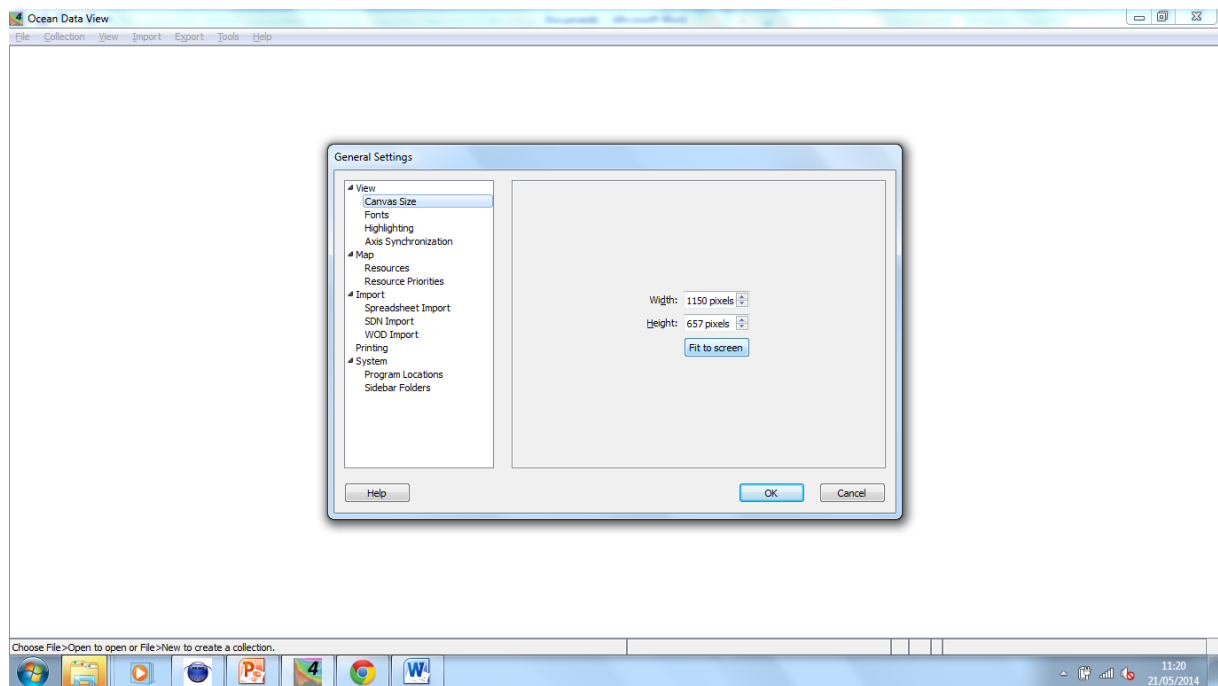
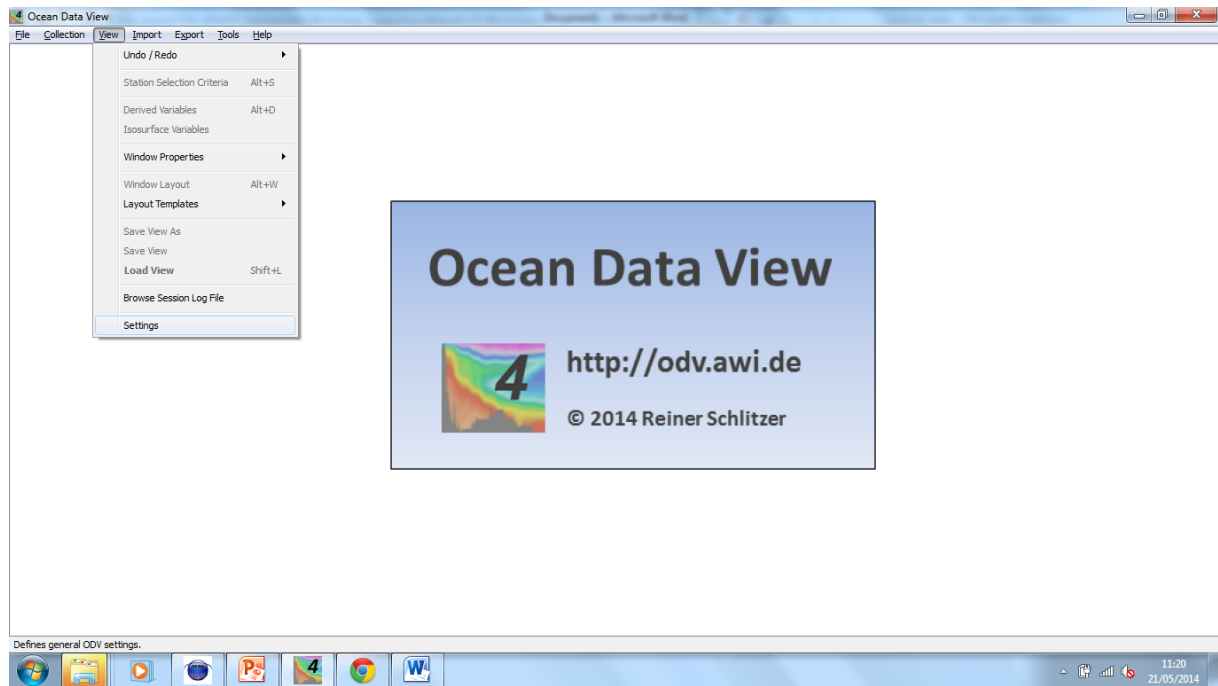
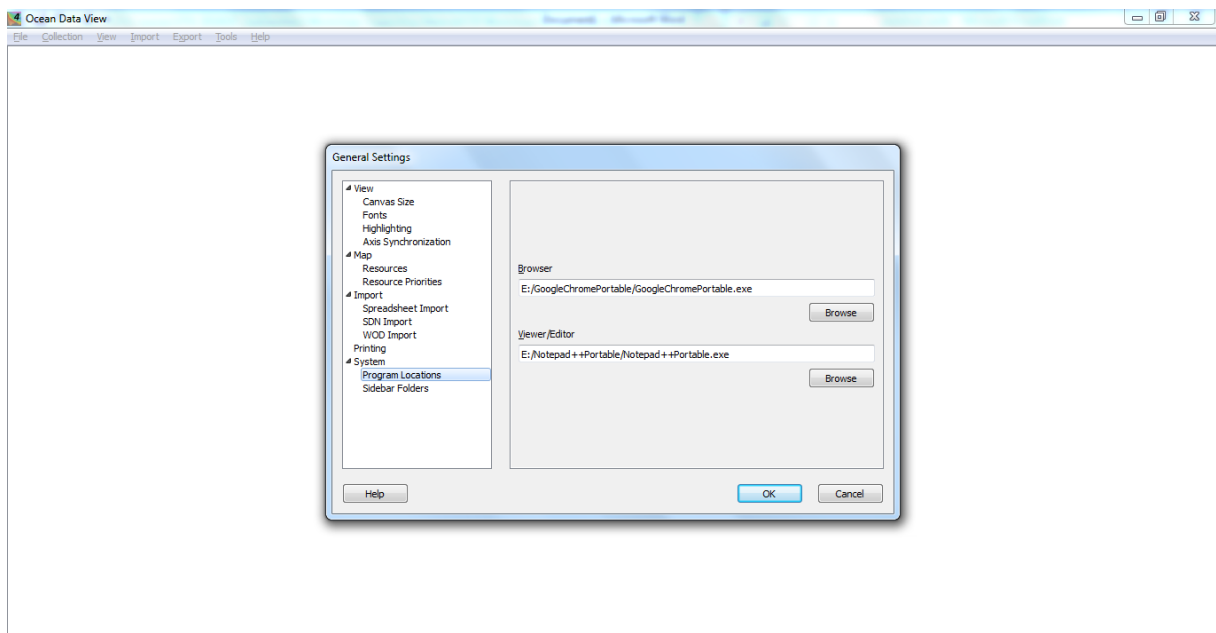
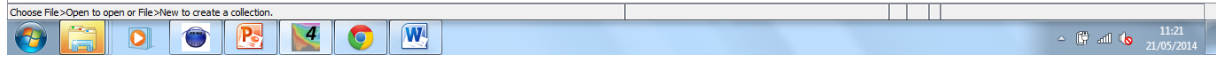
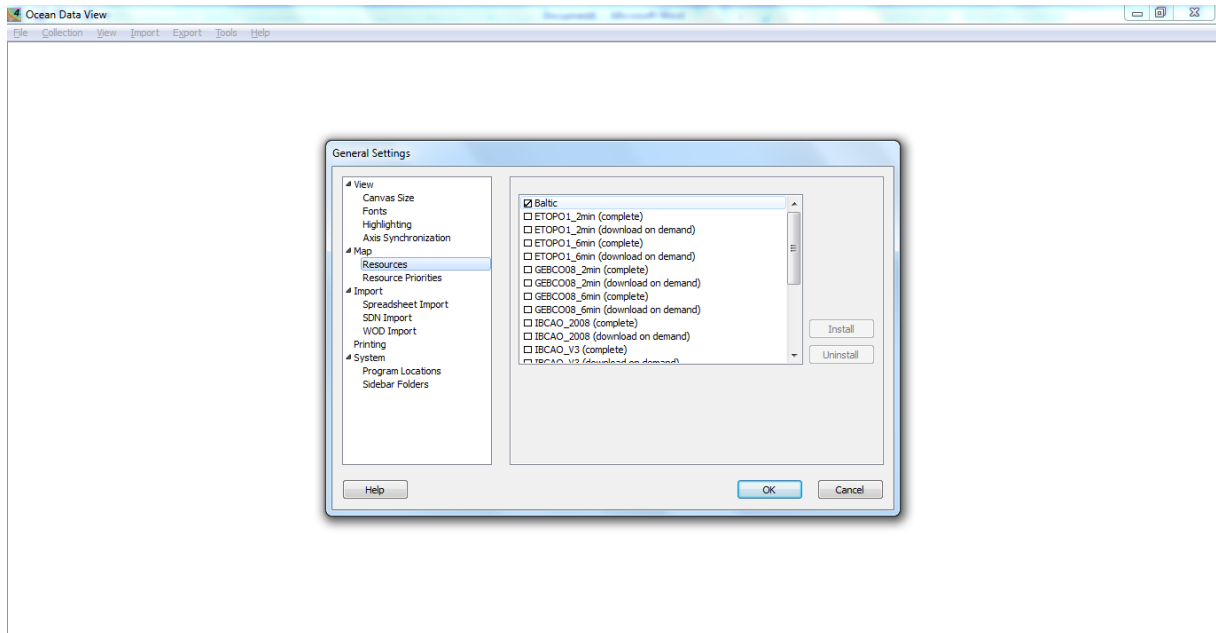
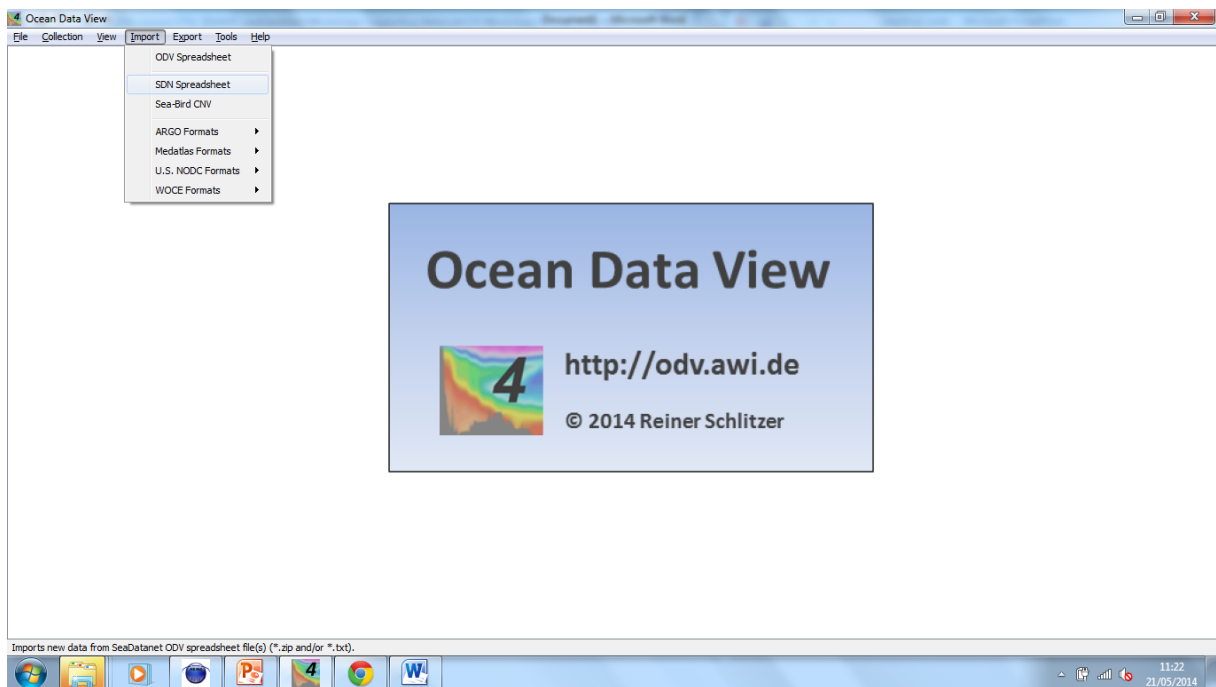
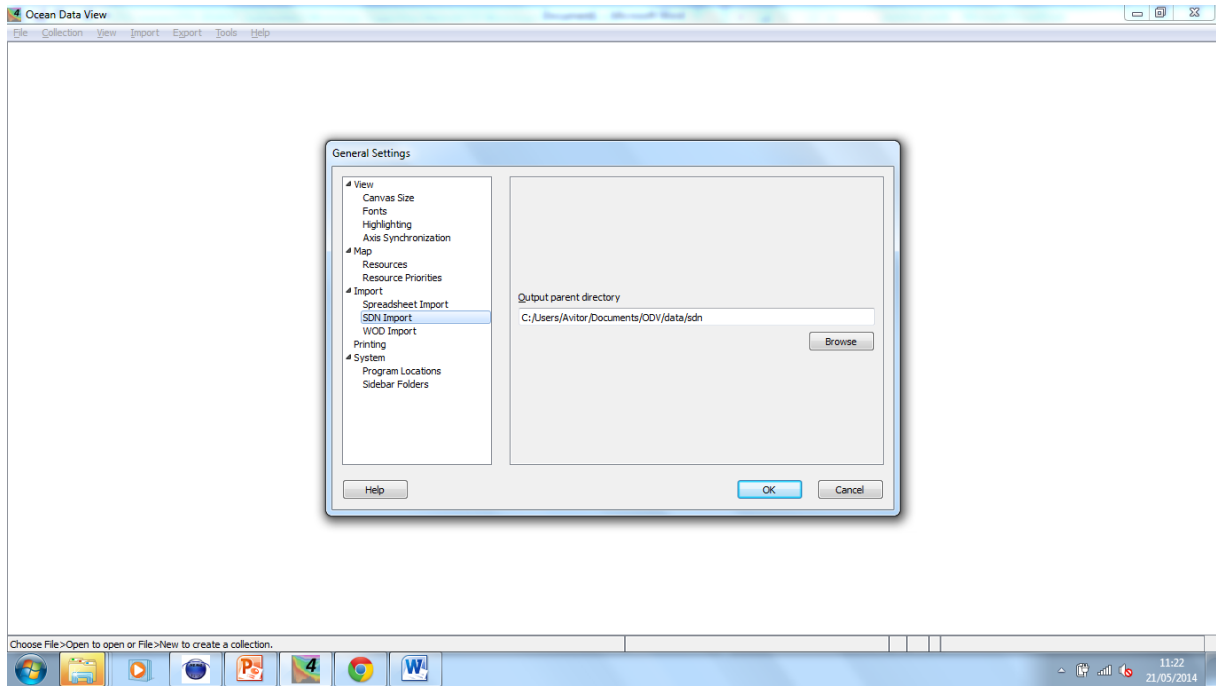


OCEAN DATA VIEW

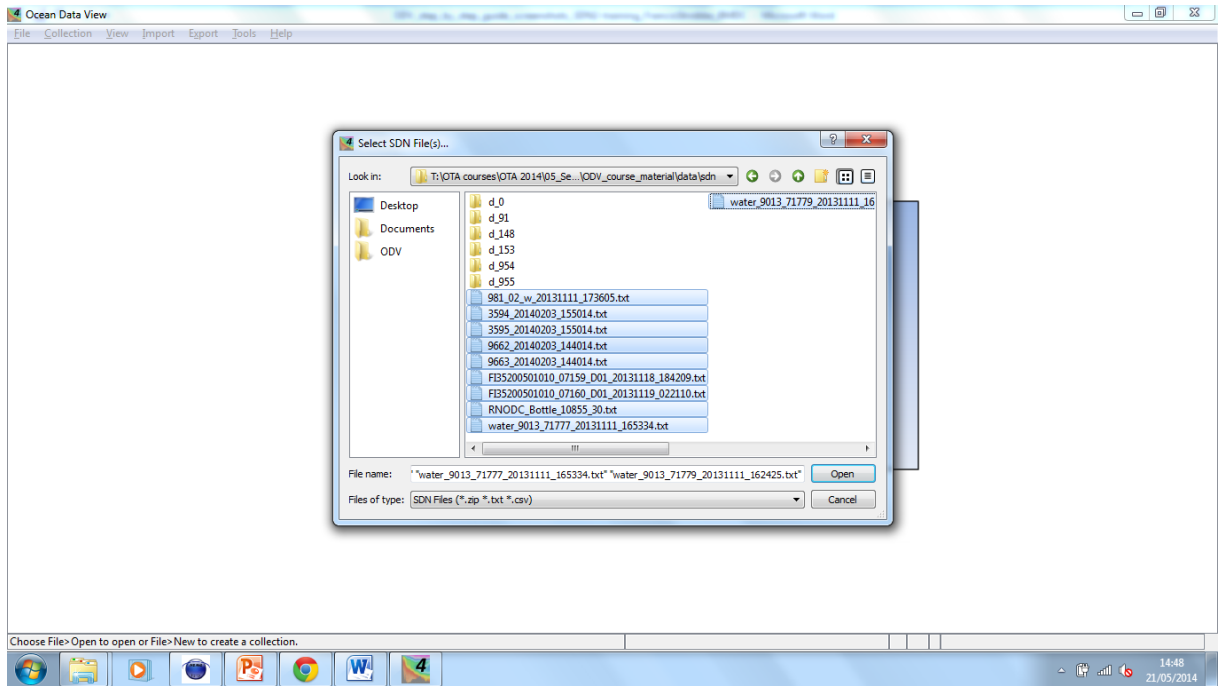


FIT TO SCREEN

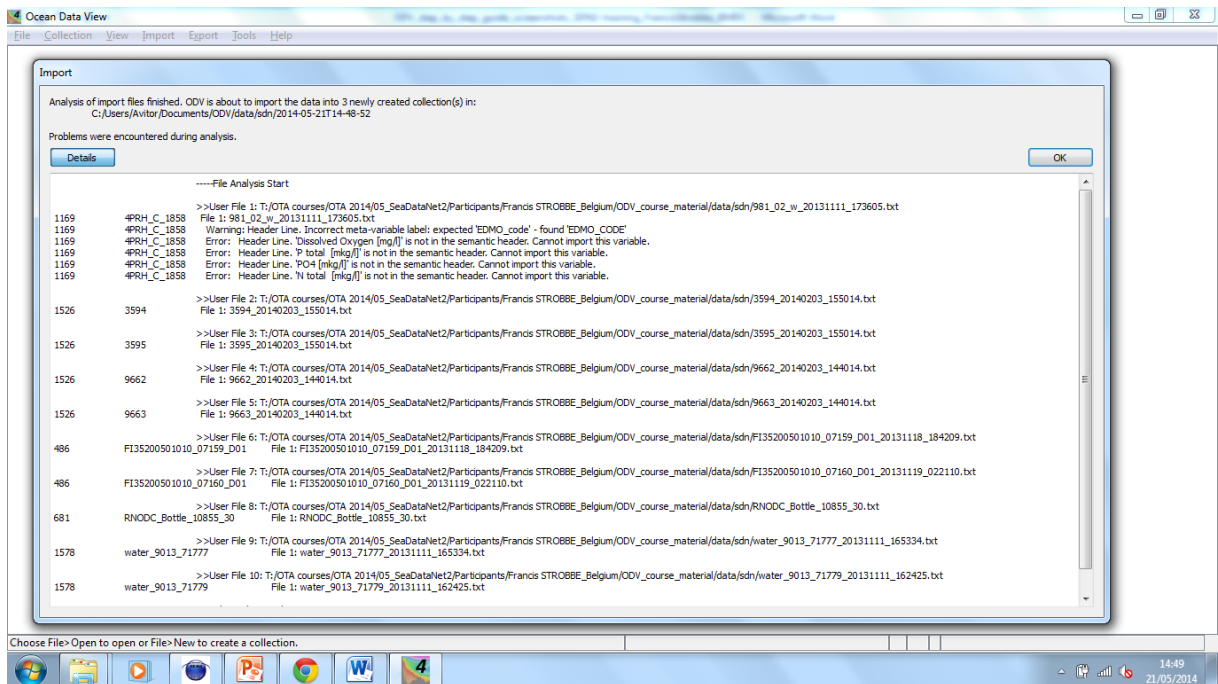




CHOOSE SDN Spreadsheet



SELECT MULTIPLE FILES



LOOK AT THE POSSIBLE ERRORS BY CLICKING ON DETAILS

```

981_02_w_20131111_173605 - Notepad
File Edit Format View Help

//SDN_parameter_mapping
//<subject>SDN:LOCAL:DEPH</subject><object>SDN:P011:ADEPZ201</object><units>SDN:P061:ULAA</units>
//<subject>SDN:LOCAL:PHPH</subject><object>SDN:P011:PHXZ2XX</object><units>SDN:P061:UUPH</units>
