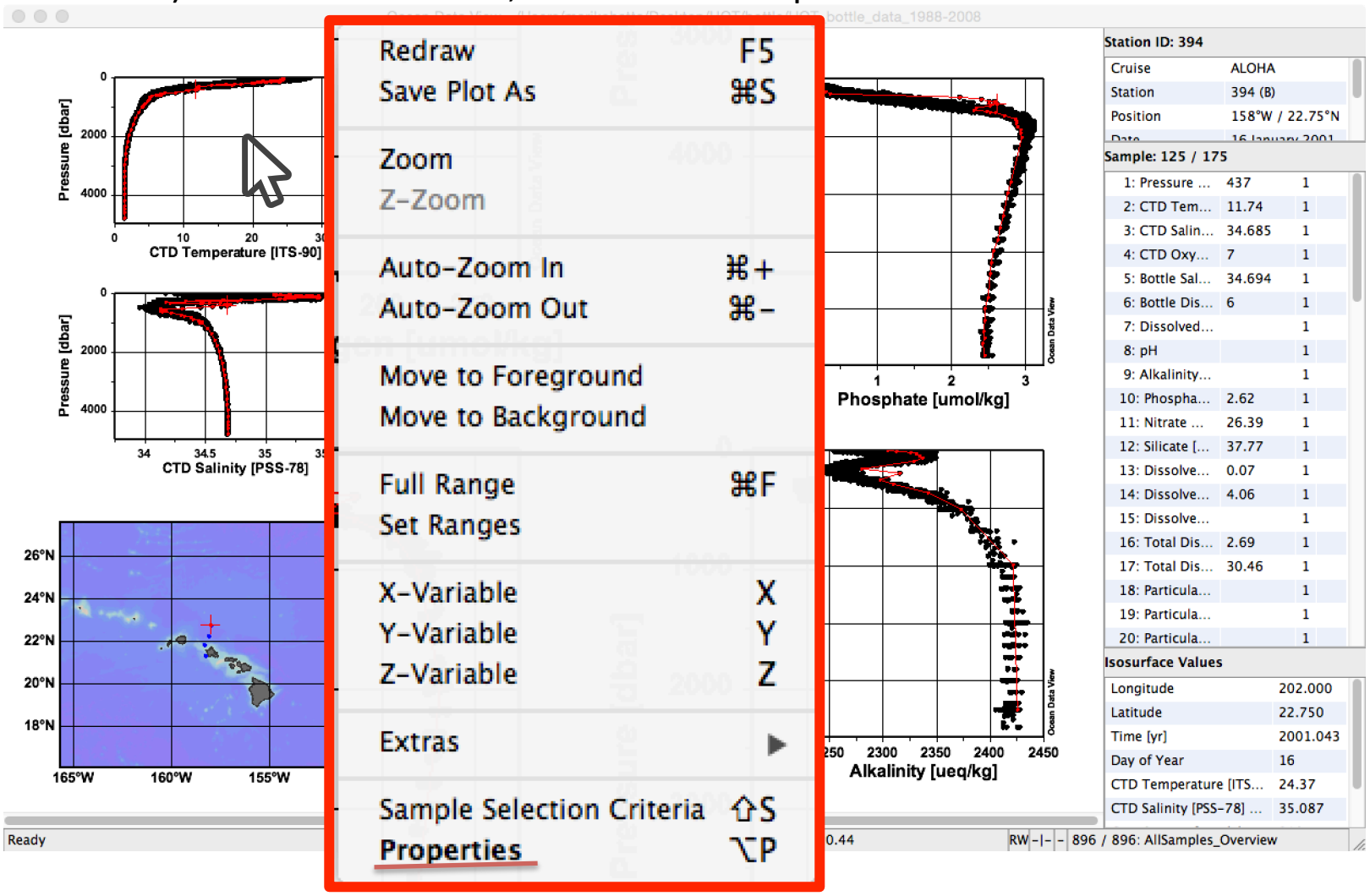
After you change the layout, select “Accept”.

“6 Scatter Windows” mode



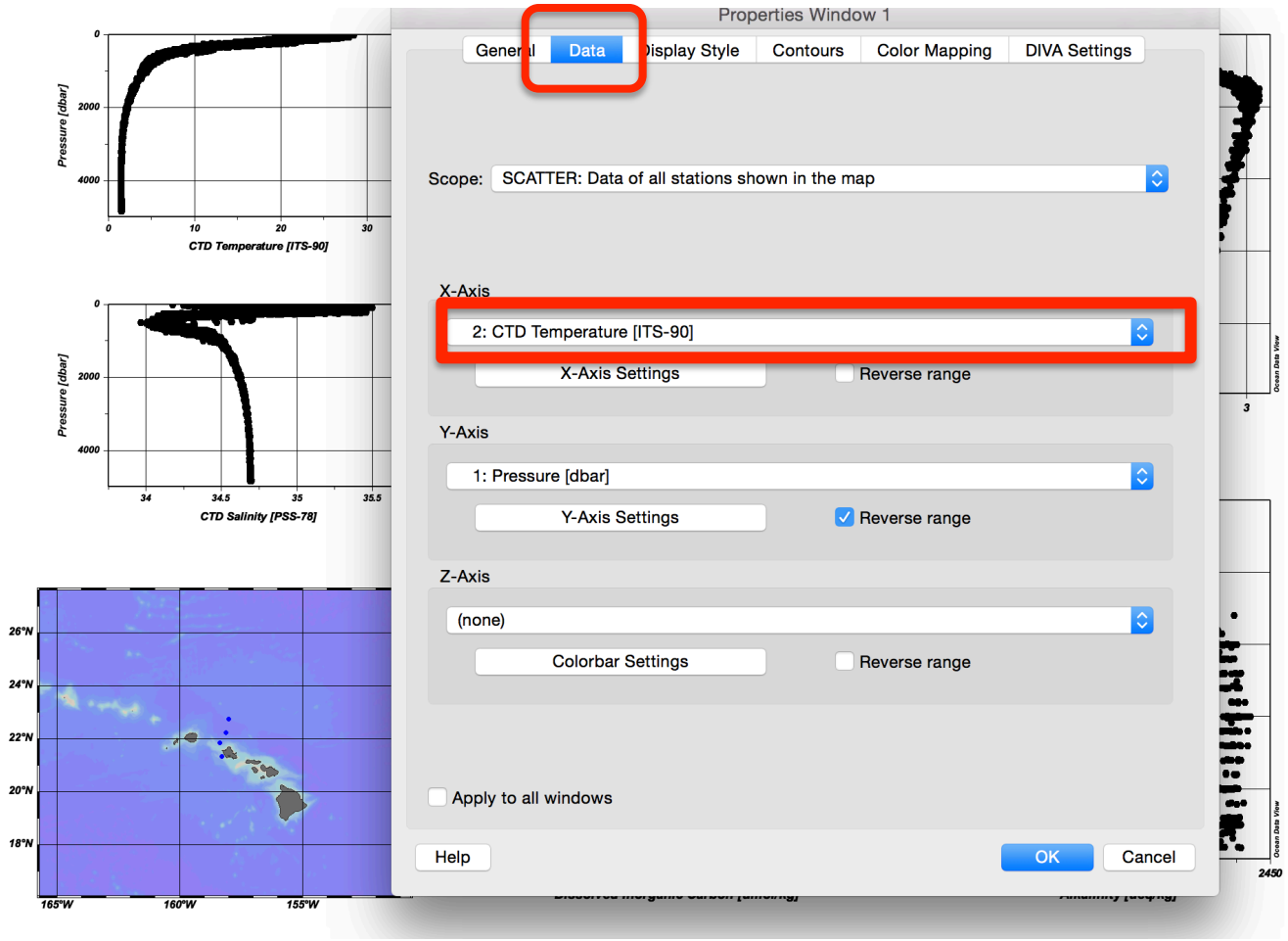
Let’s change the temperature plot to pH.

To make changes in any window, put your cursor and right click (“control” + click if you are Mac user) click in the window, then select “Properties”.



Let’s change the temperature plot to pH.

Select “Data” tab, then select “X-axis” (now selected “2:CTD Temperature [ITS-90] ”.



Cruise	ALOHA
Station	394 (B)
Position	158°W / 22.75°N
Date	16 January 2001
Time	16:29:44.000
Pressure Range...	[3 - 4804]

Sample: 88 / 175

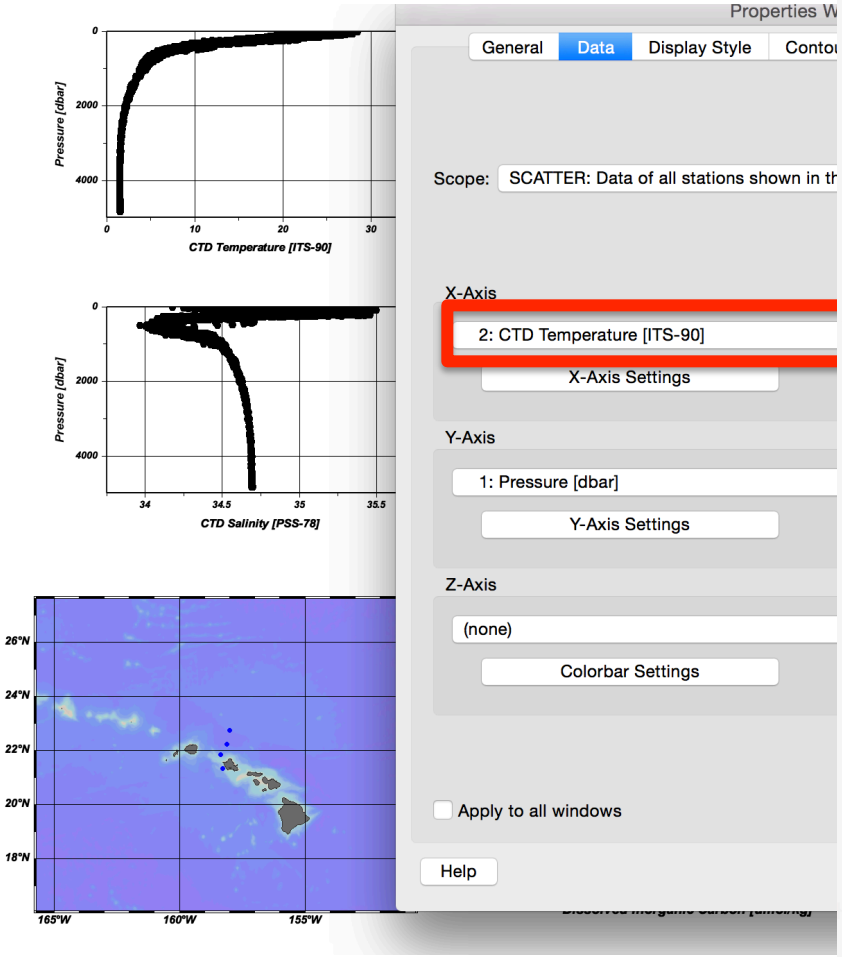
1: Pressur...	149	1
2: CTD Te...	23.86	1
3: CTD S...	35.428	1
4: CTD O...		1
5: Bottle ...	35.433	1
6: Bottle ...		1
7: Dissolv...		1
8: pH		1
9: Alkalini...		1
10: Phosp...		1
11: Nitrate...		1
12: Silicat...		1
13: Dissol...		1
14: Dissol...		1
15: Dissol...		1
16: Total ...		1
17: Total ...		1

Isosurface Values

Longitude	202.000
Latitude	22.750
Time [yr]	2001.043
Day of Year	16
CTD Temperature [ITS-...	24.37

Let's change the tem

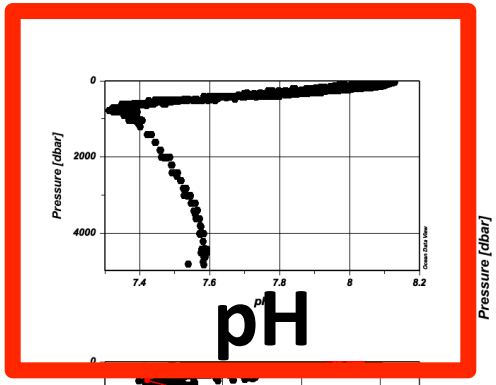
Select "8:pH", then select "OK".

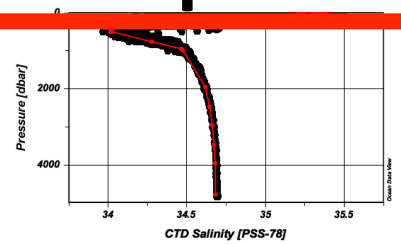


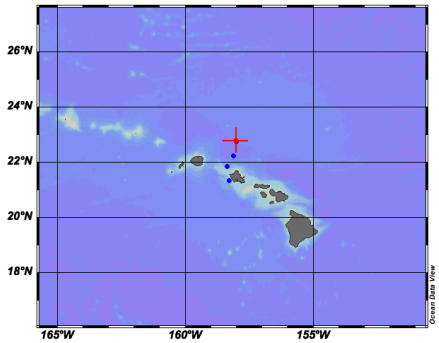
4: CTD Oxygen [umol/kg]
5: Bottle Salinity [PSS-78]
6: Bottle Dissolved Oxygen [umol/kg]
7: Dissolved Inorganic Carbon [umol/kg]
✓ 8: pH
9: Alkalinity [ueq/kg]
10: Phosphate [umol/kg]
11: Nitrate + Nitrite [umol/kg]
12: Silicate [umol/kg]
13: Dissolved Organic Phosphorus [umol/kg]
14: Dissolved Organic Nitrogen [umol/kg]
15: Dissolved Organic Carbon [umol/kg]
16: Total Dissolved Phosphorus [umol/kg]
17: Total Dissolved Nitrogen [umol/kg]
18: Particulate Carbon [umol/kg]
19: Particulate Nitrogen [umol/kg]
20: Particulate Phosphorus [nmol/kg]
21: Low-Level Nitrogen [nmol/kg]
22: Low-Level Phosphorus [nmol/kg]
23: Low-Level Silica [umol/kg]
24: Fluorometric Chlorophyll a [ug/l]
25: Pheopigments [ug/l]
26: HPLC Chlorophyll c3 [ng/l]
27: HPLC Chlorophyll c1+c2 [ng/l]
28: HPLC Chlorophyll c1+c2+c3 [ng/l]
29: HPLC Peridinin [ng/l]
30: HPLC 19' Butanoyloxyfucoxanthin [ng/l]
31: HPLC Fucoxanthin [ng/l]
32: HPLC 19' Hexanoyloxyfucoxanthin [ng/l]
33: HPLC Prasinoxanthin [ng/l]
34: HPLC Diadinoxanthin [ng/l]
35: HPLC Zeaxanthin [ng/l]
36: HPLC Chlorophyll a (chlb) [ng/l]
37: HPLC Chlorophyll b (hplc) [ng/l]
38: HPLC Chlorophyll c4 [ng/l]
39: HPLC α-Carotene [ng/l]
40: HPLC β-Carotene [ng/l]
41: HPLC Carotenes [ng/l]
42: HPLC Chlorophyllide a [ng/l]
43: HPLC Violaxanthin [ng/l]
44: HPLC Lutein [ng/l]
45: HPLC Monovinyl Chlorophyll a [ng/l]
46: HPLC Divinyl Chlorophyll a [ng/l]

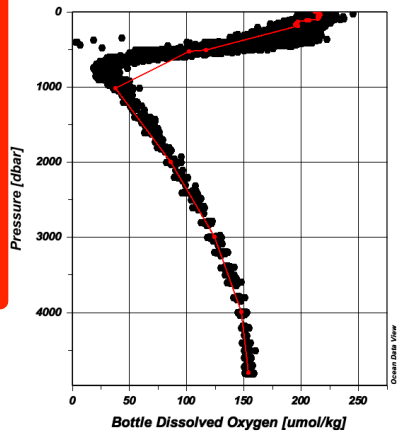
“6 Scatter Windows” mode

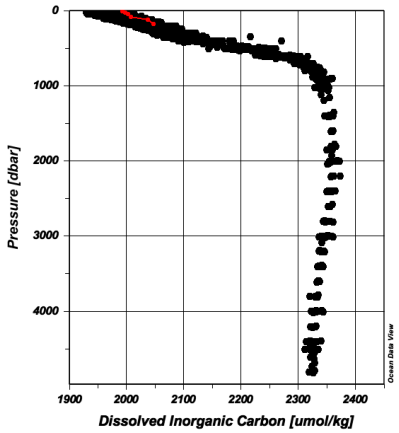
Now you will see the modified scatter window showing pH as a vertical profile.

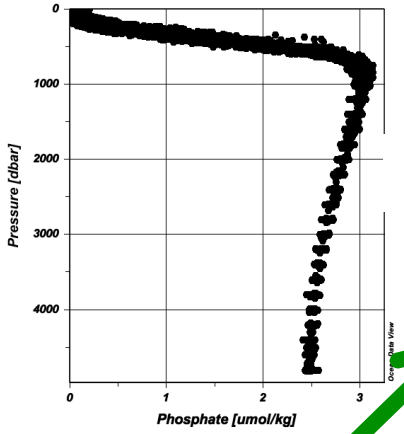


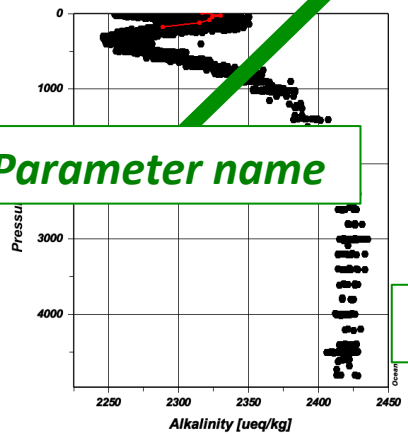












Cruise	ALOHA
Station	402 (B)
Position	158°W / 22.75°N
Date	17 May 2001
Time	18:54:35.000
	[4 - 4804]

Variables

1: Pressur…	14	1
2: CTD Te…	23.77	1
3: CTD S…	35.246	1
4: CTD O…	212	1
5: Bottle …	35.251	1
6: Bottle …		1
7: Dissolv…		1
8: pH		1
9: Alkalini…		1
10: Phosp…		1
11: Nitrate…		1
12: Silicat…		1
13: Dissol…		1
14: Dissol…		1
15: Dissol…	93.16	1
16: To…		1
17: To…		1

Parameter name

Value

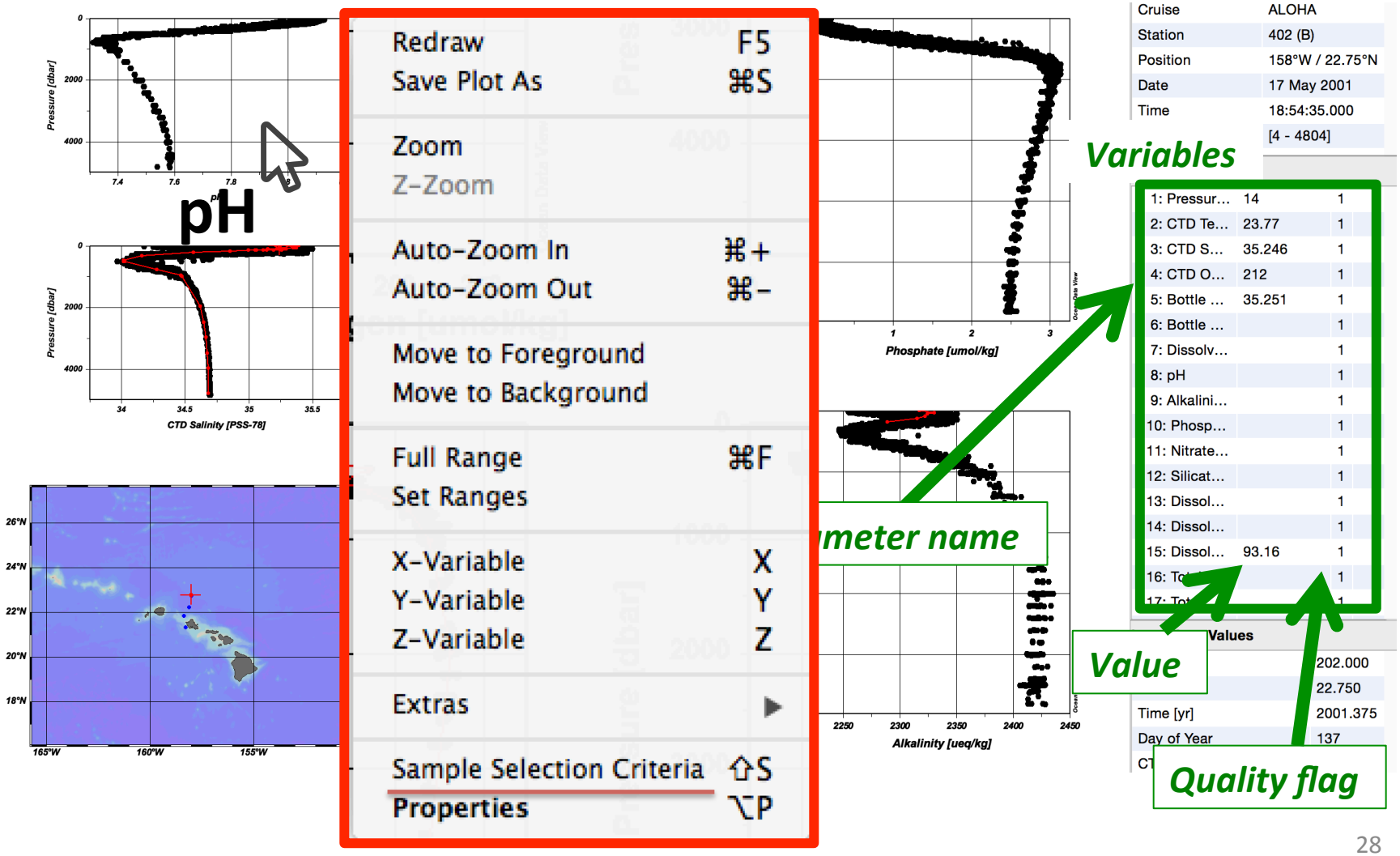
Quality flag

Values	
	202.000
	22.750
Time [yr]	2001.375
Day of Year	137
CT	

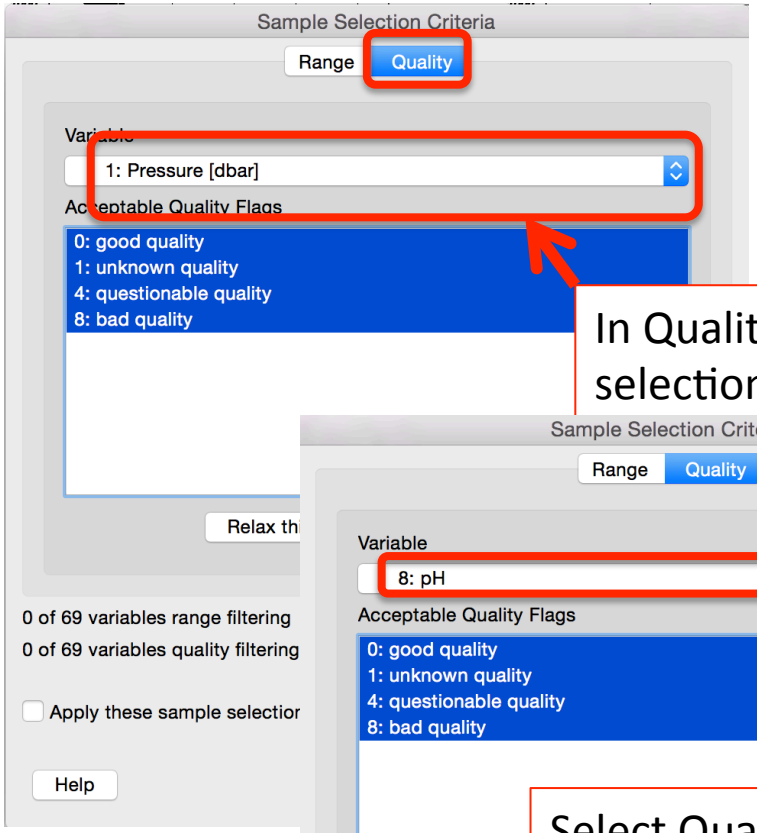
Now, we are going to modify the sample selection criteria used for the plot.

Let's modify the sample selection criteria!

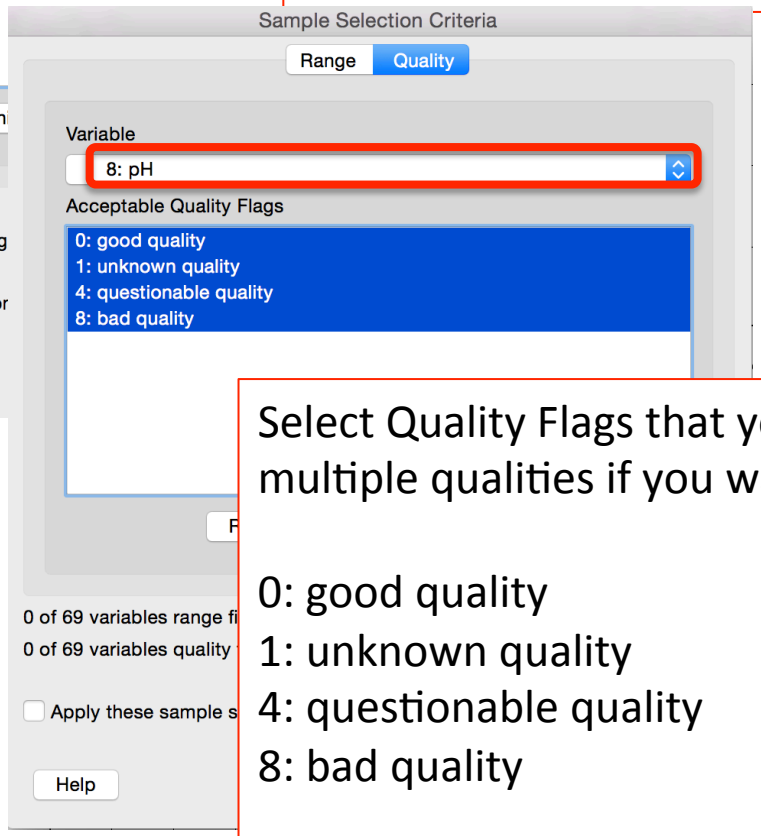
Move your cursor in the scatter window that you want to change the selection criteria, right click ("control" + click if you are Mac user), then select "**Sample Selection Criteria**".

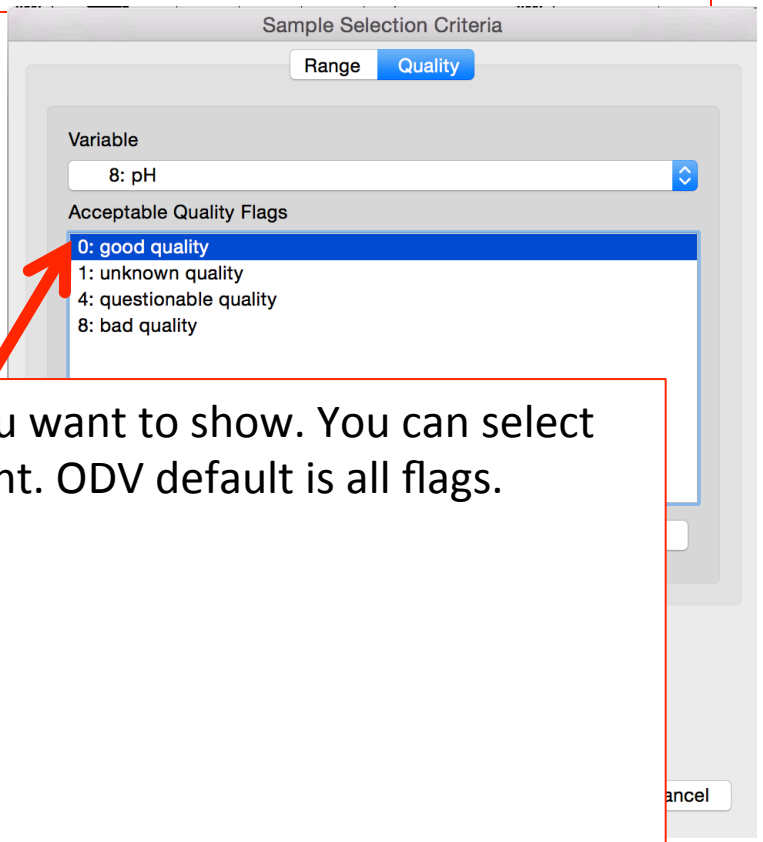


How to modify the sample selection criteria (Quality Flag)!



In Quality tab, select “Variable” that you want to modify the selection criteria.





Select Quality Flags that you want to show. You can select multiple qualities if you want. ODV default is all flags.

0: good quality
1: unknown quality
4: questionable quality
8: bad quality

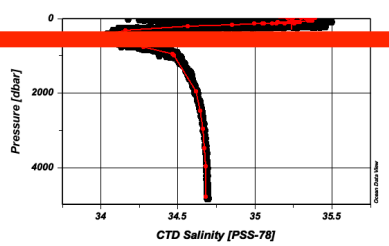
Select only “0:good quality” here.

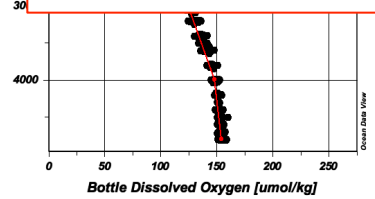
“6 Scatter Windows” mode

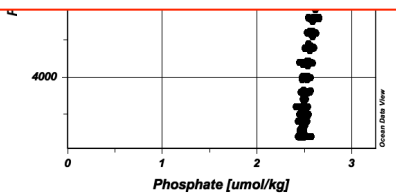
Disappeared!

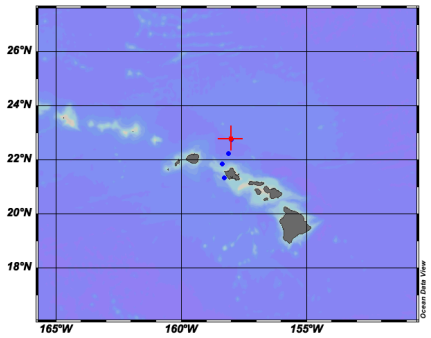
If the pH data in the scatter window disappeared, you are exactly following my instructions.

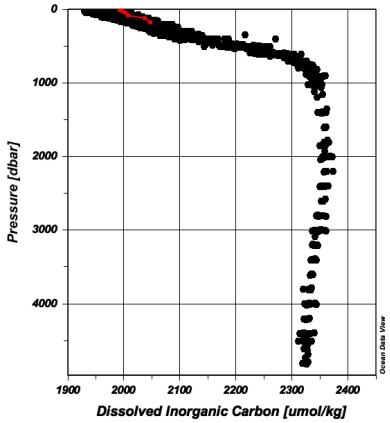
The pH values are not showing here because all of the flags in this data set were recorded as “unknown (=1)” by ODV.

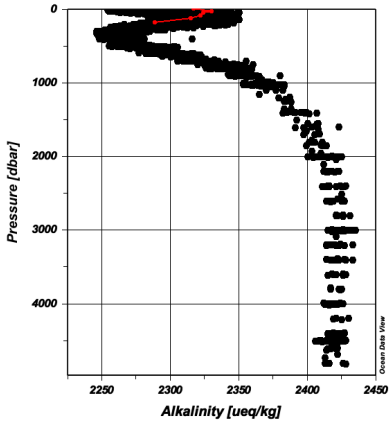










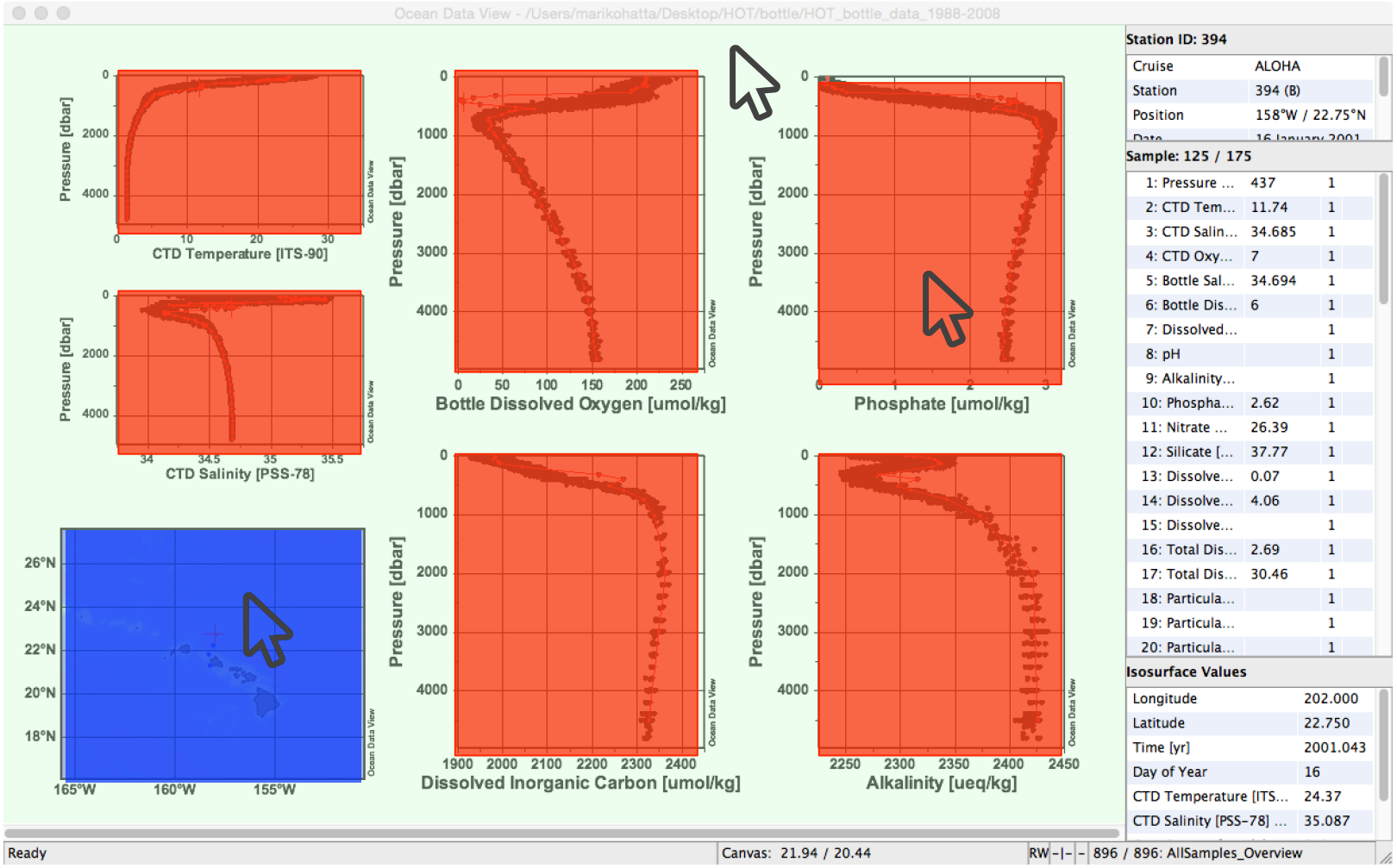


2: CTD Te…	23.77	1
3: CTD S…	35.246	1
4: CTD O…	212	1
5: Bottle …	35.251	1
6: Bottle …		1
7: Dissolv…		1
8: pH		1
9: Alkalini…		1
10: Phosp…		1
11: Nitrate…		1
12: Silicat…		1
13: Dissol…		1
14: Dissol…		1
15: Dissol…	93.16	1
16: Total …		1
17: Total …		1

Isosurface Values	
Longitude	202.000
Latitude	22.750
Time [yr]	2001.375
Day of Year	137
CTD Temperature [ITS-…	23.83
CTD Salinity [PSS-78] …	35.243

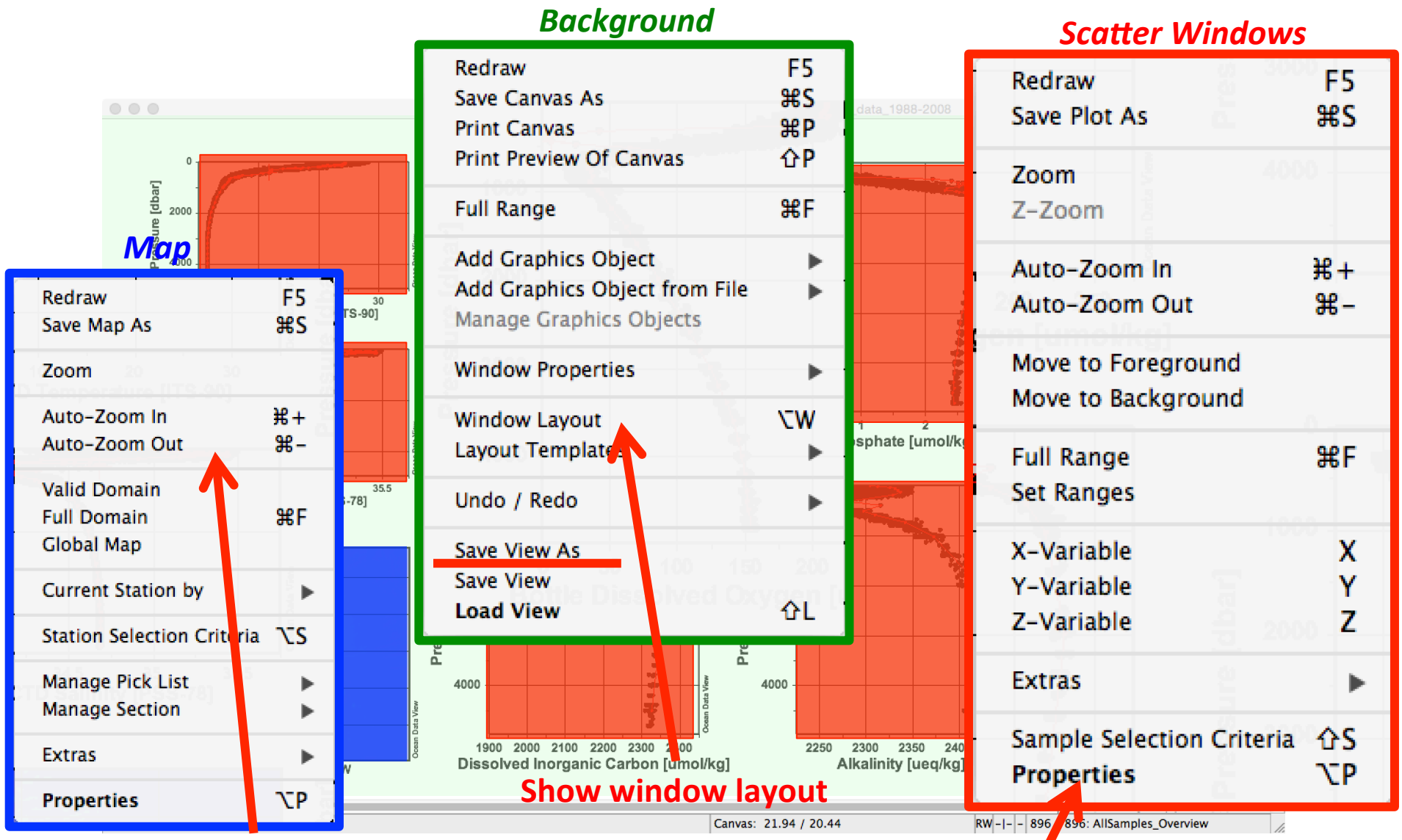
Different window types (shown in color) have different pop-up menus!

Depending on what you want to modify, you have to select “Map” or “Scatter Window” or “background”.



Map ***Scatter Windows*** ***Background***

Different window types (shown in color) have different pop-up menus!

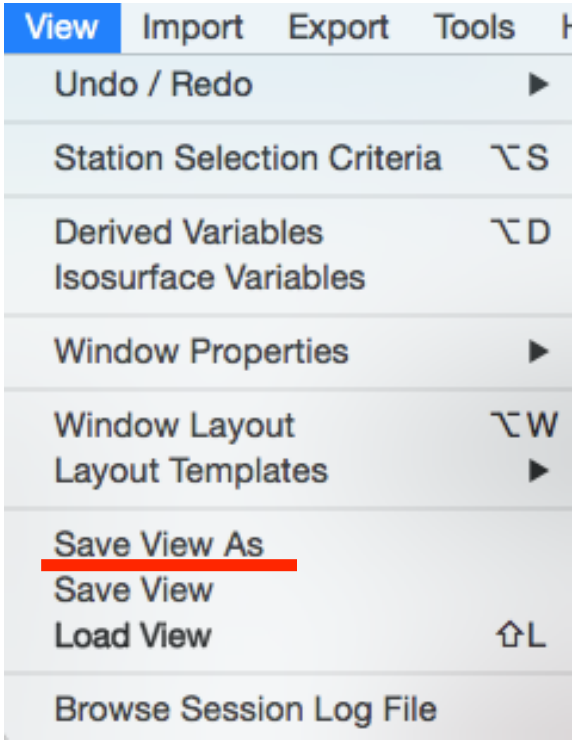


Change the scale of Map

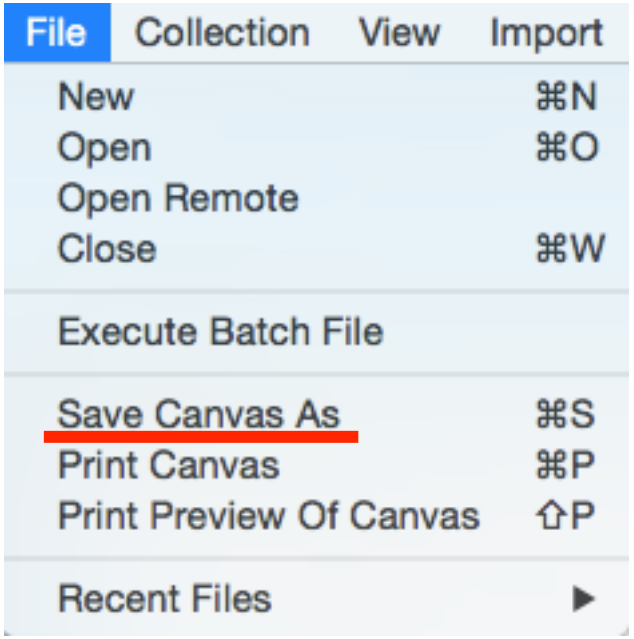
Change the properties of the window

How to save figures and views

All of the parameters in a canvas, window types, parameters shown, scaling, etc. are known as a view which can be saved. Click “View” in the Menu Bar to select “Save View as” or “Save View”.

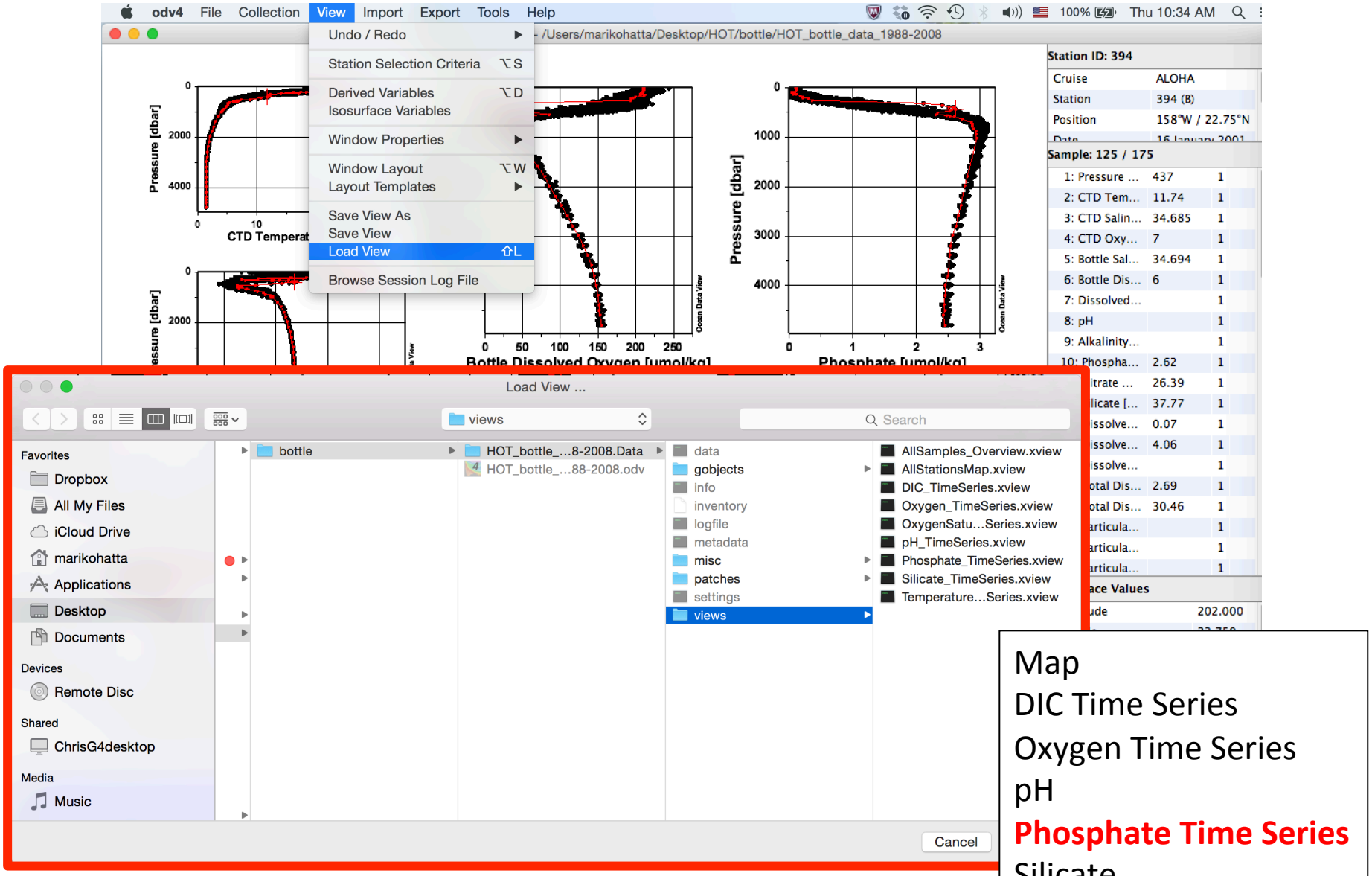


How to save figures:
Click “File” in the Menu Bar to select “Save Canvas as”.