//<subject>SDN:LOCAL:DOX2</subject><object>SDN:P011:DOXZ2XX</object><units>SDN:P061:KGUM</units>
//<subject>SDN:LOCAL:PHOS</subject><object>SDN:P011:PHOSZ2XX</object><units>SDN:P061:UPOX</units>
//<subject>SDN:LOCAL:PHOW</subject><object>SDN:P011:MDMAP906</object><units>SDN:P061:KGUM</units>
//<subject>SDN:LOCAL:NTOT</subject><object>SDN:P011:NTOTZ2XX</object><units>SDN:P061:UPOX</units>

Cruise Station Type yyyy-mm-ddThh:mm:ss.sss Longitude [degrees_east] Latitude [degrees_north] LOCAL_CDI_ID EDMO_CODE
Bot. Depth [m] DEPH [m] QV:SEADATANET PHPH [pH unit] QV:SEADATANET Dissolved Oxygen [mg/l] QV:SEADATANET P total [mg/l]
QV:SEADATANET P04 [mg/l] QV:SEADATANET N total [mg/l] QV:SEADATANET
SSSS 4PRH_C_1858 B 2004-11-19T8:00:00 +030.2050 +45.2575 4PRH_C_1858 1169 8.4 0.5 1 7.88 1 9.00 1

```

OPEN THE FILE WITH ERRORS IN A NOTEPAD AND SEE FOR THE ERRORS

In this case: Dissolved Oxygen should be replaced by DOX2 (or vice versa)

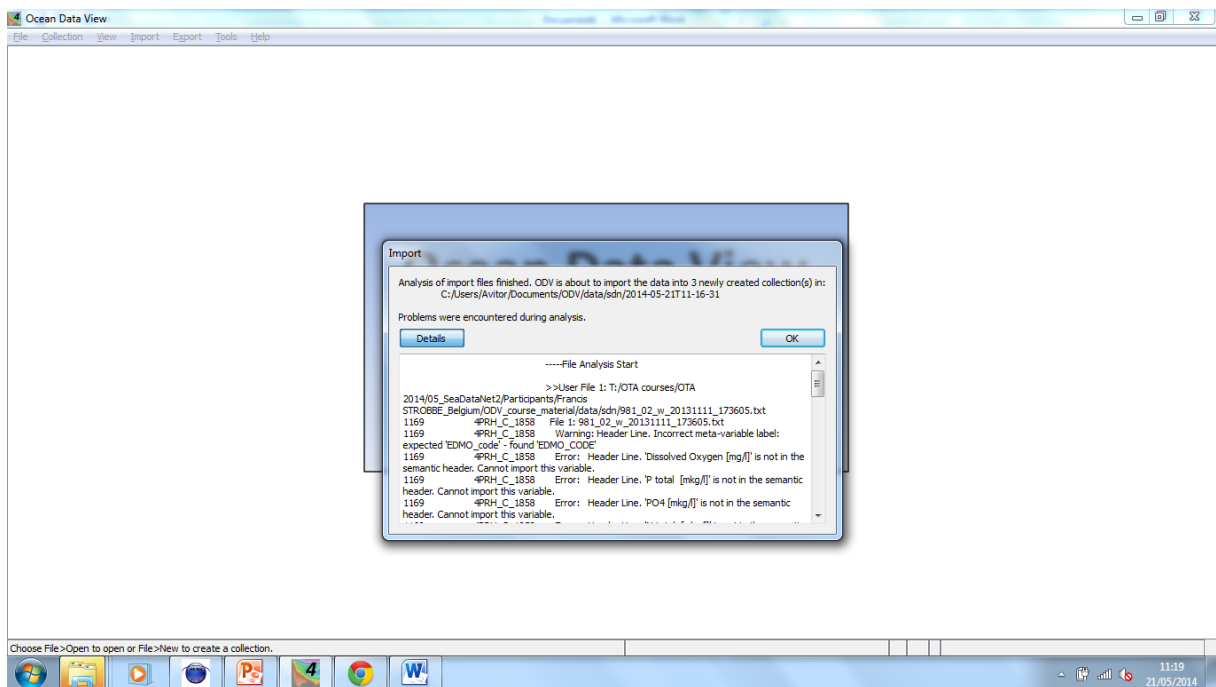
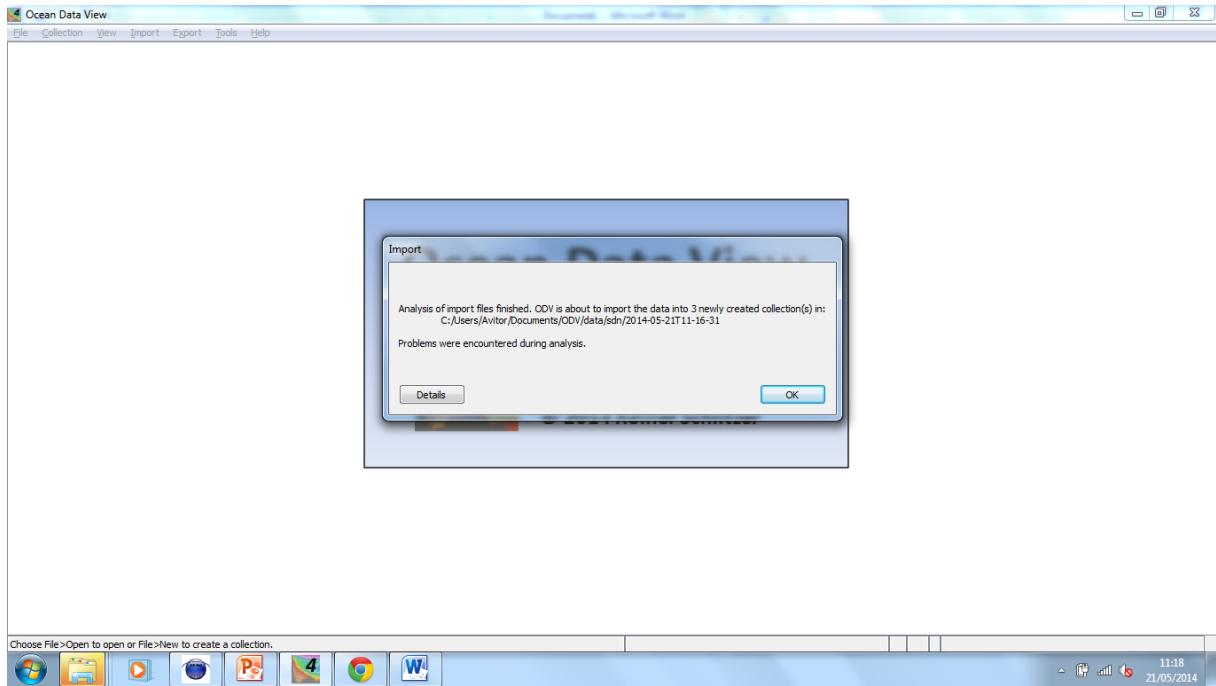
```

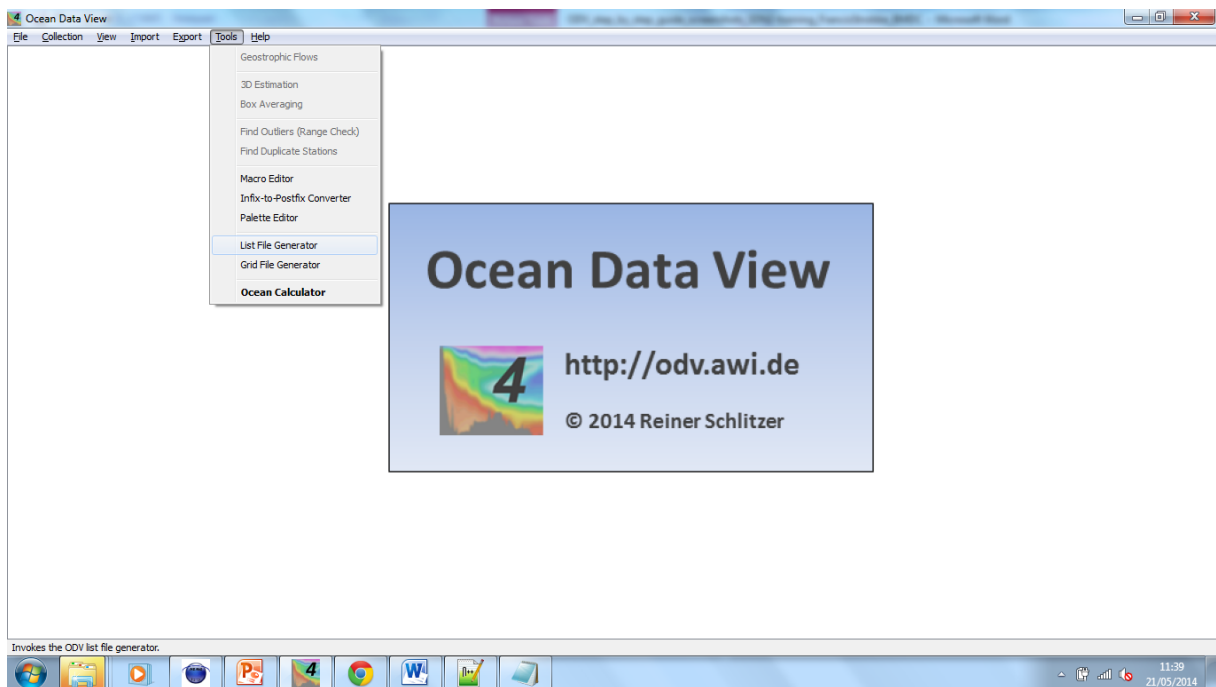
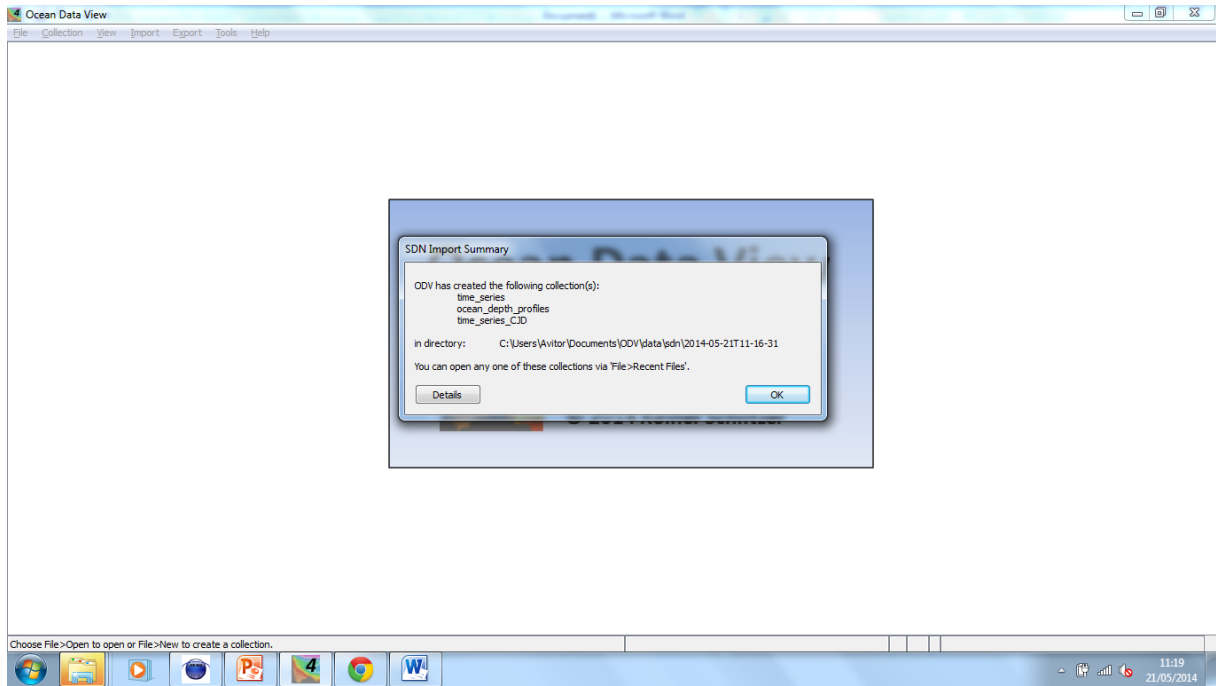
T:\OTA courses\OTA 2014\05_SeaDataNet2\Participants\Francis STROBBE_Belgium\ODV_course_material\data\sdn\981_02_w_20131111_173605.txt - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?

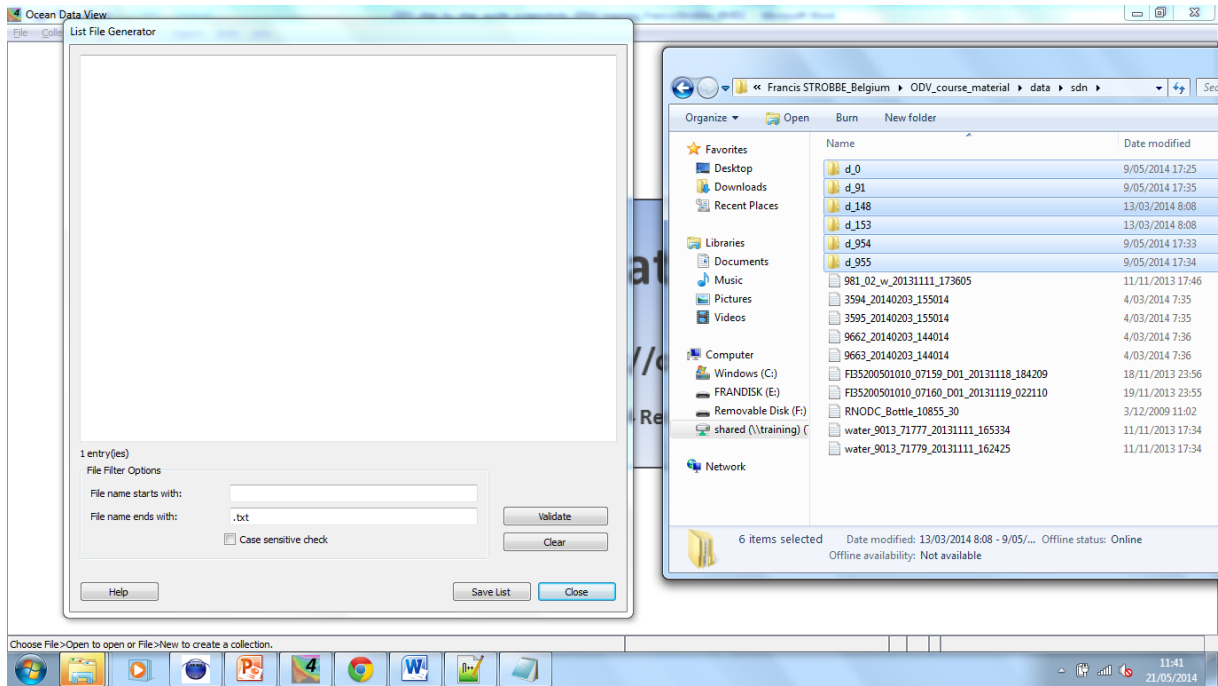
981_02_w_20131111_173605.txt
1 //
2 //SDN_parameter_mapping
3 //<subject>SDN:LOCAL:DEPH</subject><object>SDN:P011:ADEPZ201</object><units>SDN:P061:ULAA</units>