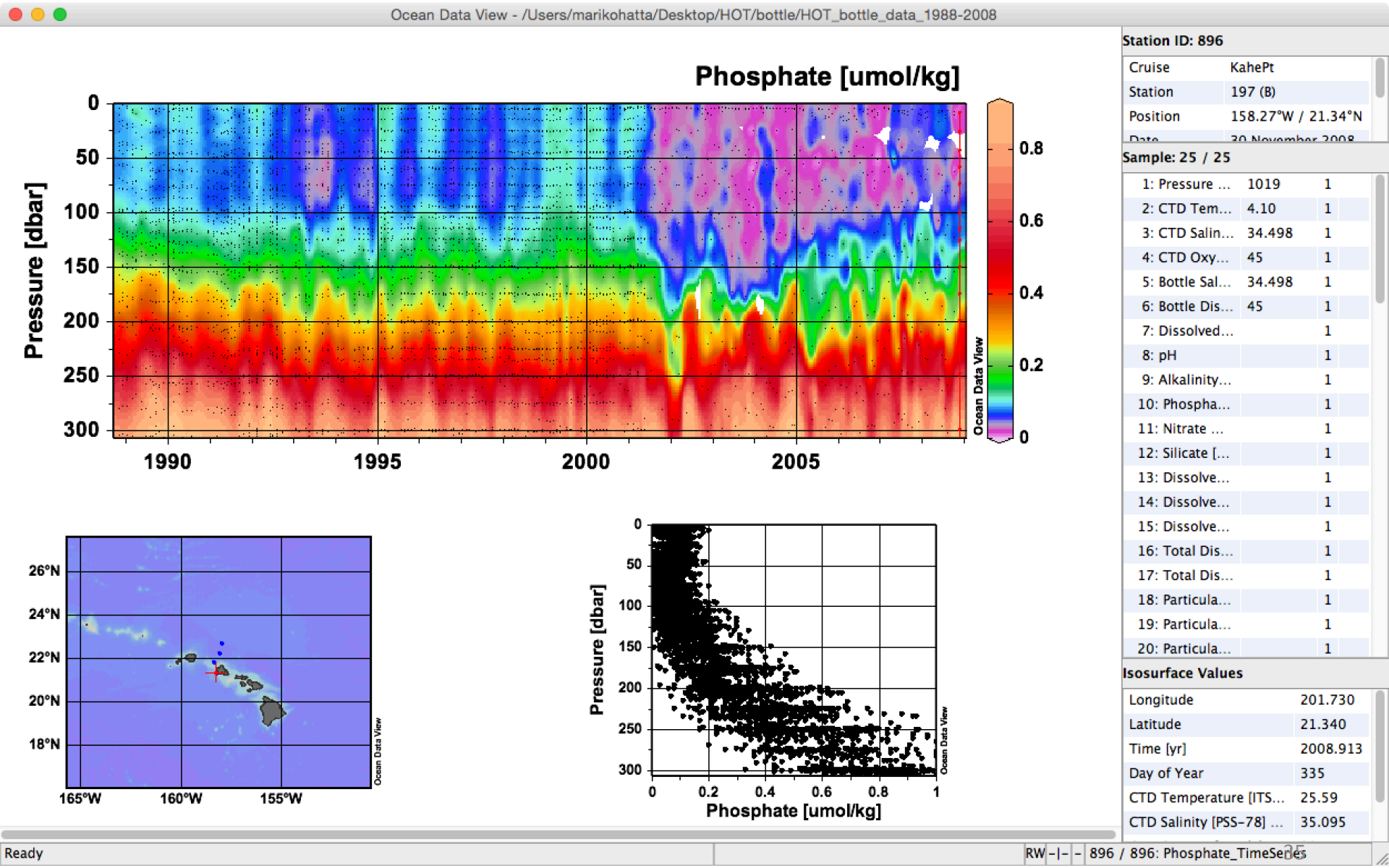
Tip: The highest resolution of the canvas you can save is 499, which would be important for a publication. Also when you print the Canvas, it would take a long time to print. Save as the canvas, and then print it (faster!).

Let's change the view from the vertical profiles to "Phosphate Time Series" mode!



Map
DIC Time Series
Oxygen Time Series
pH
Phosphate Time Series
Silicate
Temperature

Phosphate Time Series



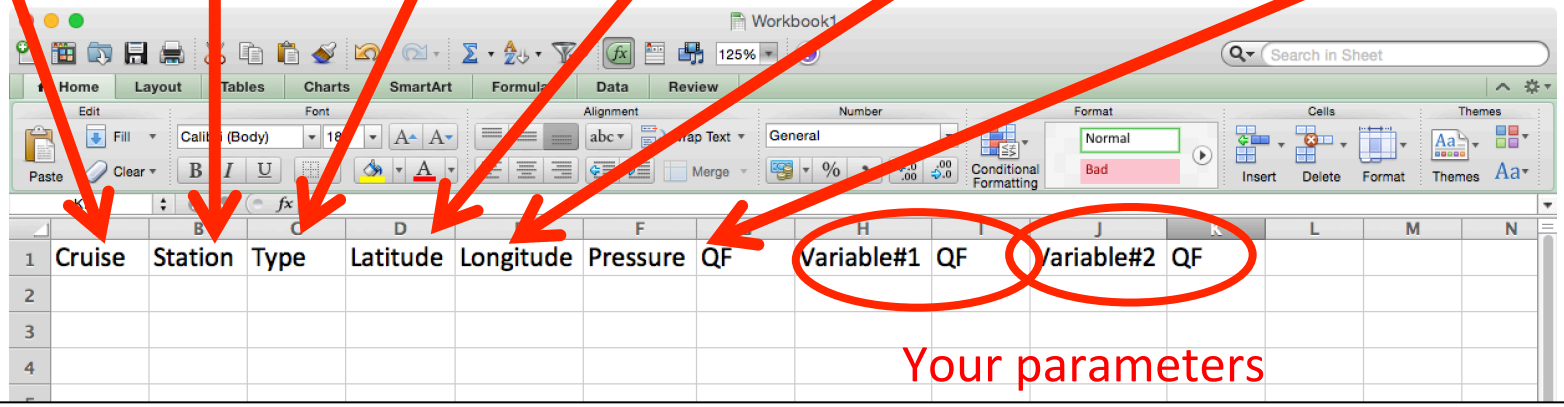
Exercise 1.

Now to create your own ODV readable text file

1. Create your own data file

ODV will only recognize files in tab delimited format (.txt) with the following headers (the order of "Meta data" is not important!):

Cruise *(name)* Station *(numbers)* Type *(B or C)* Latitude *(North +, South -)* Longitude *(East +, West -)* Pressure *(or depth)* QF



Tip: Fill out the info of the metadata (cruise, station, Type, Long/Lat, Date/time*, Bot. Depth*). *if you do not have these data, you can leave it blank.*

Tip:

1. Have to use the following headers for the metadata (the order is not important!)
2. If you want to use the bottom depth from the data file, you have to use the header of "Bot.Depth" instead of bottom depth or any other name.
3. If you want to show only "Bottle file" or "CTD file", "Type" column would be useful. This data file is the bottle file, so you should use "B" in the column of "Type".

Metadata

Cruise
Station
Type ← *(C or B): C=CTD, B=Bottle*
yyyy-mm-ddThh:mm:ss.sss
Longitude [degrees_east]
Latitude [degrees_north]
Bot. Depth [m]

East (+), West (-), North (+), South (-)

ODV recognize the name of the column as the parameter name automatically . So, if you do not use the specific header names, individual column data data would recognize as "a parameter".

Quality Flag

-You use the flag to identify data quality, you can then isolate bad data from your figure!
- If you do not add QF column, ODV will automatically assign a flag "unknown (QF=1)".

Quality flag document: http://odv.awi.de/en/documentation/

ODV flag:
QF

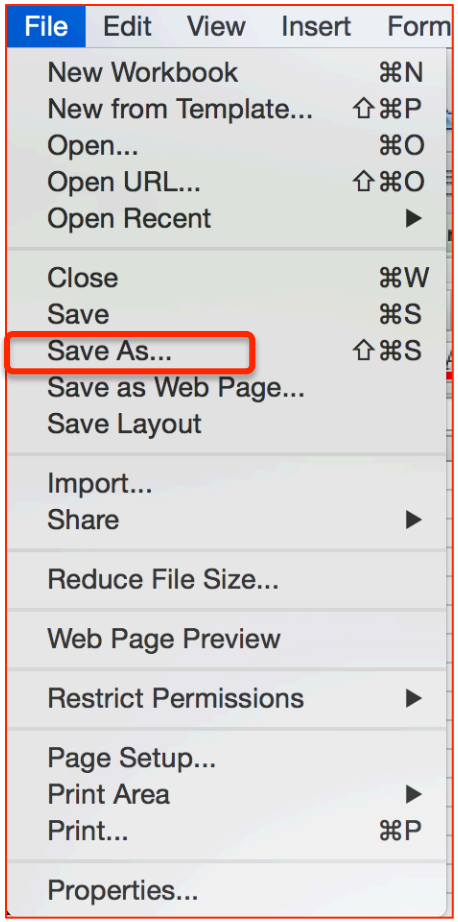
Flag Description	ODV
good quality	0
unknown quality	1
questionable quality	4
bad quality	8

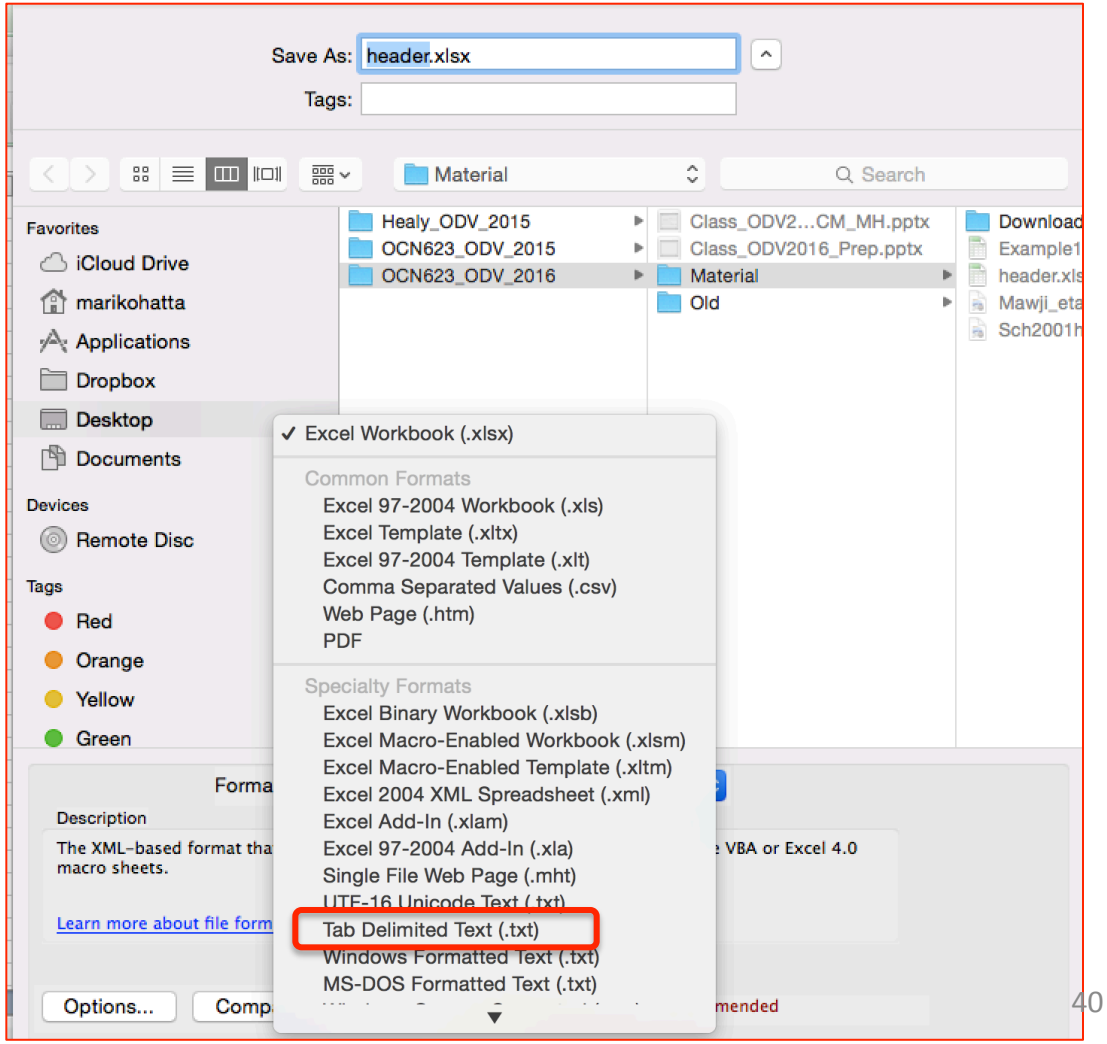
WOCE flag:
QV:WOCEBOTTLE
QV:WOCECTD

Flag Description	WOCEBOTTLE
sample for this measurement was drawn from water bottle but analysis not received	1
acceptable measurement	2
questionable measurement	3
bad measurement	4
not reported	5
mean of replicate measurements	6
manual chromatographic peak measurement	7
irregular digital chromatographic peak integration	8
sample not drawn for this measurement from this bottle	9

4. Save the created excel document in Tab delimited format (.txt).

ODV will only recognize files in the tab delimited format (.txt).





Exercise 2.

Let's create your own ODV file & figures

Open ODV and import the data

1. Create New Collection. Find the place you want to save the new ODV collection.

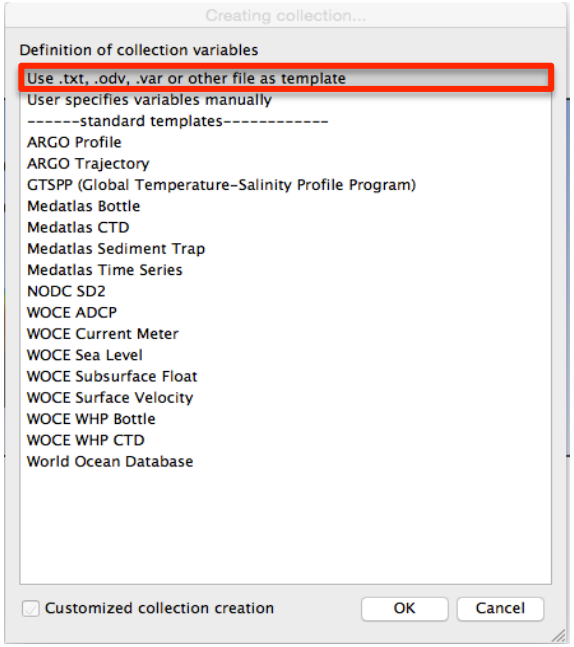
2. Choose “Definition of collection variables”. Select “Use .txt,.odv,.var or other file as template” and select your file that you made.

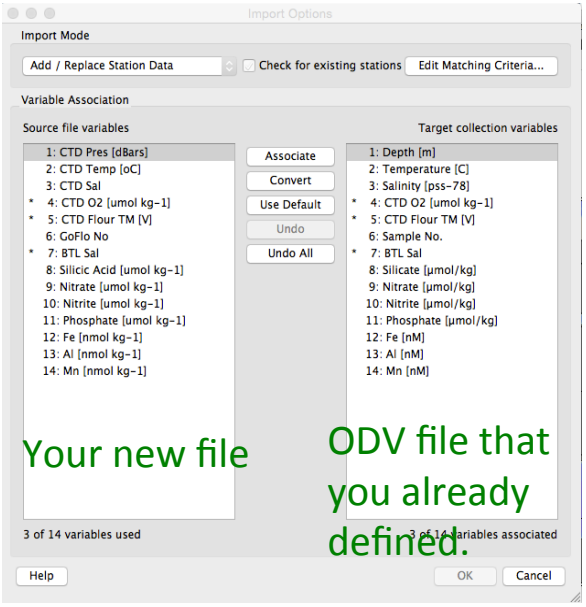
   This step defines how ODV will read your data (i.e. metadata, variable name, QF etc.)

3. Click “Import”, and select your file that you made.

   This step actually imports your data into ODV. Now you can see your data on the screen!

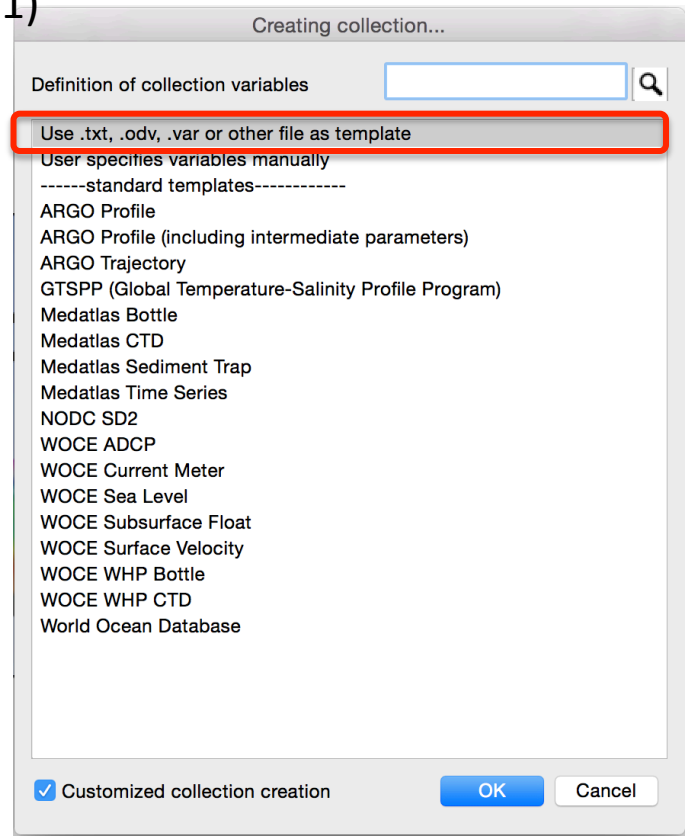
   Tip: If you want to import additional data into an existing file, you need to associate the new variables with the existing file “Target collection variables”.



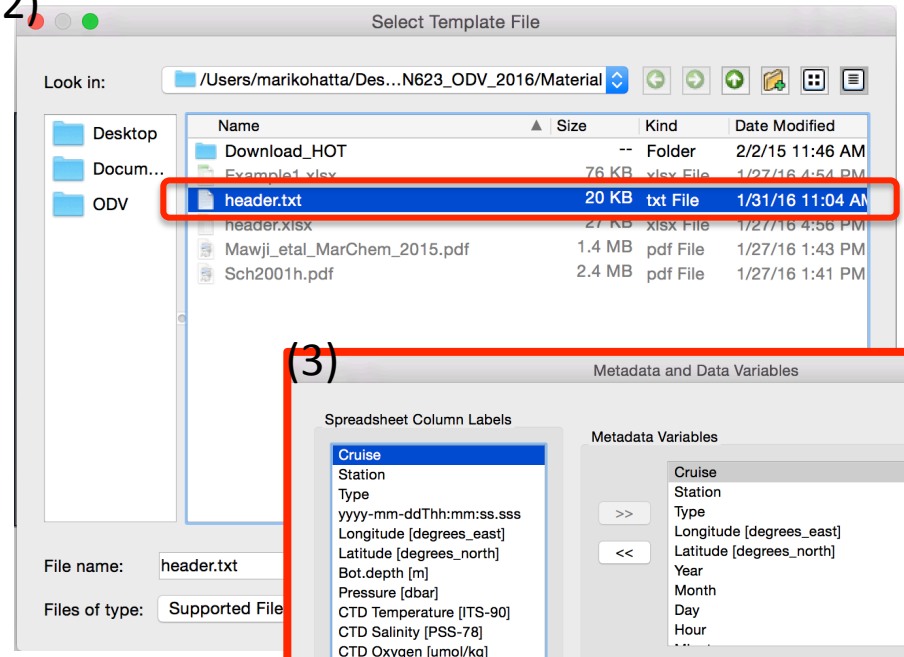


2. Choose “Definition of collection variables”. Select “Use .txt,.odv,.var or other file as template” and select your file that you made (tab delimited text file).