4 //<subject>SDN:LOCAL:PHPH</subject><object>SDN:P011:PHXZ2XX</object><units>SDN:P061:UUPH</units>
5 //<subject>SDN:LOCAL:DOX2</subject><object>SDN:P011:DOXZ2XX</object><units>SDN:P061:KGUM</units>
6 //<subject>SDN:LOCAL:PHOS</subject><object>SDN:P011:PHOSZ2XX</object><units>SDN:P061:UPOX</units>
7 //<subject>SDN:LOCAL:PHOW</subject><object>SDN:P011:MDMAP906</object><units>SDN:P061:KGUM</units>
8 //<subject>SDN:LOCAL:NTOT</subject><object>SDN:P011:NTOTZ2XX</object><units>SDN:P061:UPOX</units>
9 //
10 Cruise Station Type yyyy-mm-ddThh:mm:ss.sss Longitude [degrees_east] Latitude [degrees_north] LOCAL_CDI_ID EDMO_CODE Bot. Depth [m] DEPH [m] QV
11 SSSS 4PRH_C_1858 B 2004-11-19T8:00:00 +030.2050 +45.2575 4PRH_C_1858 1169 8.4 0.5 1 7.88 1 9.00 1
12 8.4 7.9 1 7.9 1 8.80 1 1 1 1 1 1 1 1 1