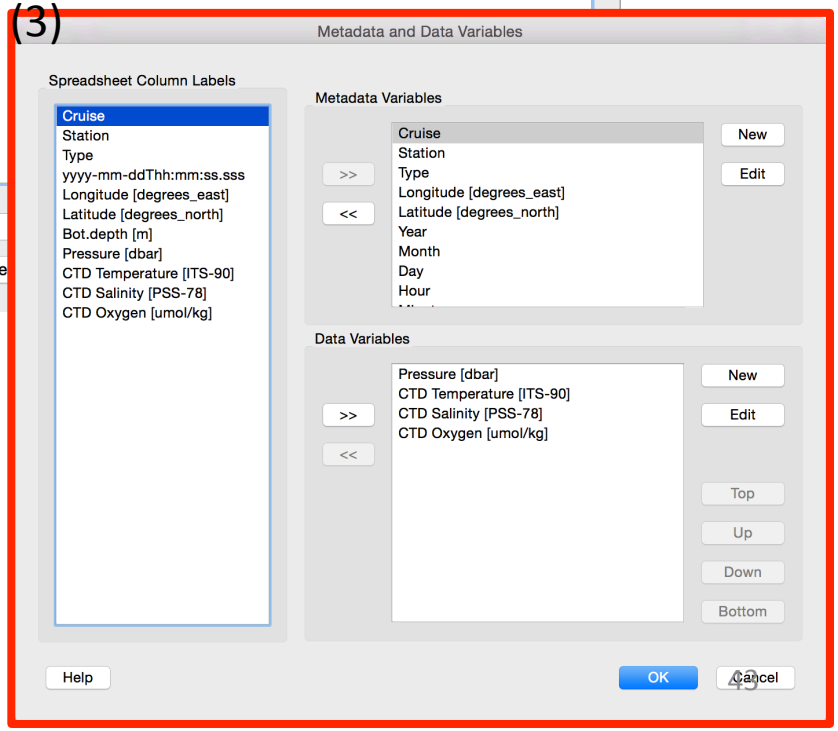
(1)



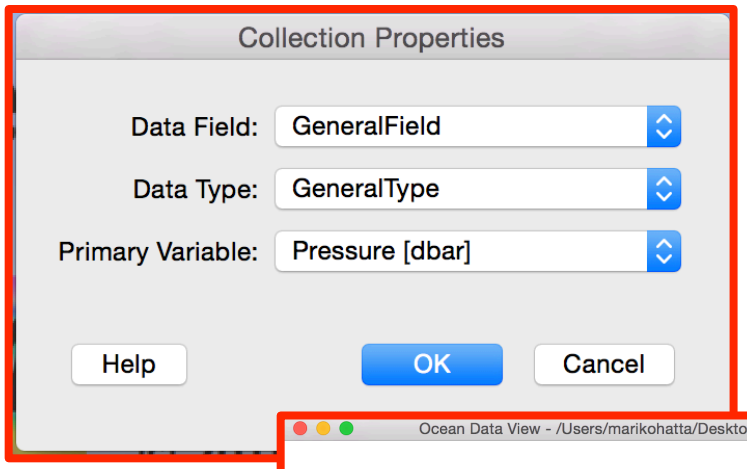
(2)



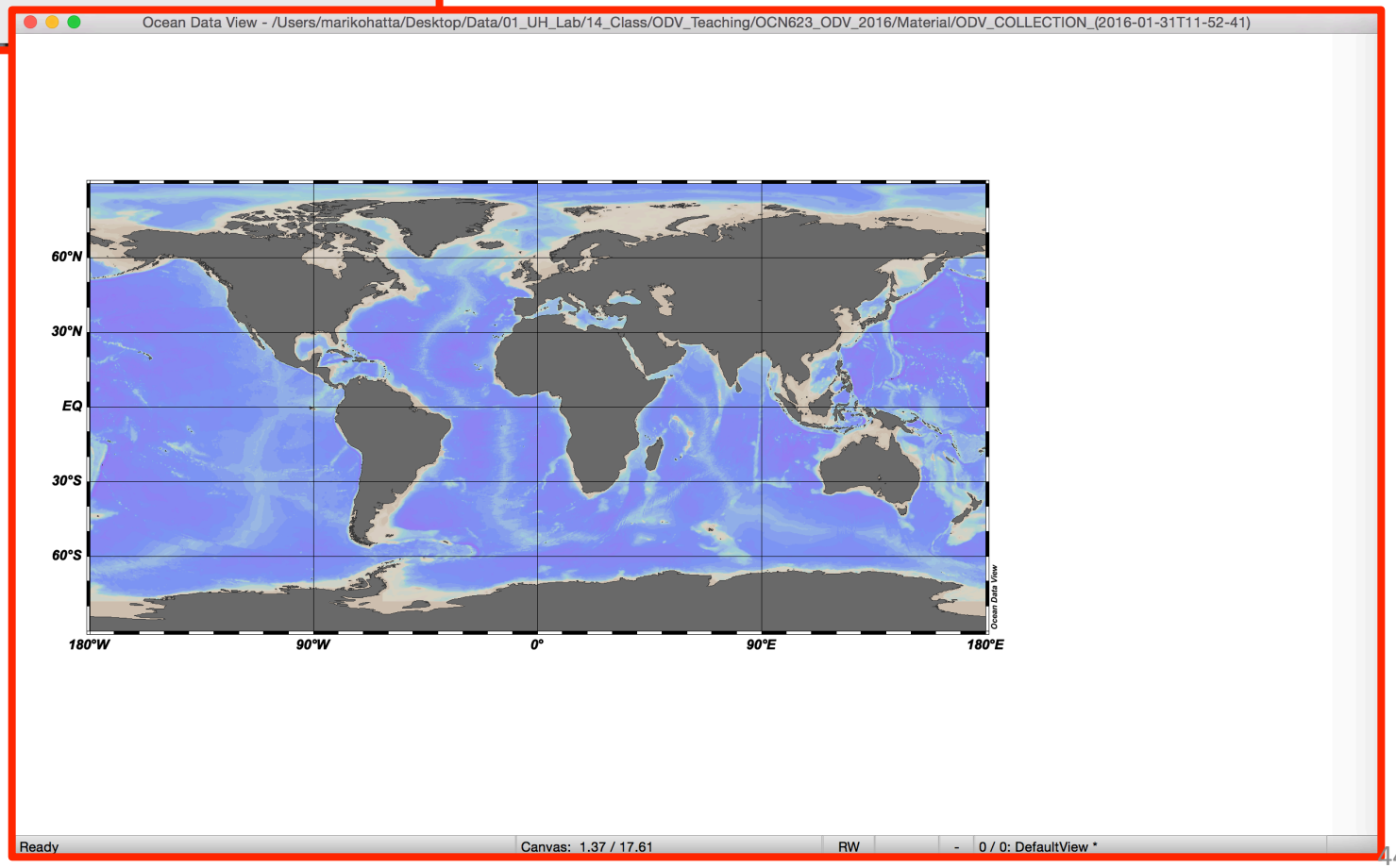
(3)



This step defines how ODV will read your data (i.e. metadata, variable name, QF etc.)

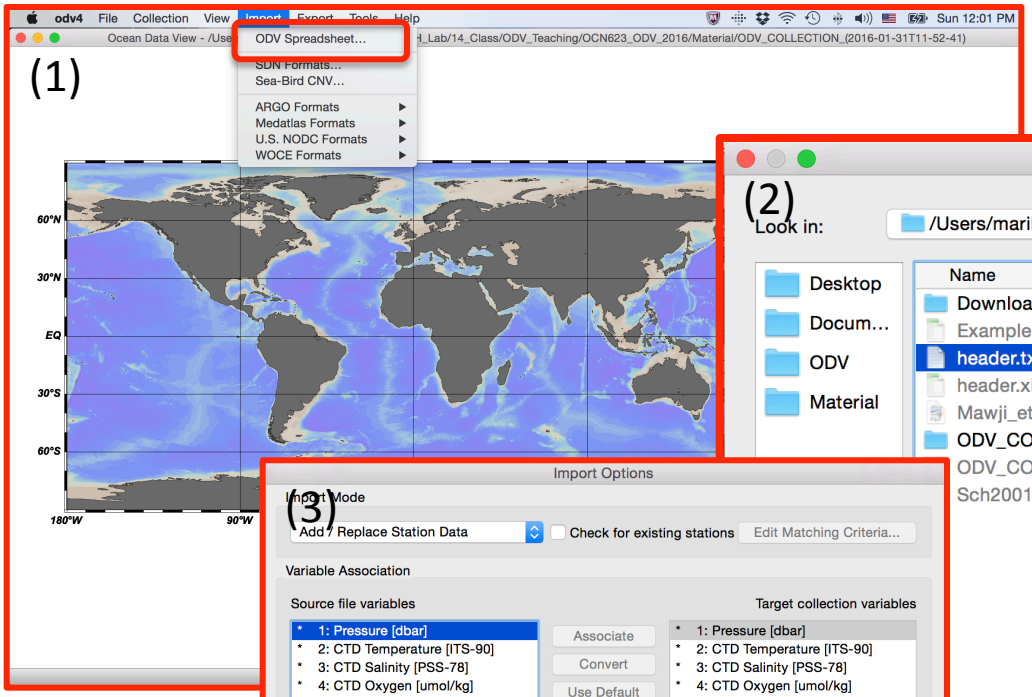


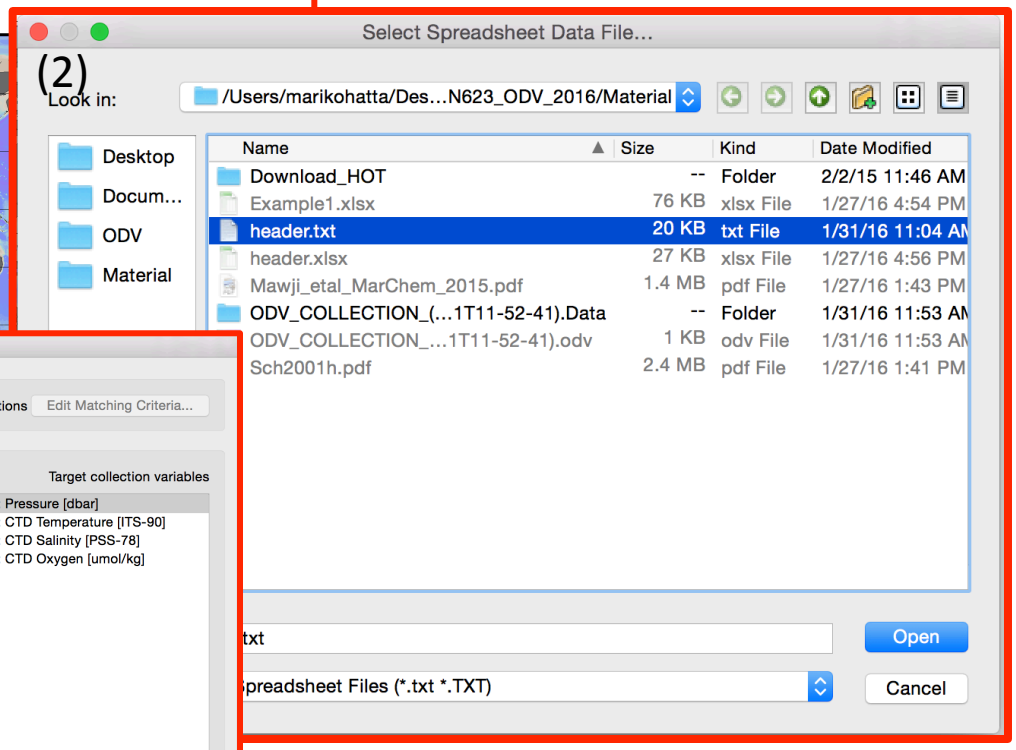
Now you made a new ODV file with your parameters in the header. Next, you have to import your data!

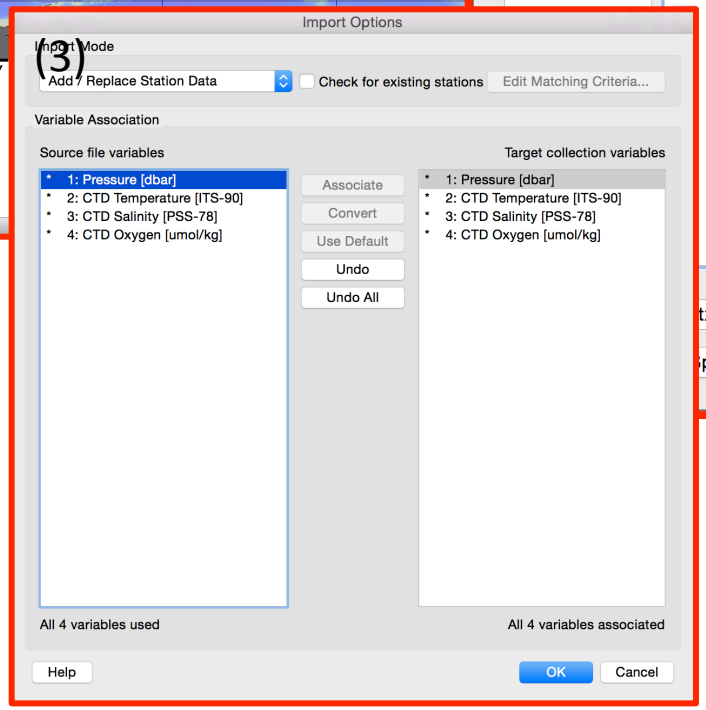


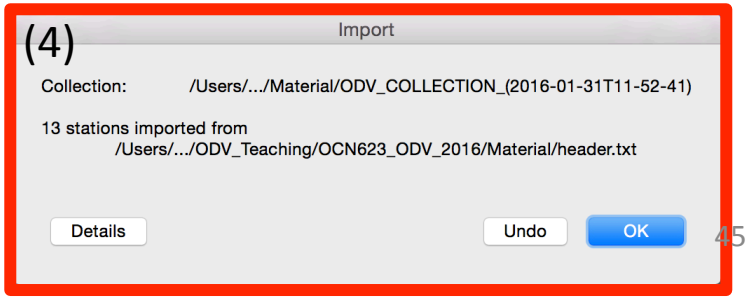
3. Click “Import”, and select “ODV spreadsheet” and select the txt file that you made.

This step actually imports your data into ODV.



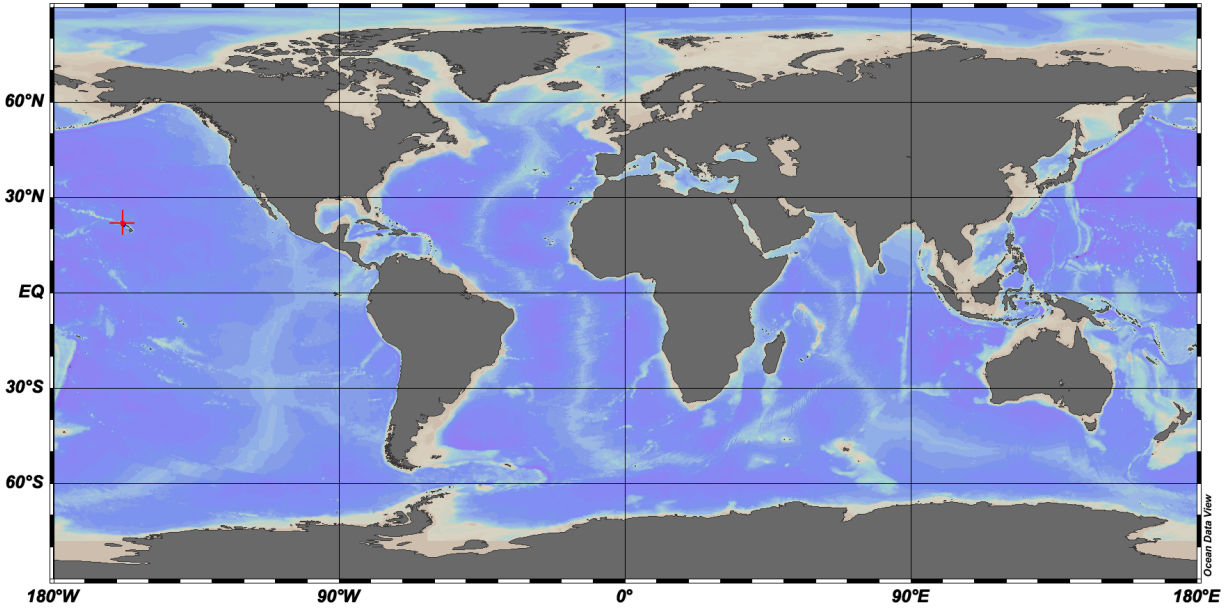






Now you can see your data on the screen!

Use a magnifying glass!



Accession N…	1
Cruise	4
Station	1 (B)
Position	157.782°W / 21.433°N
Date	
Time	
Pressure Ra…	[1.00 - 10.00]
Bot.depth [m]	

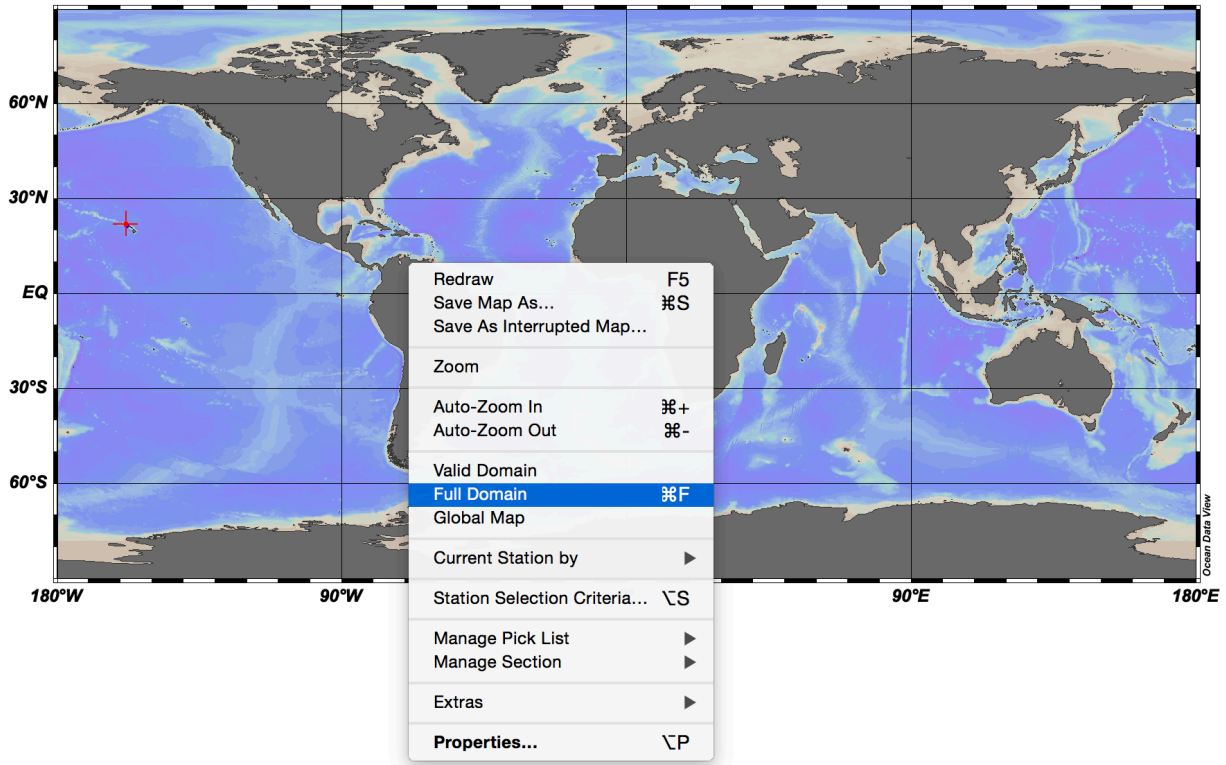
Sample: 1 / 10

1: Pressure [d…	1.00	1
2: CTD Tempe…	26.33	1
3: CTD Salinit…	34.14	1
4: CTD Oxyge…	27.05	1

Isosurface Values

Longitude	-157.782
Latitude	21.433
Time [yr]	
Day of Year	
Pressure [dbar] @ Pressur…	1.00
CTD Temperature [ITS-90]…	26.33
CTD Salinity [PSS-78] @ P…	34.14
CTD Oxygen [umol/kg] @ …	27.05

Zoom the map: Right click on “Map” window, and select “Full Domain”.



Accession N…	1
Cruise	4
Station	1 (B)
Position	157.782°W / 21.433°N
Date	
Time	
Pressure Ra…	[1.00 - 10.00]
Bot.depth [m]	

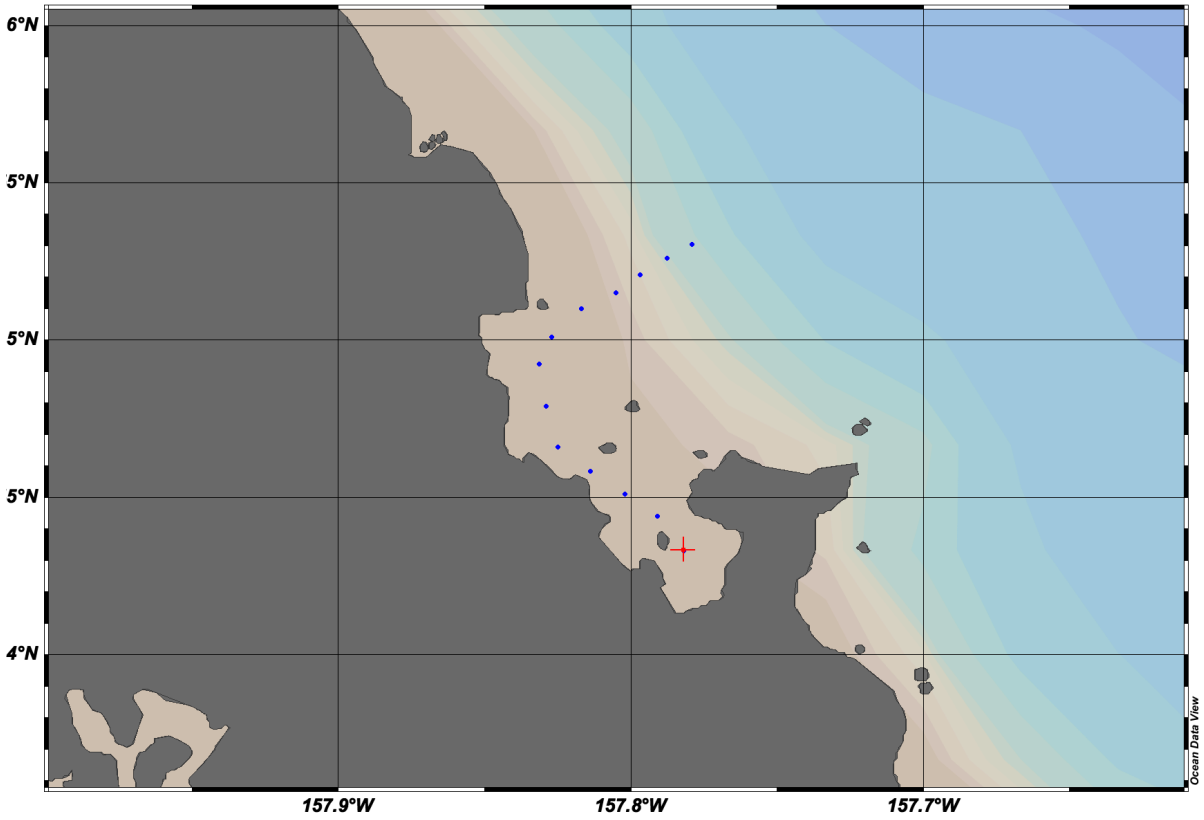
Sample: 1 / 10

1: Pressure [d…	1.00	1
2: CTD Tempe…	26.33	1
3: CTD Salinit…	34.14	1
4: CTD Oxyge…	27.05	1

Isosurface Values

Longitude	-157.782
Latitude	21.433
Time [yr]	
Day of Year	
Pressure [dbar] @ Pressur…	1.00
CTD Temperature [ITS-90]…	26.33
CTD Salinity [PSS-78] @ P…	34.14
CTD Oxygen [umol/kg] @ …	27.05

Kaneohe Bay data!



Accession N…	1
Cruise	4
Station	1 (B)
Position	157.782°W / 21.433°N
Date	
Time	
Pressure Ra…	[1.00 - 10.00]
Bot.depth [m]	

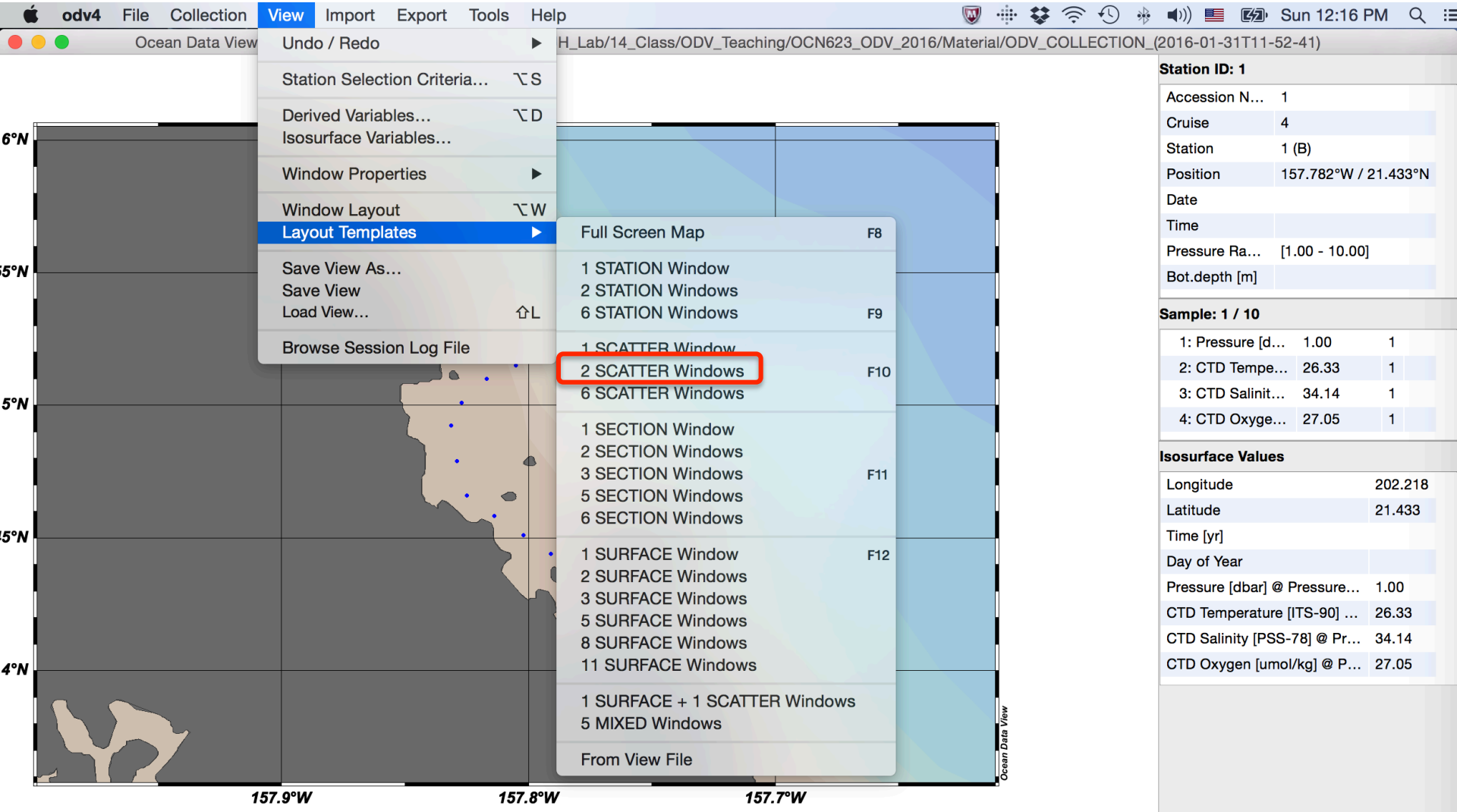
Sample: 1 / 10

1: Pressure [d…	1.00	1
2: CTD Tempe…	26.33	1
3: CTD Salinit…	34.14	1
4: CTD Oxyge…	27.05	1

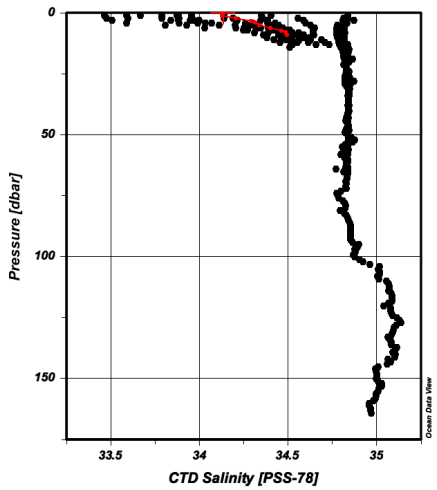
Isosurface Values

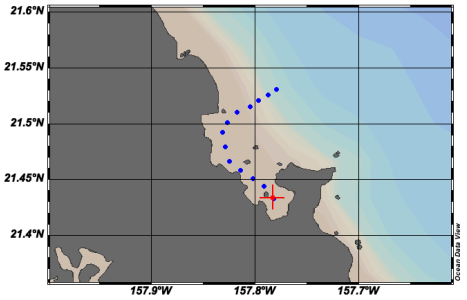
Longitude	202.218
Latitude	21.433
Time [yr]	
Day of Year	
Pressure [dbar] @ Pressure…	1.00
CTD Temperature [ITS-90] …	26.33
CTD Salinity [PSS-78] @ Pr…	34.14
CTD Oxygen [umol/kg] @ P…	27.05

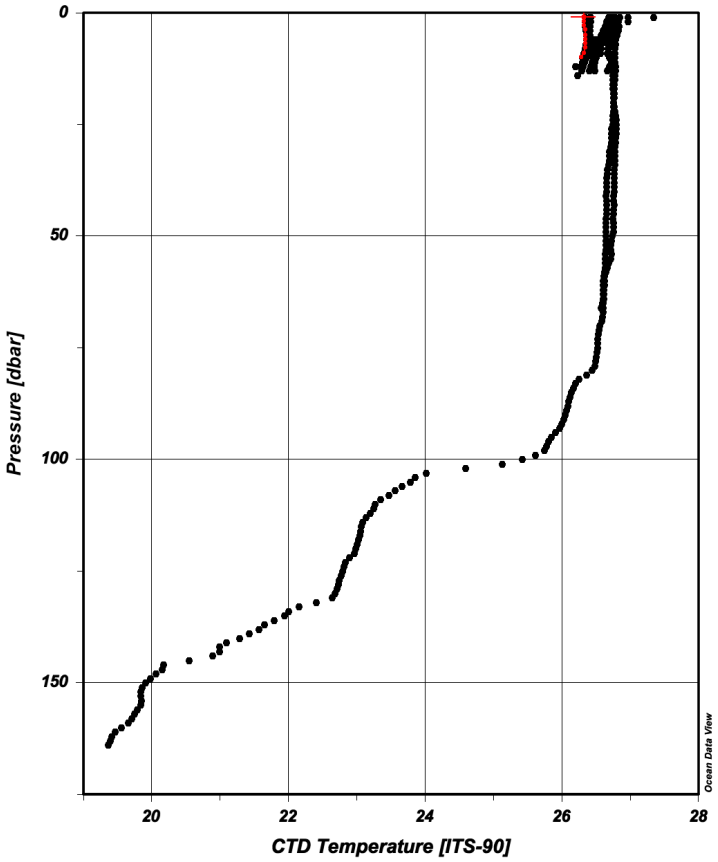
Let's make "2 scatter windows" using Layout Templates



“2 scatter windows” mode







Accession N…	1
Cruise	4
Station	1 (B)
Position	157.782°W / 21.433°N
Date	
Time	
Pressure Ra…	[1.00 - 10.00]
Bot.depth [m]	

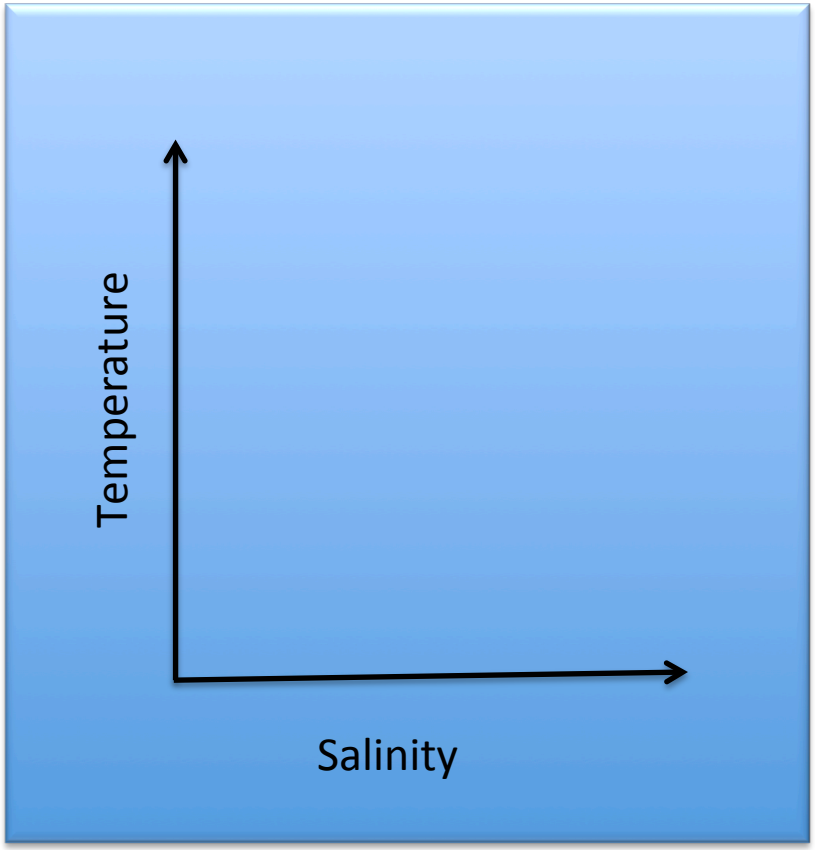
Sample: 1 / 10

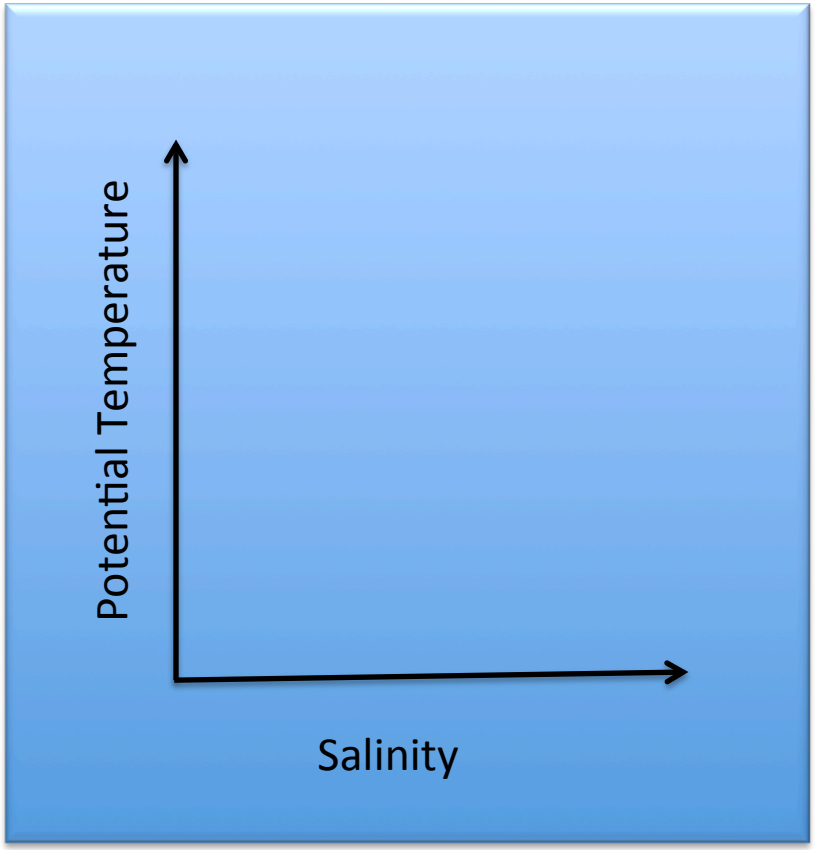
1: Pressure [d…	1.00	1
2: CTD Tempe…	26.33	1
3: CTD Salinit…	34.14	1
4: CTD Oxyge…	27.05	1

Isosurface Values

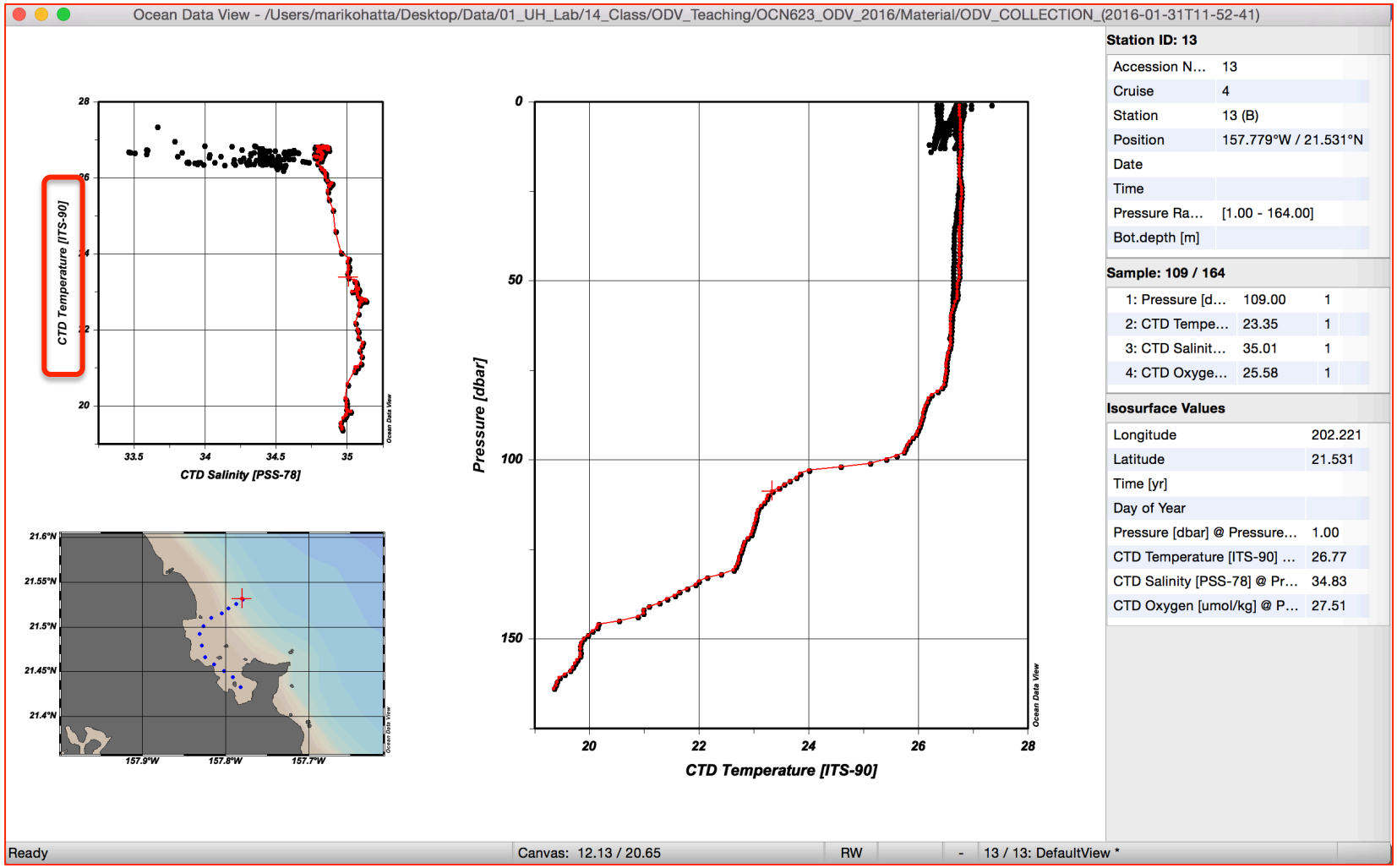
Longitude	202.218
Latitude	21.433
Time [yr]	
Day of Year	
Pressure [dbar] @ Pressure…	1.00
CTD Temperature [ITS-90] …	26.33
CTD Salinity [PSS-78] @ Pr…	34.14
CTD Oxygen [umol/kg] @ P…	27.05

Exercise 3.
Make a T-S diagram





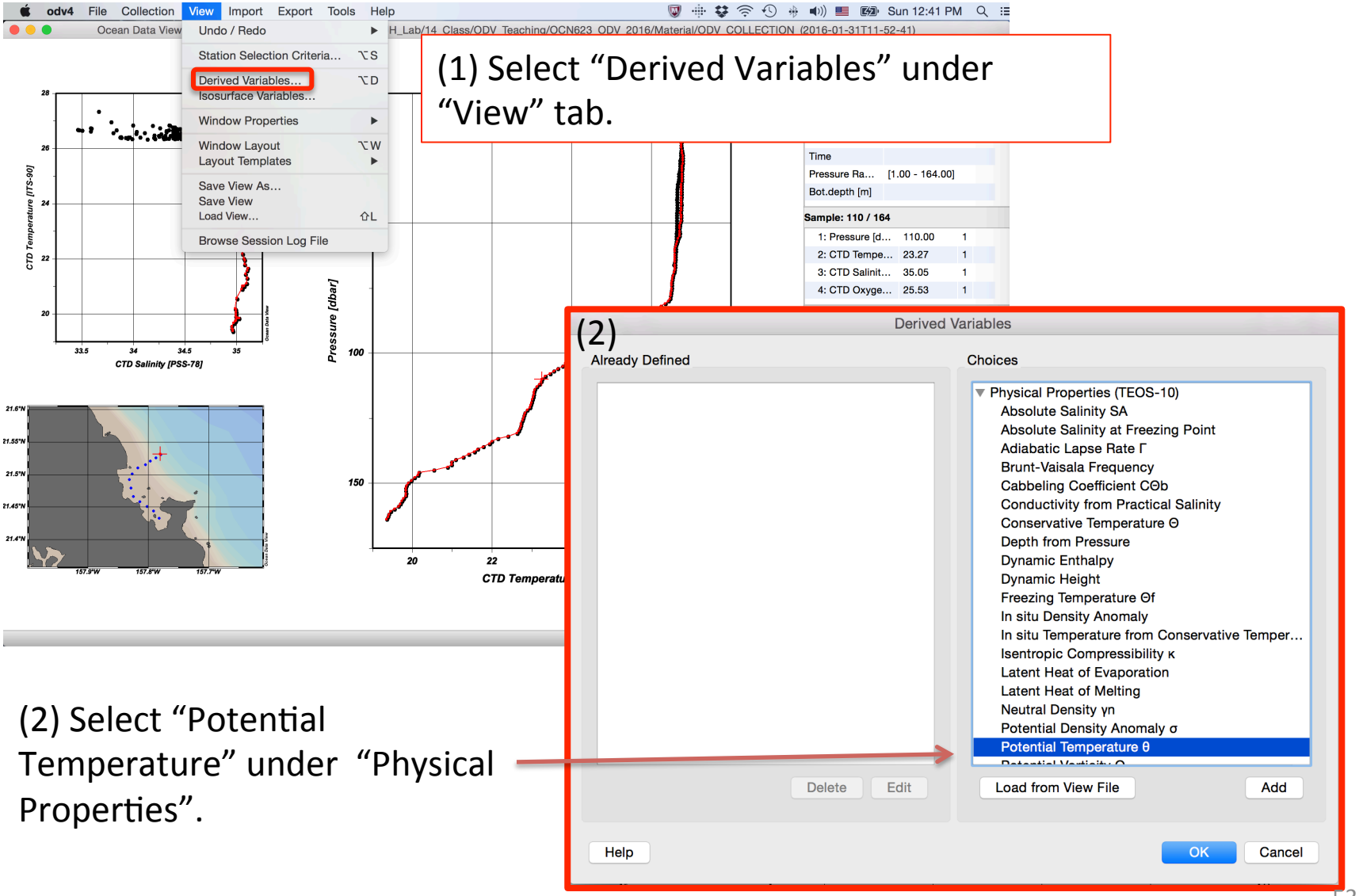
1. Change the y-axis from Pressure to CTD Temperature



Right click, then select “Properties”, then select “Data” tab. Select “y-axis” (now selected “2:CTD Temperature [ITS-90] ”.

2. Let's make a potential temperature-salinity diagram. In order to calculate "potential Temperature" using ODV "Derived Variables" function!