13
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16
17
18
19
20
21
22
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```

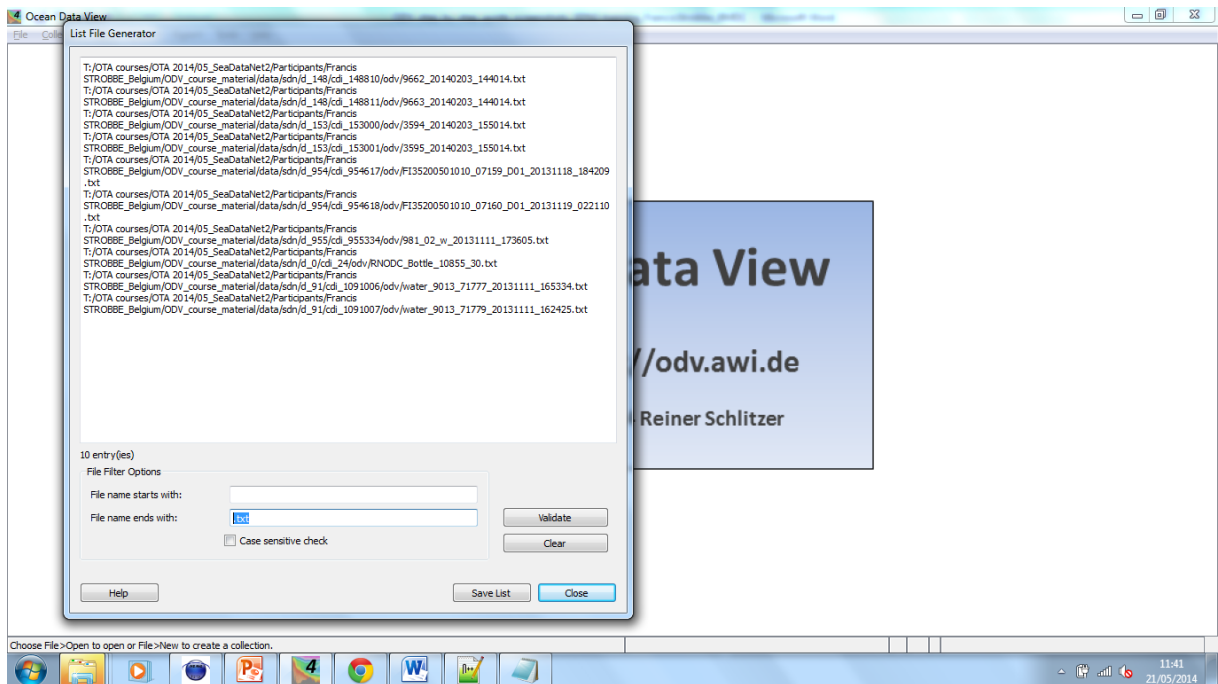
Also; watch out for ‘ ‘ which means there is an empty tab somewhere (can be seen by clicking on ¶ button in Notepad++ (free advanced text editor))



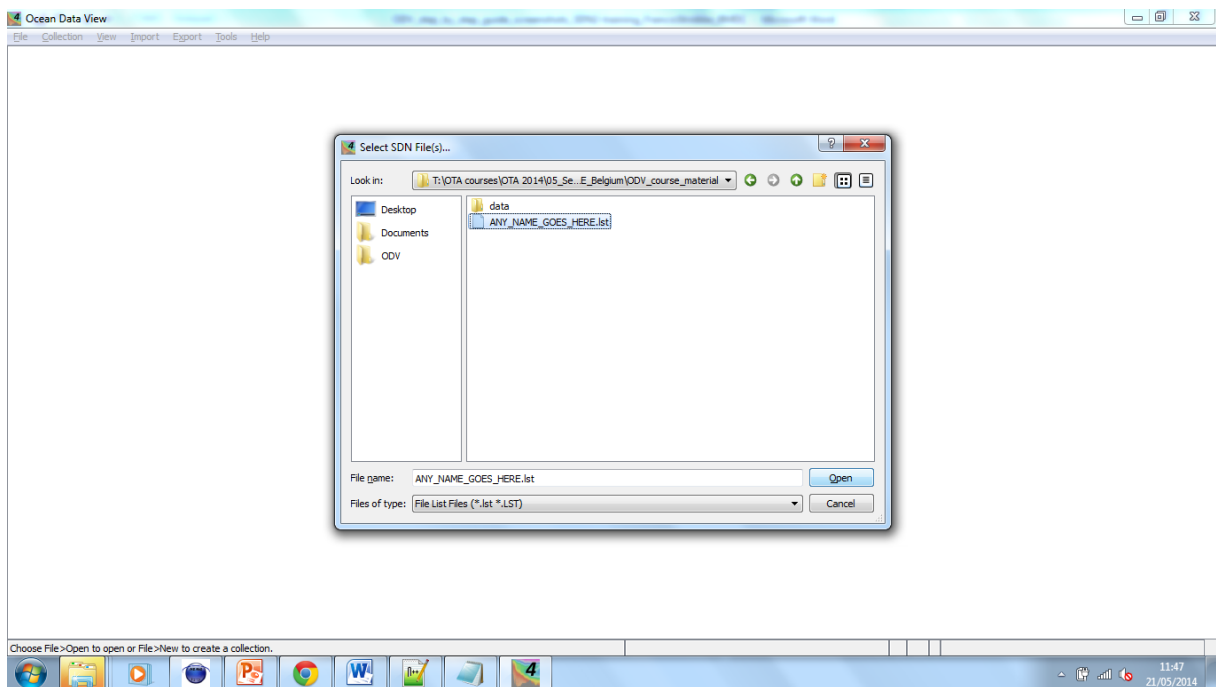
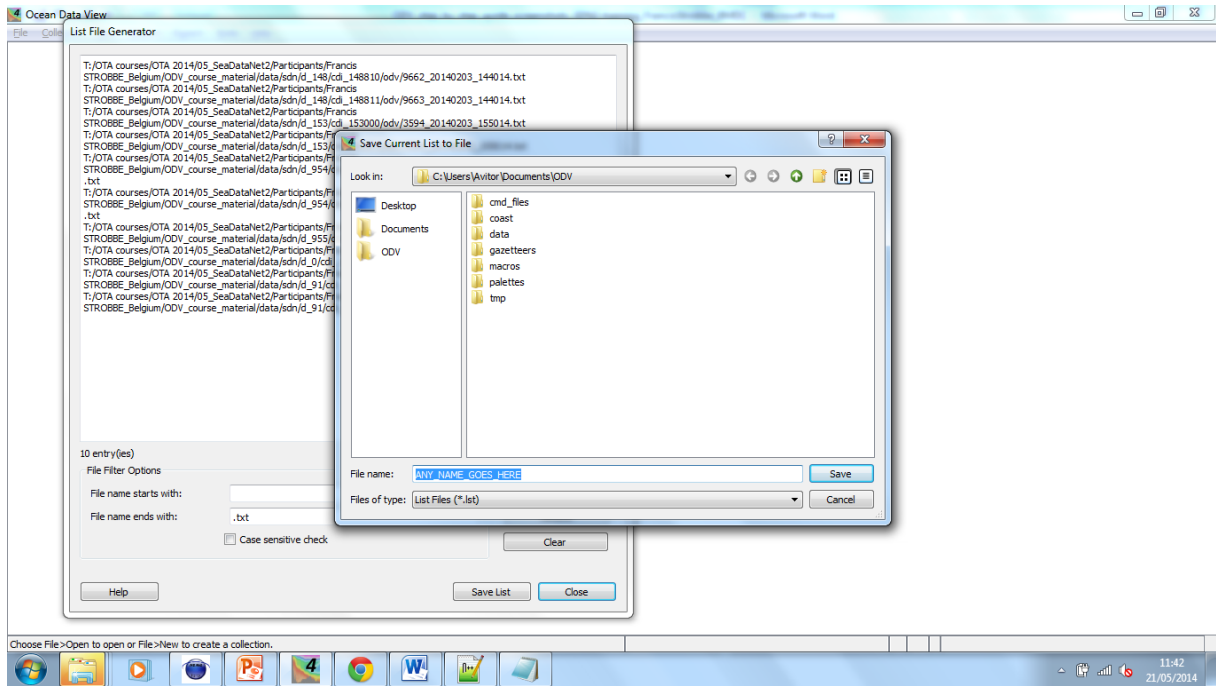




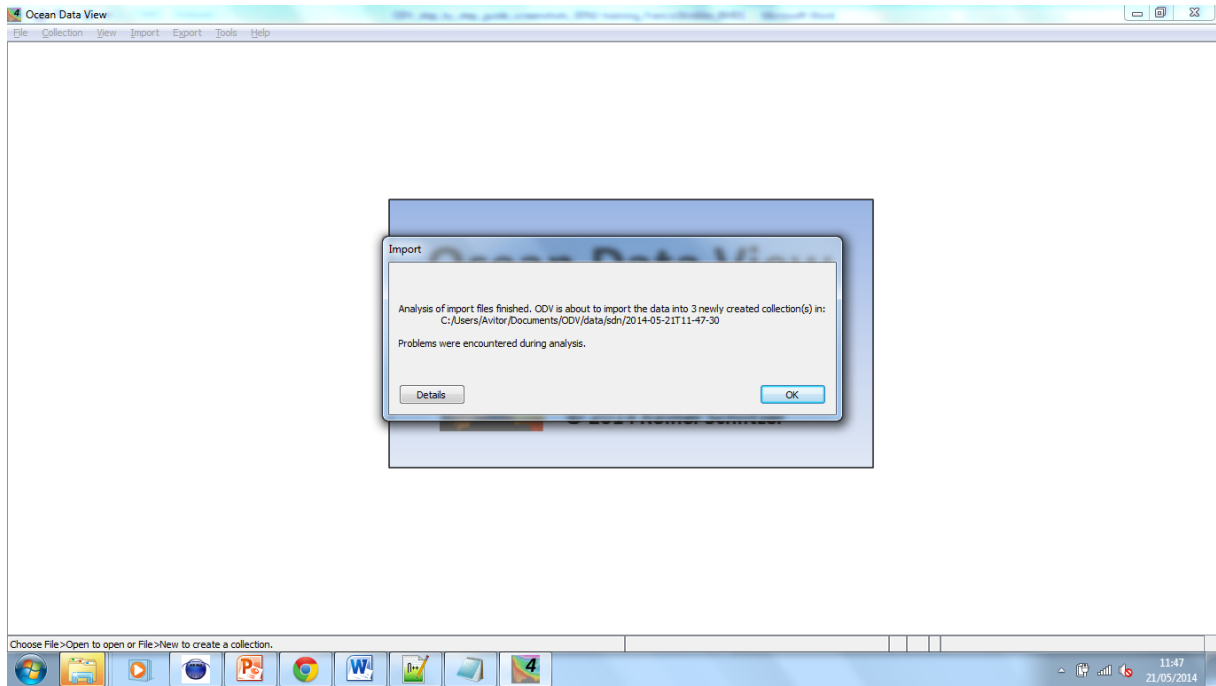
DRA G'N' DRO P THE FOLDERS IN THE LIST FILE GENERATOR WINDOW,



If you selected *file name ends with: .txt*, it will take all these files and they will show up



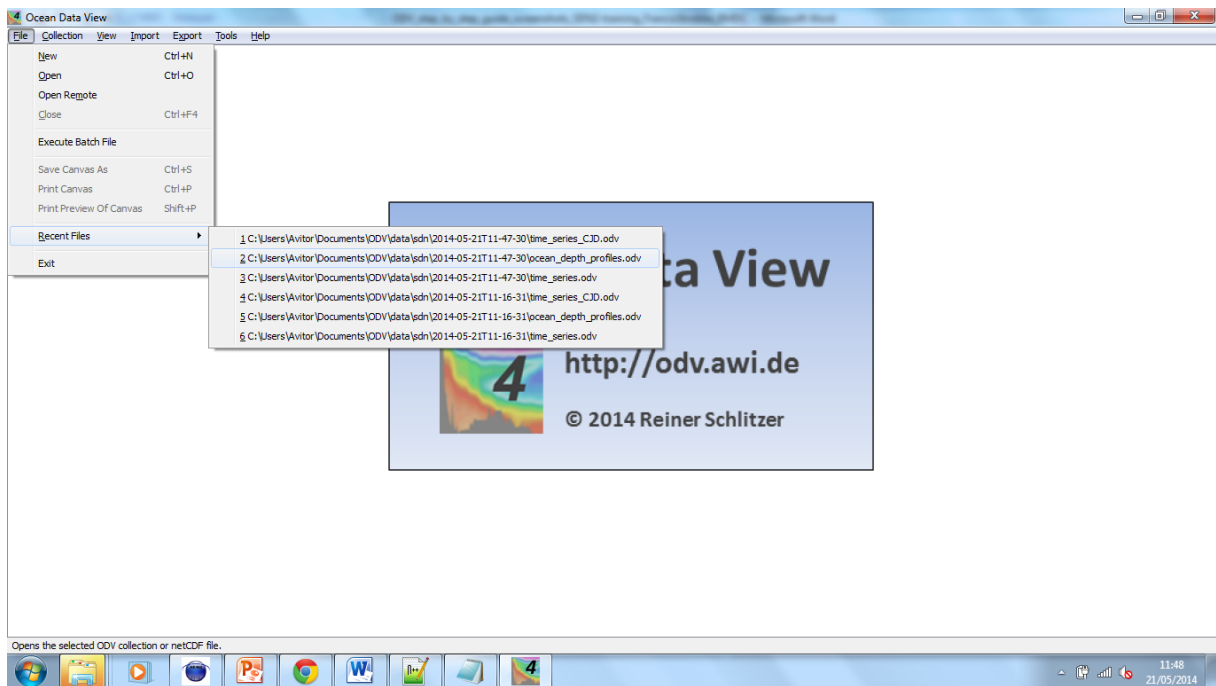
ONCE THE LIST IS MADE, CHOOSE OPEN FILE LIST WHEN YOU WANT TO WORK ON THIS AGAIN

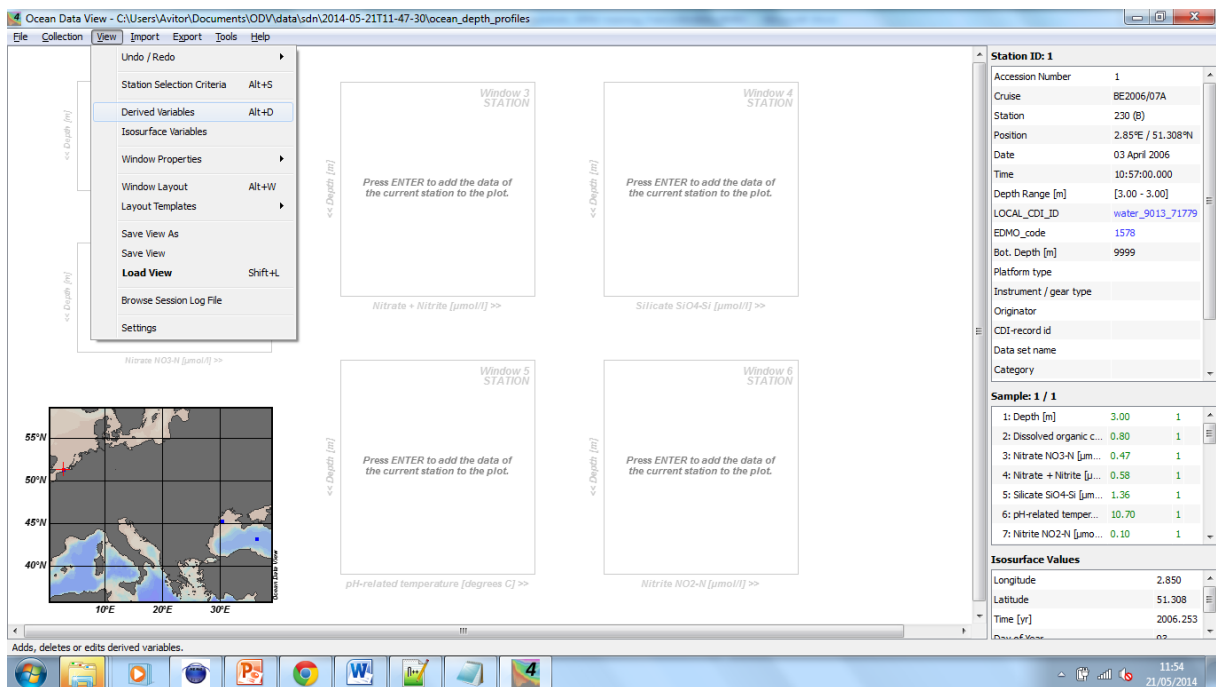
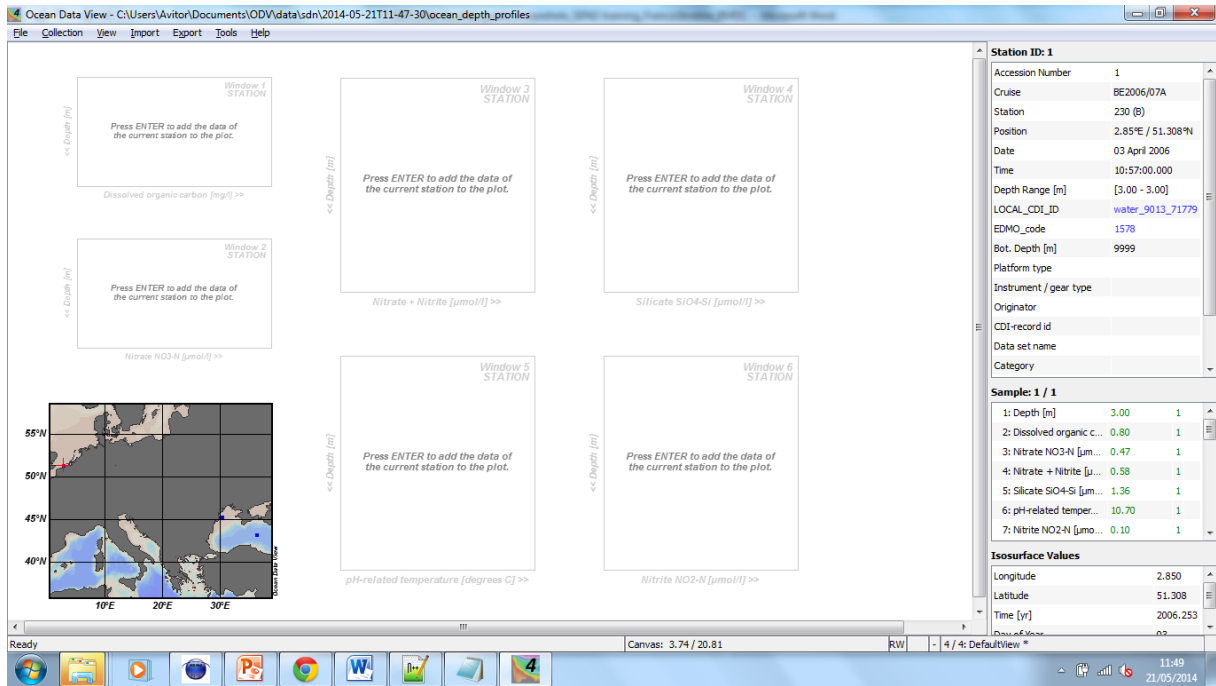


Again, same errors, but continue, for now

.....

BIG STEP FORWARD





Derived Variables

Already Defined: [Empty]

Choices:

- Potential Vorticity Q
- Practical Salinity from Absolute Salinity
- Practical Salinity from Conductivity
- Preformed Salinity S*
- Pressure from Depth
- Reference Salinity SR
- Saline Contraction Coefficient β_0
- Sound Speed c
- Specific Enthalpy h
- Specific Entropy η
- Specific Heat Capacity Cp
- Specific Internal Energy u
- Specific Volume Anomaly δ
- Spiciness η
- Stability Ratio Rp
- Thermal Expansion Coefficient α_0
- Thermobaric Coefficient T β
- Turner Angle Tu
- Special
 - Aggregated Variable
 - Converted Variable
 - Difference from Reference
 - Interpolated Variable