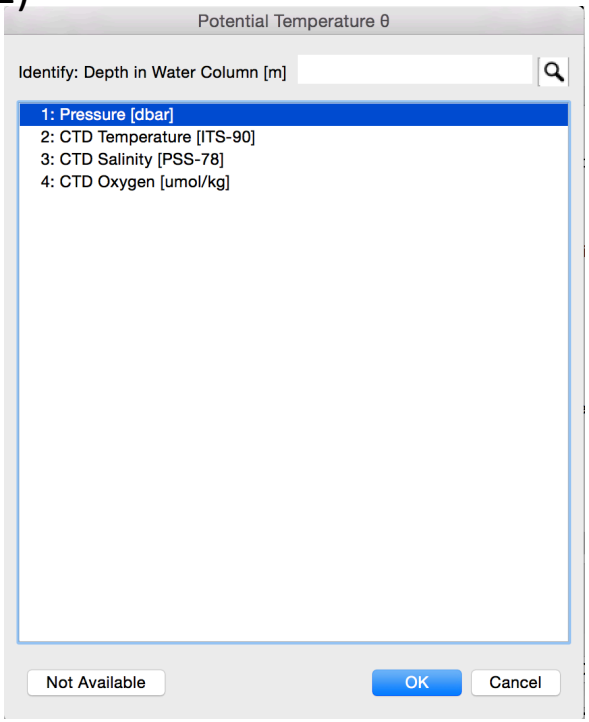
(1)



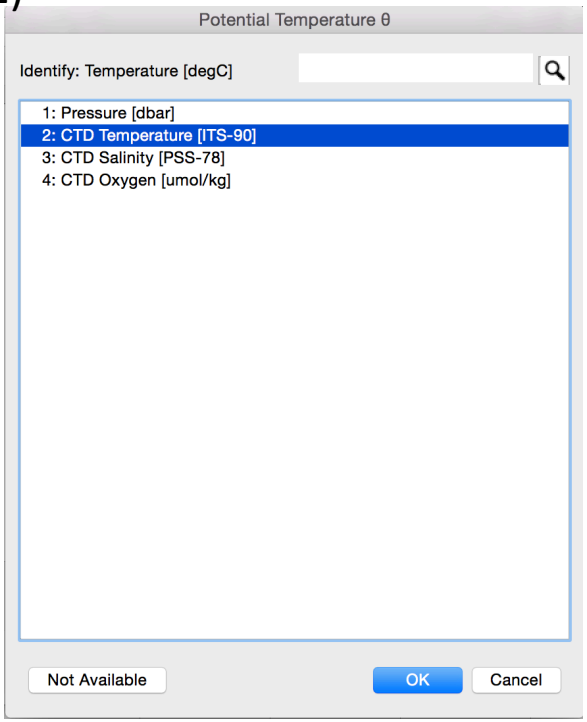
(2) Select "Potential Temperature" under "Physical Properties".

3. Identify each parameter from the list. At first, you have to identify “Depth in Water Column (m)”, here is “1. Pressure”. Next, identify “Temperature”, so select “CTD Temperature”, and finally identify “Practical Salinity”, and select “CTD salinity”. Then enter “reference pressure”, so type “0”.

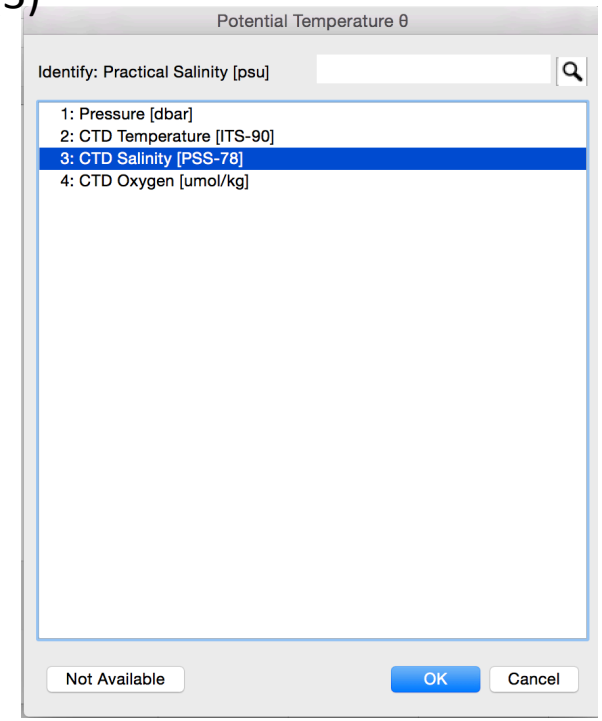
(1)



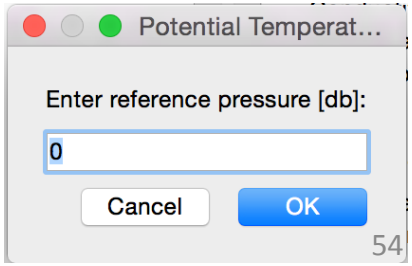
(2)



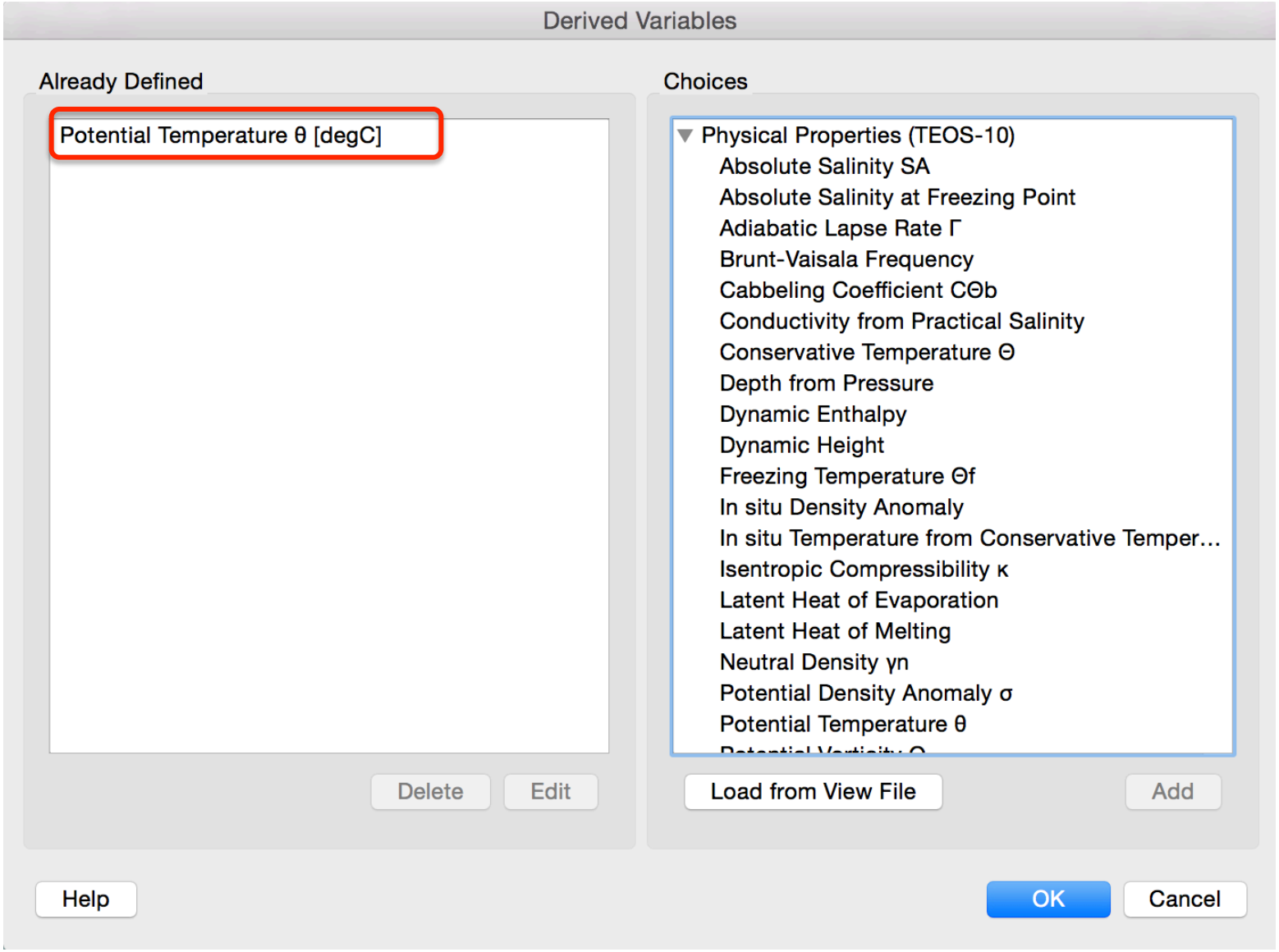
(3)



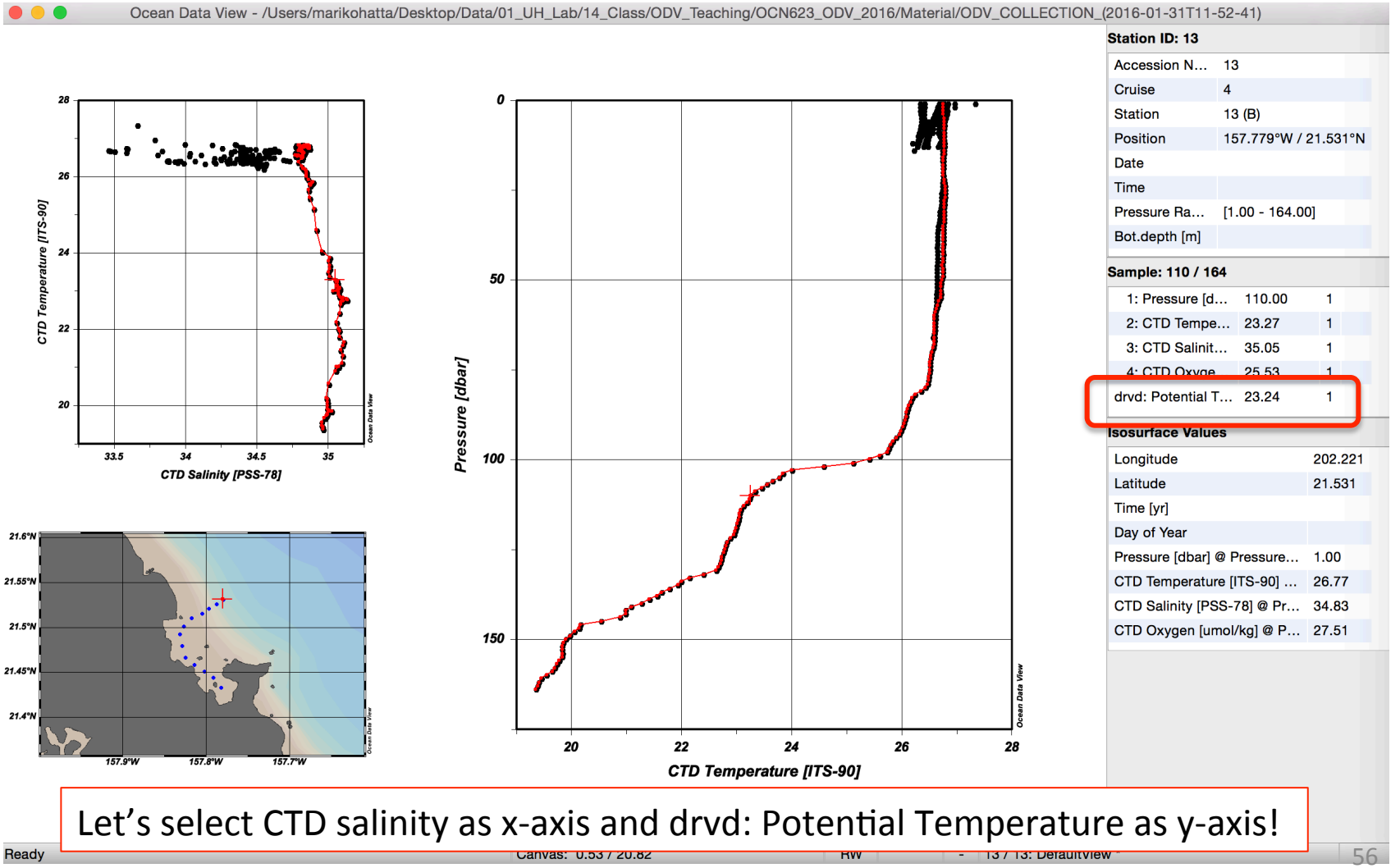
(4)



4. You calculated “Potential Temperature”!

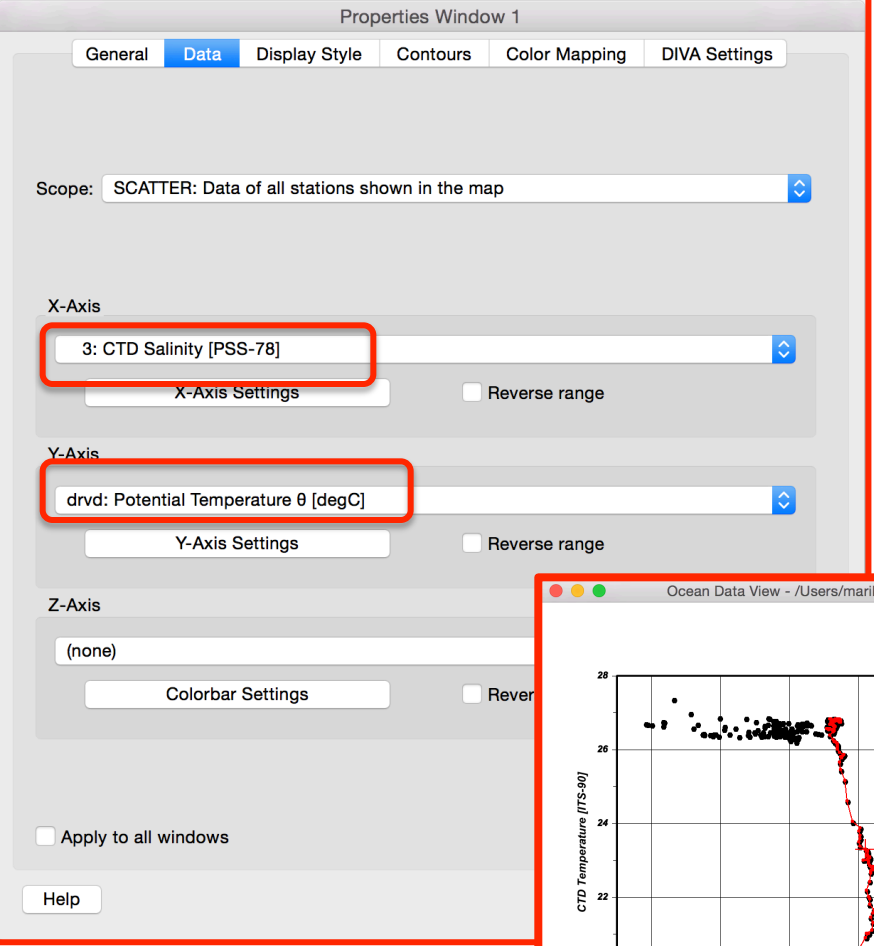


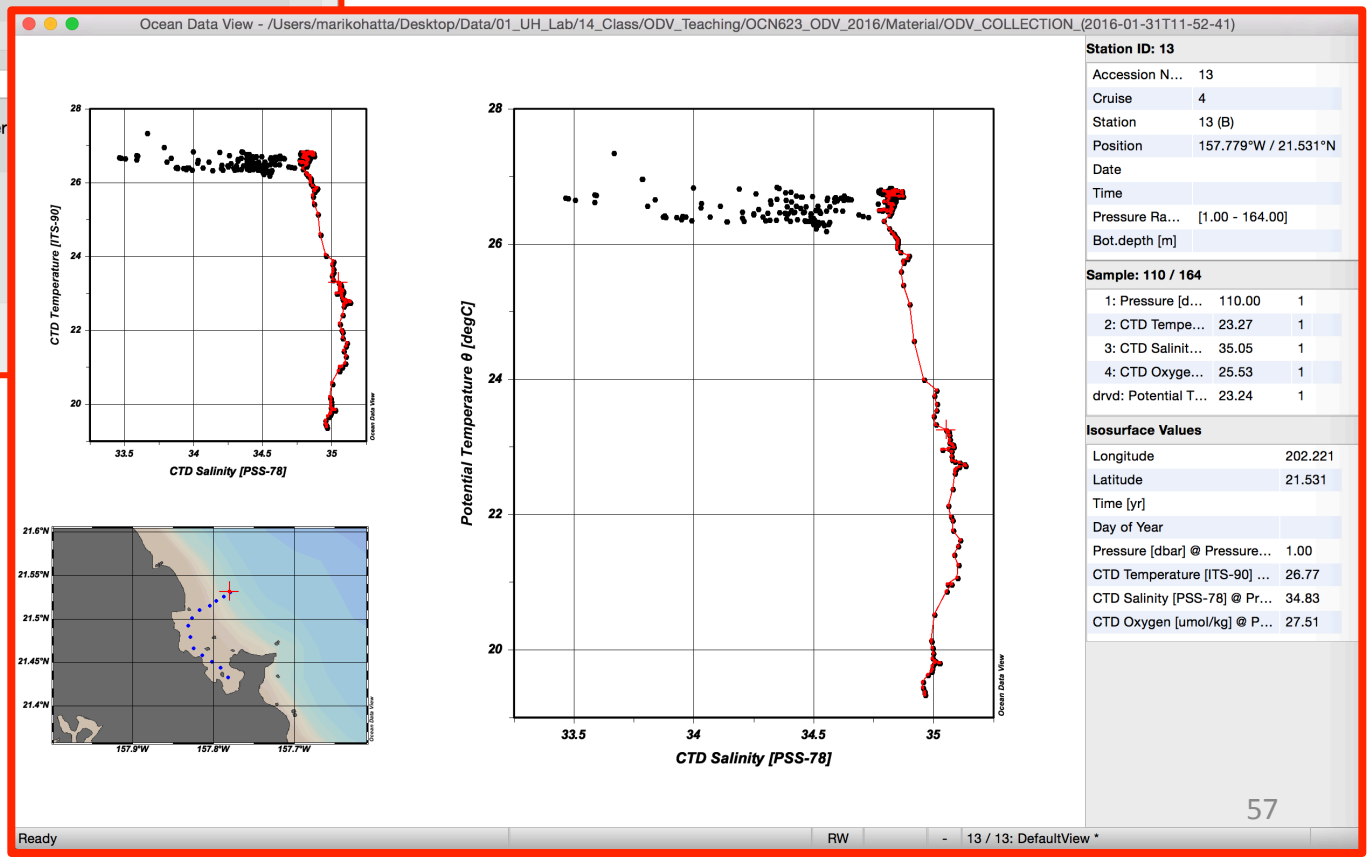
Now, “drvd: Potential Temperature” are appeared in the variables window!



Let’s select CTD salinity as x-axis and drvd: Potential Temperature as y-axis!

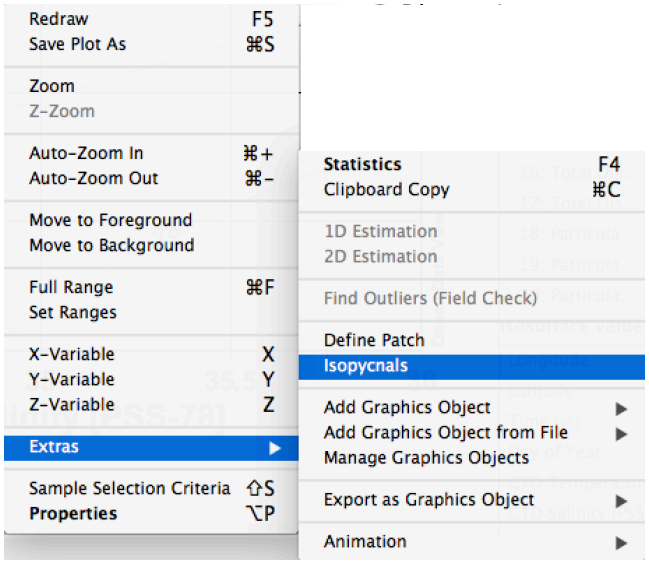
5. Right click over the Window, then select Properties. Then Select “Data” tab. And Select X-axis as “3: CTD salinity” and Y-axis as “drvd: Potential Temperature.

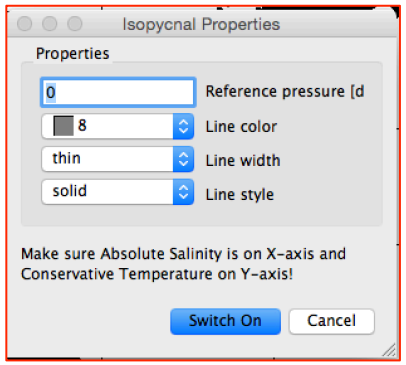


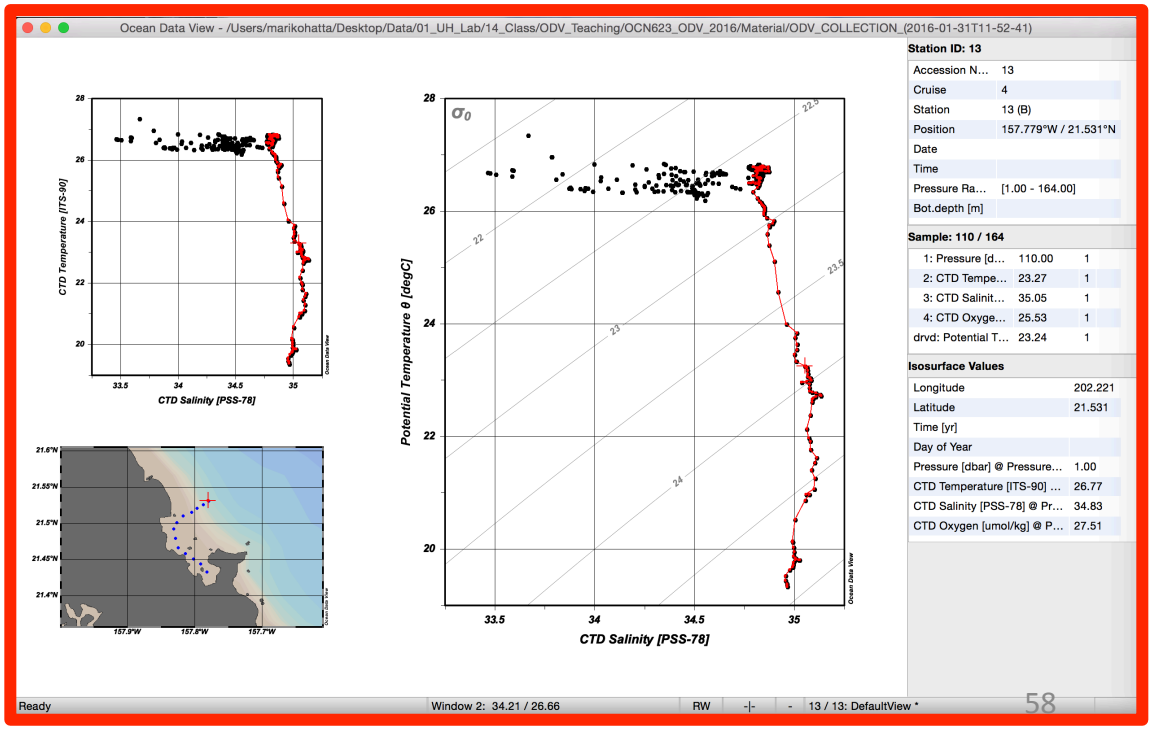


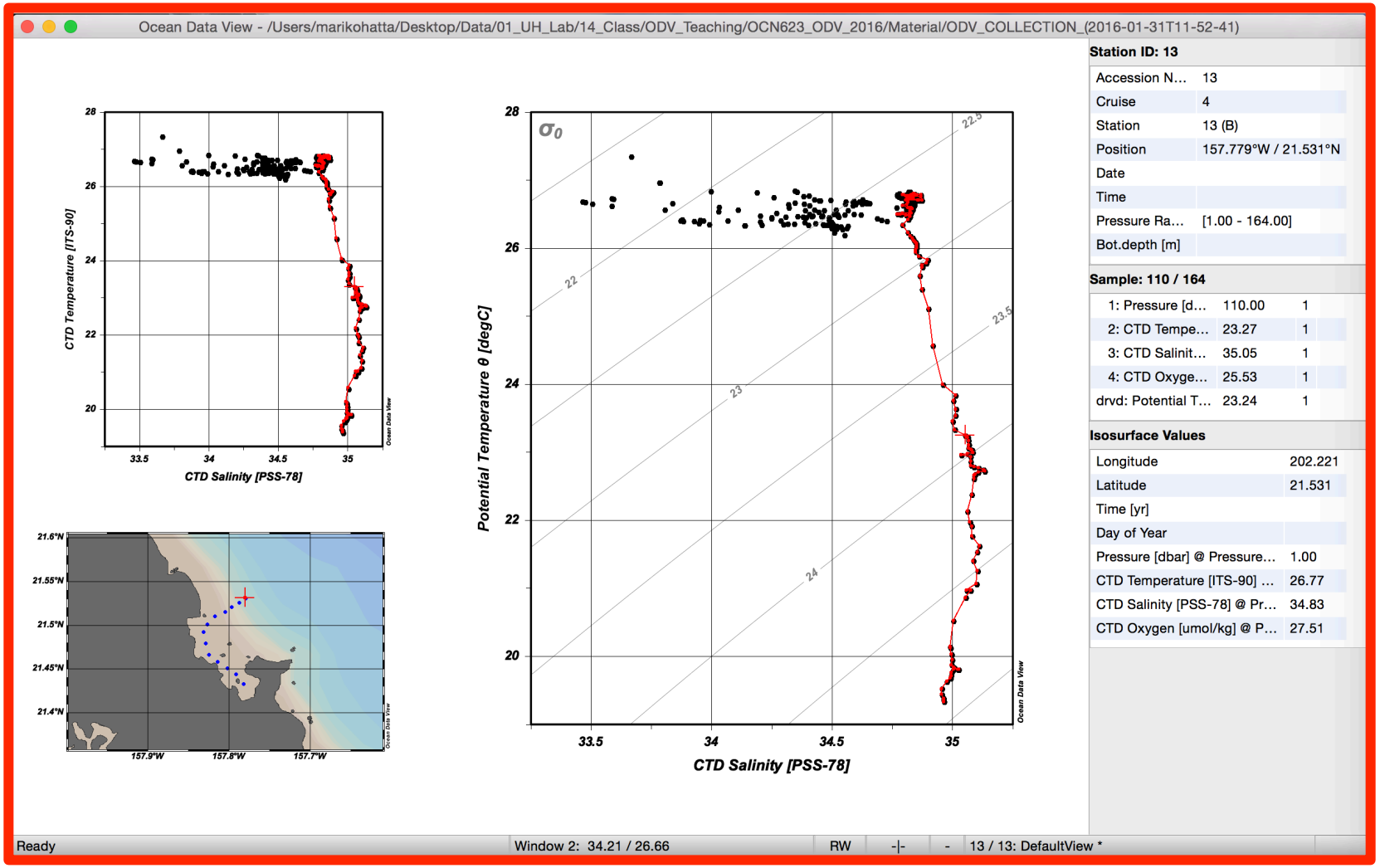
6. Draw the Isopycnals.

Right click over the Window, then select “Extras”. Then Select “Isopycnals”. Select “Switch On”.

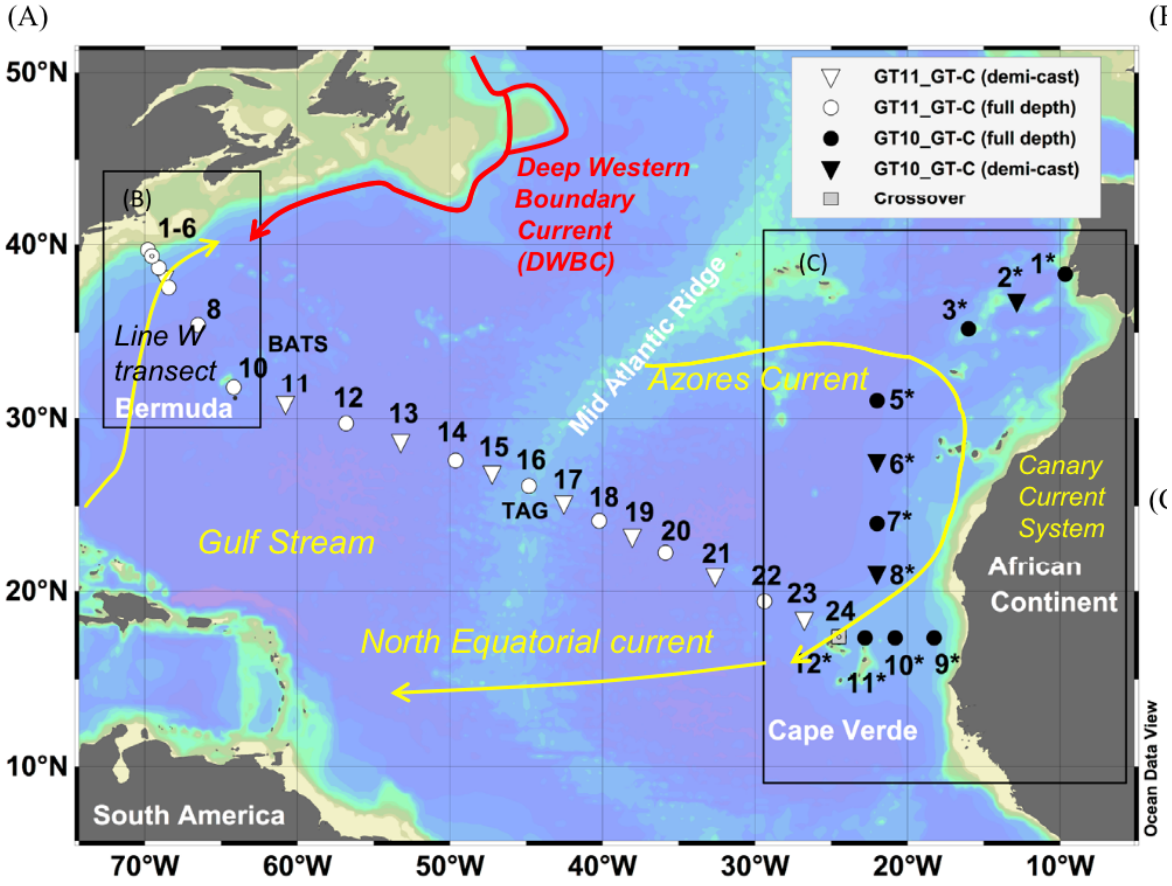






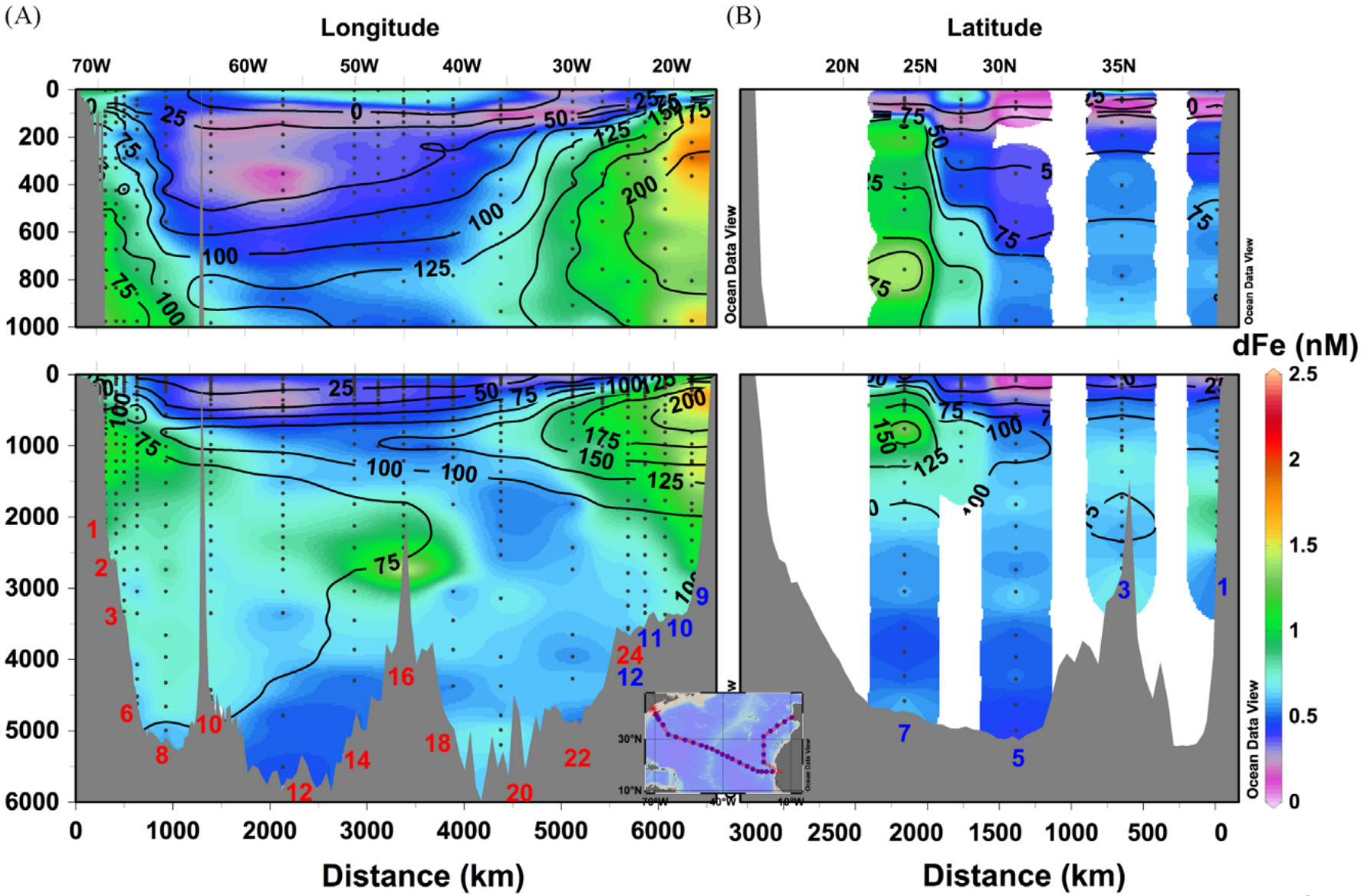

Ocean Data View - /Users/marikohatta/Desktop/Data/01_UH_Lab/14_Class/ODV_Teaching/OCN623_ODV_2016/Material/ODV_COLLECTION_(2016-01-31T11-52-41)
CTD Temperature [ITS-90]
CTD Salinity [PSS-78]
Potential Temperature θ [degC]
σ0
Station ID: 13
Accession N... 13
Cruise 4
Station 13 (B)
Position 157.779°W / 21.531°N
Date
Time
Pressure Ra... [1.00 - 164.00]
Bot.depth [m]
Sample: 110 / 164
1: Pressure [d... 110.00 1
2: CTD Tempe... 23.27 1
3: CTD Salinit... 35.05 1
4: CTD Oxyge... 25.53 1
drvd: Potential T... 23.24 1
Isosurface Values
Longitude 202.221
Latitude 21.531
Time [yr]
Day of Year
Pressure [dbar] @ Pressure... 1.00
CTD Temperature [ITS-90] ... 26.77
CTD Salinity [PSS-78] @ Pr... 34.83
CTD Oxygen [umol/kg] @ P... 27.51
Ready
Window 2: 34.21 / 26.66
RW
13 / 13: DefaultView *

Draw Map & stations



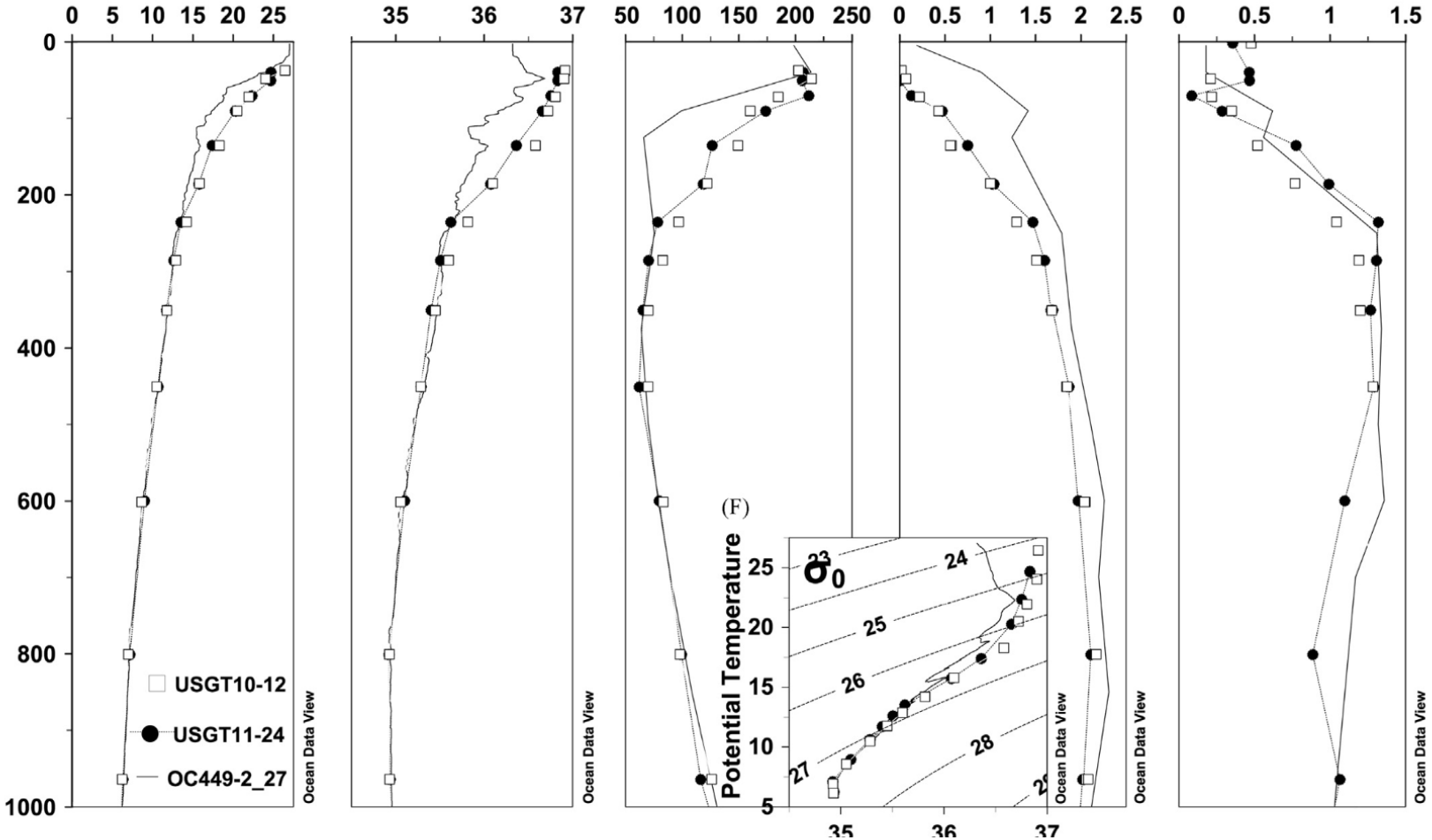
Hatta et al., 2014 & Measures et al., 2014

Same section with different depths



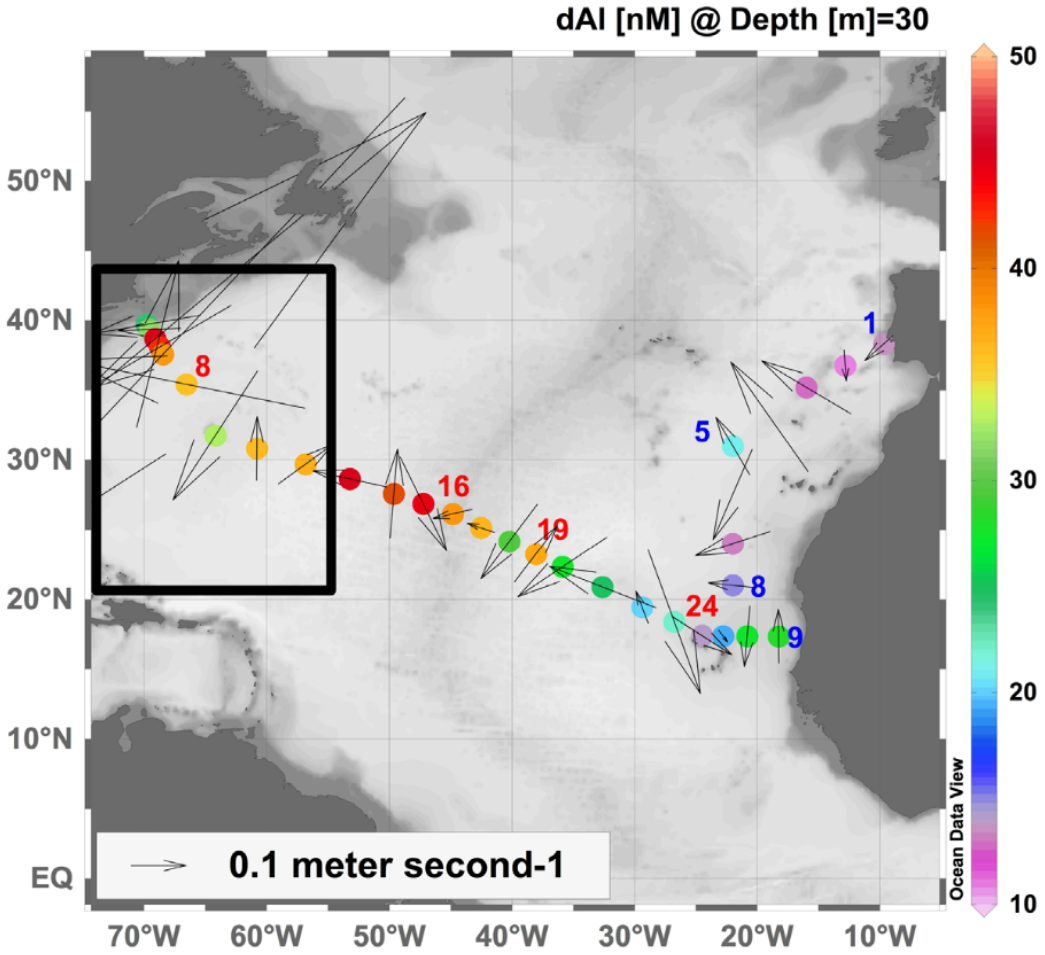
Hatta et al., 2014

Vertical Profiles + T-S diagram



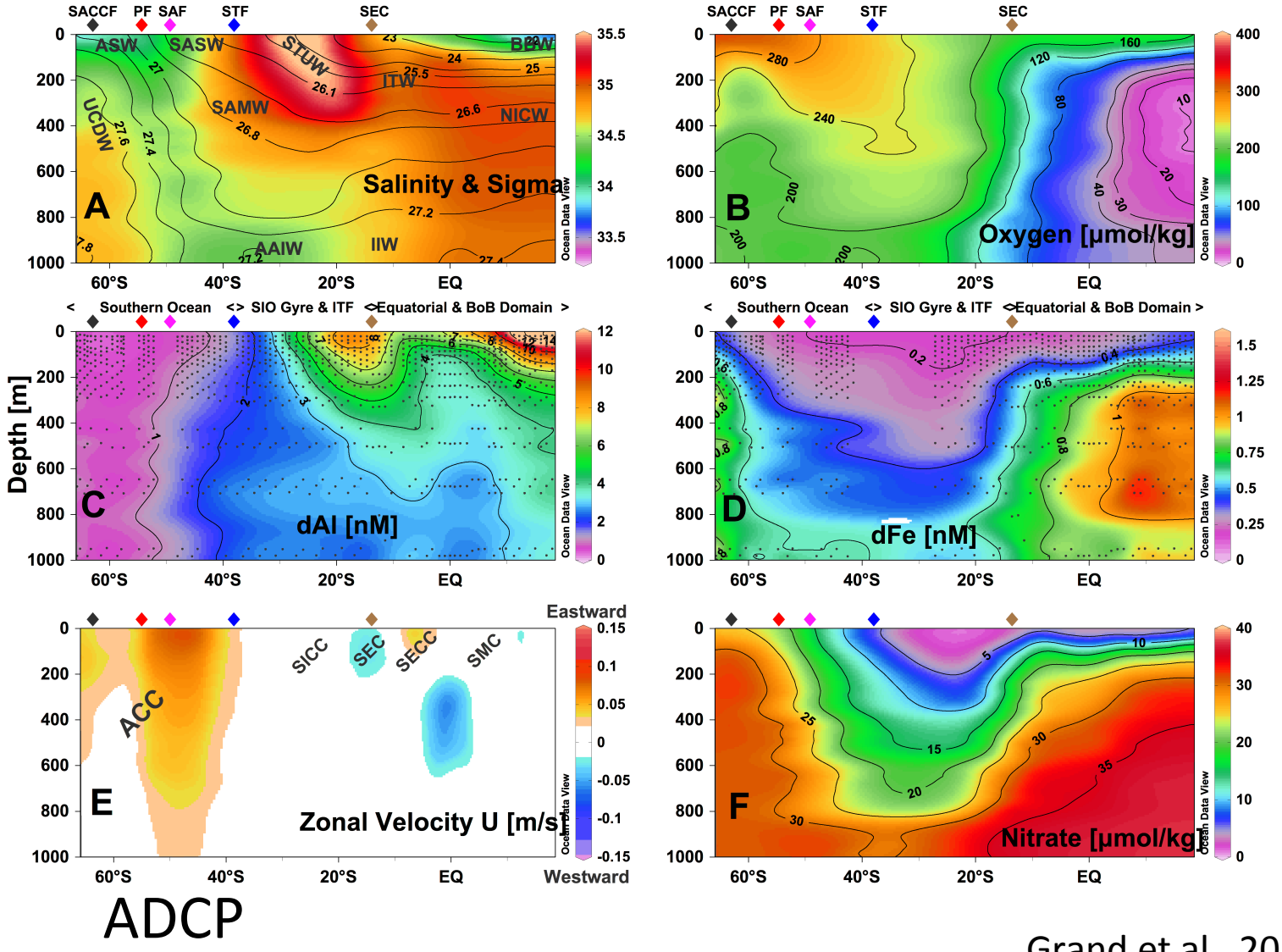
Hatta et al., 2014

Concentrations with color as well as flow direction (ADCP data)



Measures et al., 2014

Temperature overlaid with Salinity



ADCP

Grand et al., 2015

Reference

ODV User's Guide:

http://odv.awi.de/en/documentation/

HOT ADCP data:

http://currents.soest.hawaii.edu/hot/

Kaneohe data:

http://data.nodc.noaa.gov/cgi-bin/iso?id=gov.noaa.nodc:0099831

ADCP data during HOT cruise
http://currents.soest.hawaii.edu/hot/

Back to currents

Station Aloha Shipboard ADCP data

The **Hawaii Ocean Timeseries** project involves cruises to **ALOHA Station** nearly every month, starting in October 1988. Most of these cruises have been on ships equipped with acoustic Doppler current profilers, the observations from which are presented here. Continuous time series of currents at ALOHA are available elsewhere from the **WHOTS mooring**.

Funding from the National Science Foundation via grants OCE-0752606 and OCE-0926766 is gratefully acknowledged.

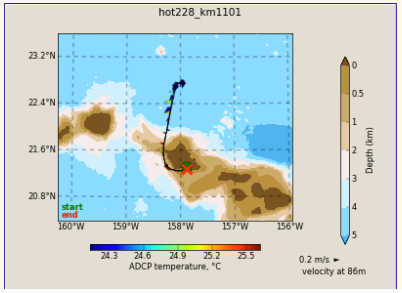
For each cruise we provide a set of links to data plots (left column), to the data location in the **NODC JASADCP** (center, if present), and to **netcdf files** with the ADCP data and predicted barotropic tides (right column).

LIST VIEW

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
2008	2009	2010	2011						

2011

hot228	km1101	2011/01/08 to 2011/01/10	Honolulu, HI to Honolulu, HI
hot229	km1102a	2011/01/27 to 2011/01/31	Honolulu, HI to Honolulu, HI
hot230	km1108	2011/02/27 to 2011/03/03	Honolulu, HI to Honolulu, HI
hot231	km1113	2011/04/10 to 2011/04/14	Honolulu, HI to Honolulu, HI
hot232	kok1107	2011/05/08 to 2011/05/12	Honolulu, HI to Honolulu, HI



hot228_km1101
2011/01/08 to 2011/01/10
Honolulu, HI to Honolulu, HI

os38bb	JASADCP	netCDF
os38nb	JASADCP	netCDF
wh300	JASADCP	netCDF

top

Hot Cruise Data

Download this!

Online Data

CRUISE	SONAR	ADCP		PREDICTED TIDE	
hot225_km1017	os38bb	short	long	tpxo7.2	hawaii
	os38nb	short	long	tpxo7.2	hawaii
	wh300	short	long	tpxo7.2	hawaii
					hawaii
					hawaii
					hawaii
					hawaii
					hawaii
					hawaii
		short	long	tpxo7.2	hawaii
		short			
		short			
		short			
		short			
		short	long	tpxo7.2	hawaii
		short	long	tpxo7.2	hawaii
	wh300	short	long	tpxo7.2	hawaii
hot231_km1113	os38bb	short	long	tpxo7.2	hawaii
	os38nb	short	long	tpxo7.2	hawaii
	wh300	short	long	tpxo7.2	hawaii
hot232_kok1107	nb150	short	long	tpxo7.2	hawaii

Back to currents

Type of the sensor

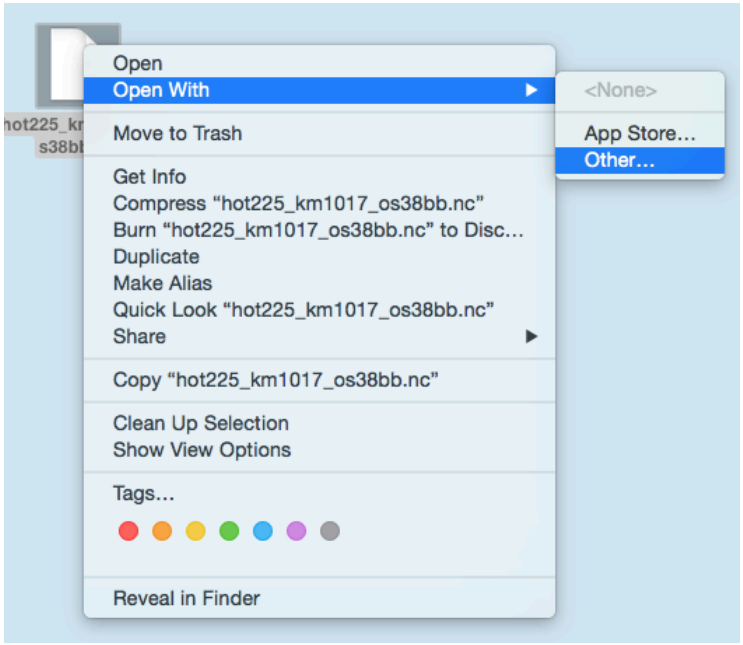
os38bb (12m bin/1000m)
os38nb (24m bin/1200m)
wh300 (80m)
os75bb (8m bin/600m)
os75nb (16m bin/700m)
nb150 (8m bin/200m)
etc.. Ask Jules Hummon more detail.

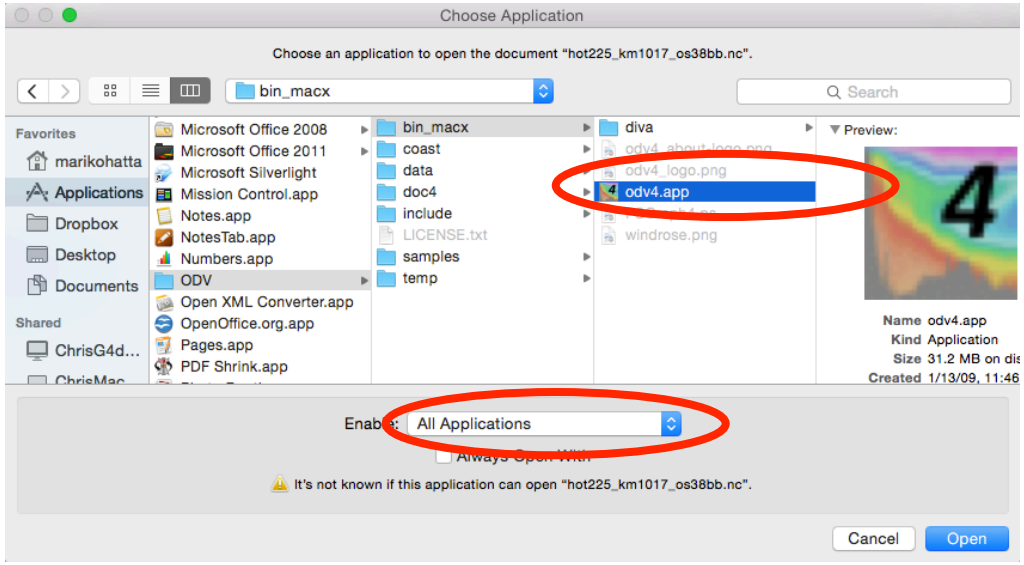
ADCP: raw data
Short or long
Short variable list (U and V etc.)
Long variable list (more)

The "Barotrophic Tide" data from the models

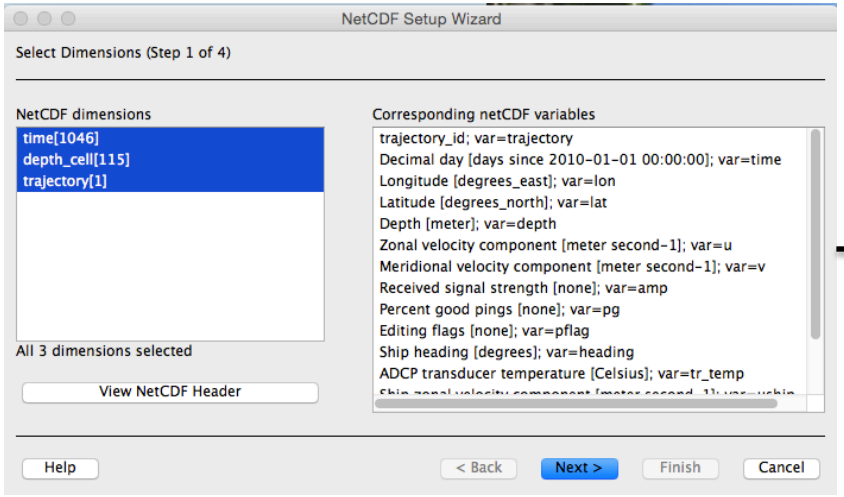
How to open ADCP data (netCDF)

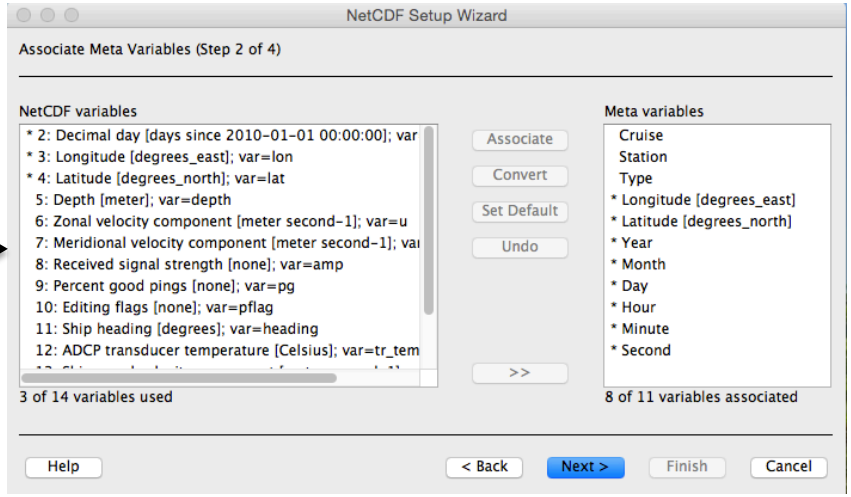
1. After download netCDF file, open XXX.nc file with “Other”. In menu “Choose Application”, enable “All Application” and go to ODV, bin_macx, odv4.app, then open odv4.app



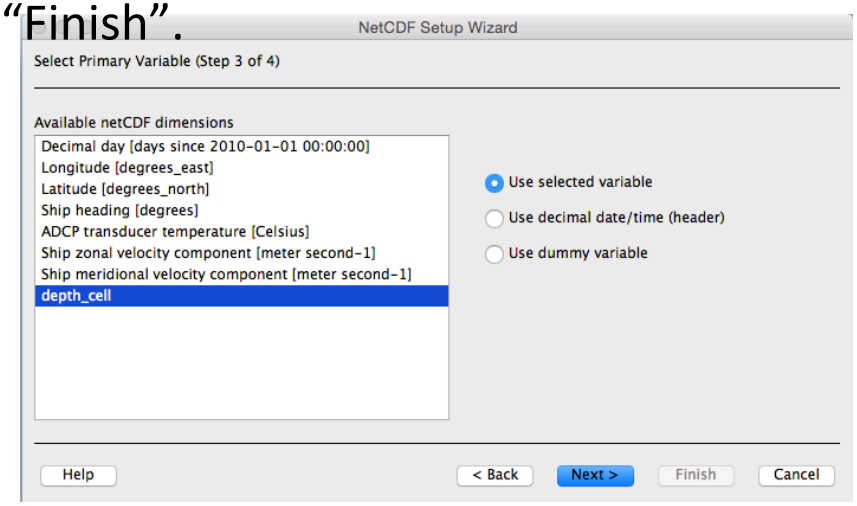


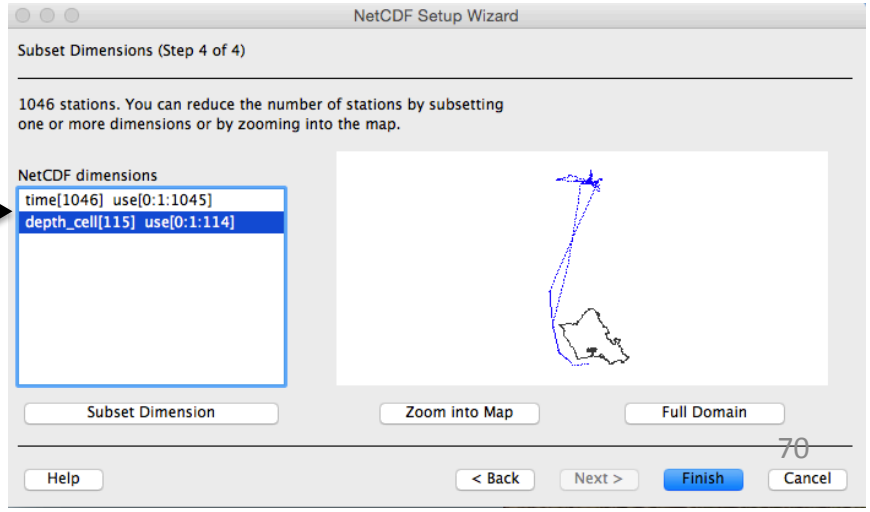
2. Should get “NetCDF Setup Wizard”. Select (highlight) both dimensions shown (at least, “Time” and “depth_cell”). A bunch of corresponding variables should appear to the right, then click “Next”. Should get “Associate Meta Variables” screen; likely you will do nothing but select “Next”.



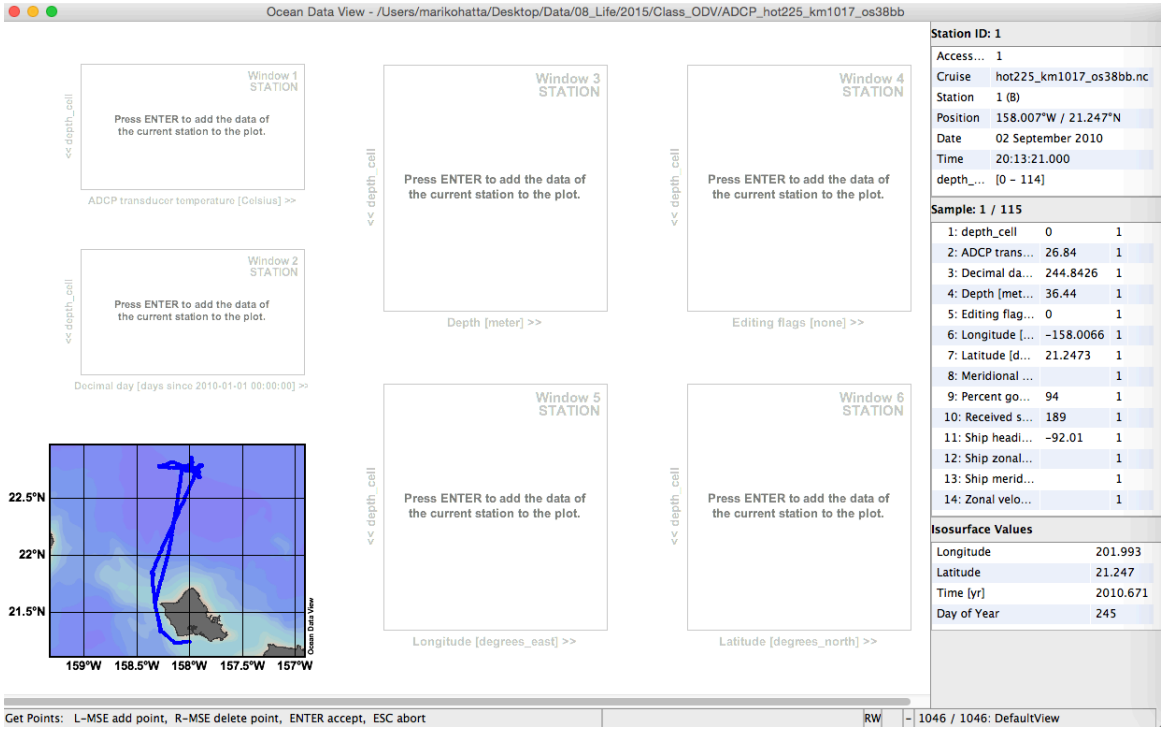


3. Should get “Select Primary Dimension” screen: select “depth_cell” by clicking on it, then click “Next”. Then you should get “Subset Dimensions” screen. Then “Finish”.

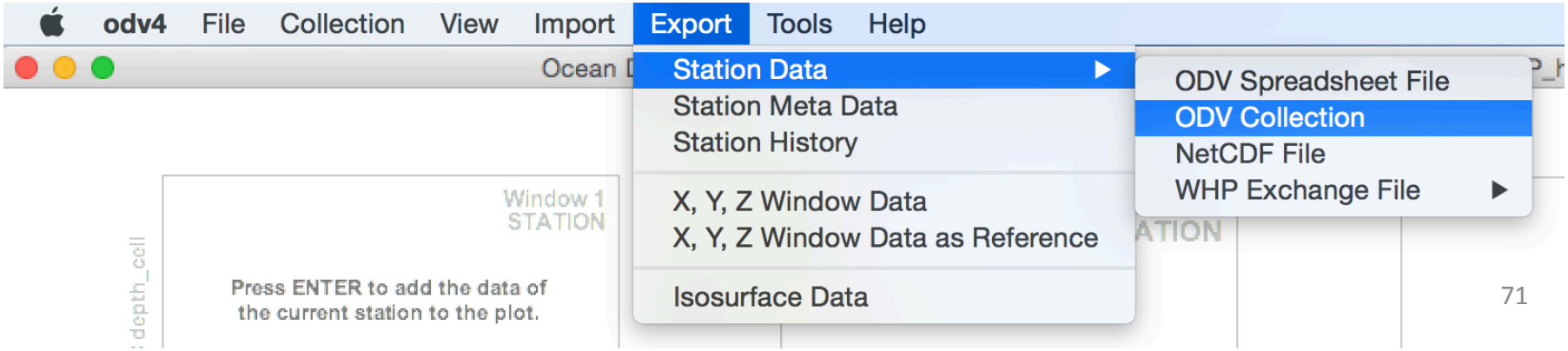




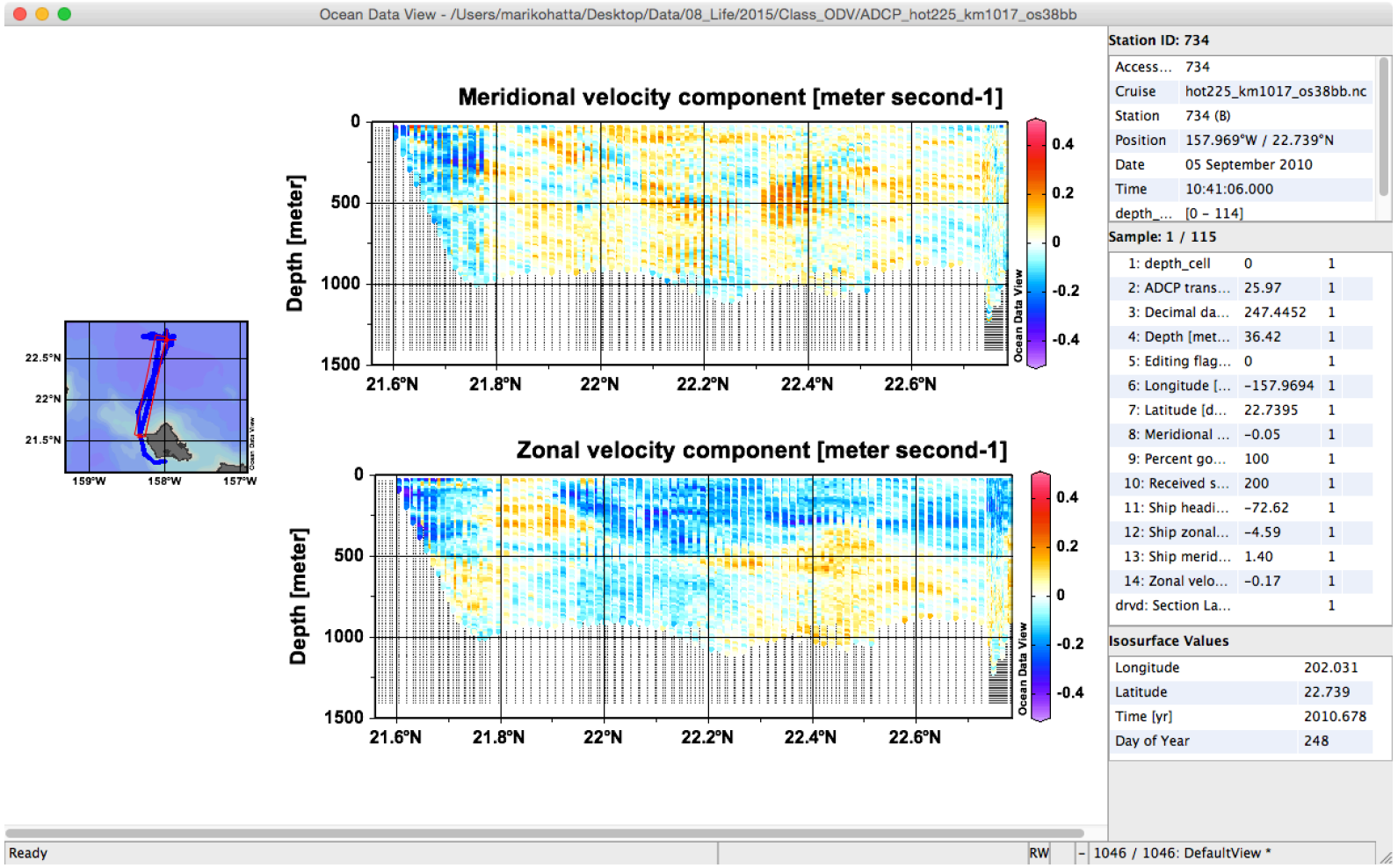
4. You should get the ODV file.



5. You should export the ODV collection. Since the ADCP data is huge, it is easy to crash ODV, so it is the safe thing to do!



6. You can make the section data of ADCP components with “Section Window” mode.



7. Save “View”, then you do not have to make this again! Also you can save the canvas as your favorite format (.jpg/.png/etc..).