 - Patches
- Time

Buttons: Delete, Edit, Load from View File, Add, OK, Cancel, Help

Station ID: 1

Accession Number: 1
Cruise: BE2006/07A
Station: 230 (B)
Position: 2.85°E / 51.308°N
Date: 03 April 2006
Time: 10:57:00.000
Depth Range [m]: [3.00 - 3.00]
LOCAL_CDI_ID: water_9013_7179
EDMO_code: 1578
Bot. Depth [m]: 9999
Platform type:
Instrument / gear type:
Originator:
CDI-record id:
Data set name:
Category:

Sample: 1 / 1

1: Depth [m]	3.00	1
2: Dissolved organic c...	0.80	1
3: Nitrate NO3-N [µm...	0.47	1
4: Nitrate + Nitrite [µ...	0.58	1
5: Silicate SiO4-Si [µm...	1.36	1
6: pH-related temper...	10.70	1
7: Nitrite NO2-N [µmo...	0.10	1

Isosurface Values

Longitude: 2.850
Latitude: 51.308
Time [yr]: 2006.253

Aggregated Variable

Select one or more variables

- 6: pH-related temperature [degrees C]
- 7: Nitrite NO2-N [µmol/l]
- 8: Ammonium NH4-N [µmol/l]
- 9: Phosphate PO4-P [µmol/l]
- 10: Dissolved oxygen [mg/l]
- 11: Dissolved Total phosphorus DOP [µmol/l]
- 12: Dissolved Total nitrogen DON [µmol/l]
- 13: pH [pH units]
- 14: Salinity [‰]
- 15: Temperature [degrees C]
- 16: Oxygen saturation [%]
- 17: Density
- 18: Turbidity [NTU]
- 19: Salinity
- 20: Oxygen [ml/l]
- 21: Alkalinity [µequiv/l]
- 22: Phosphate [µg/l]
- 23: Photal [µg/l]
- 24: Silicate [µg/l]
- 25: Nitrate [µg/l]
- 26: Nitrite [µg/l]
- 27: Ammonium [µg/l]
- 28: PHPH [pH units]
- 29: DOX2 [µmol/kg]
- 30: PHOS [µmol/l]
- 31: PHOW [µmol/kg]
- 32: NTOT [µmol/l]

3 of 32 items selected

Buttons: Select All, Invert Selection, OK, Cancel, Add

Station ID: 1

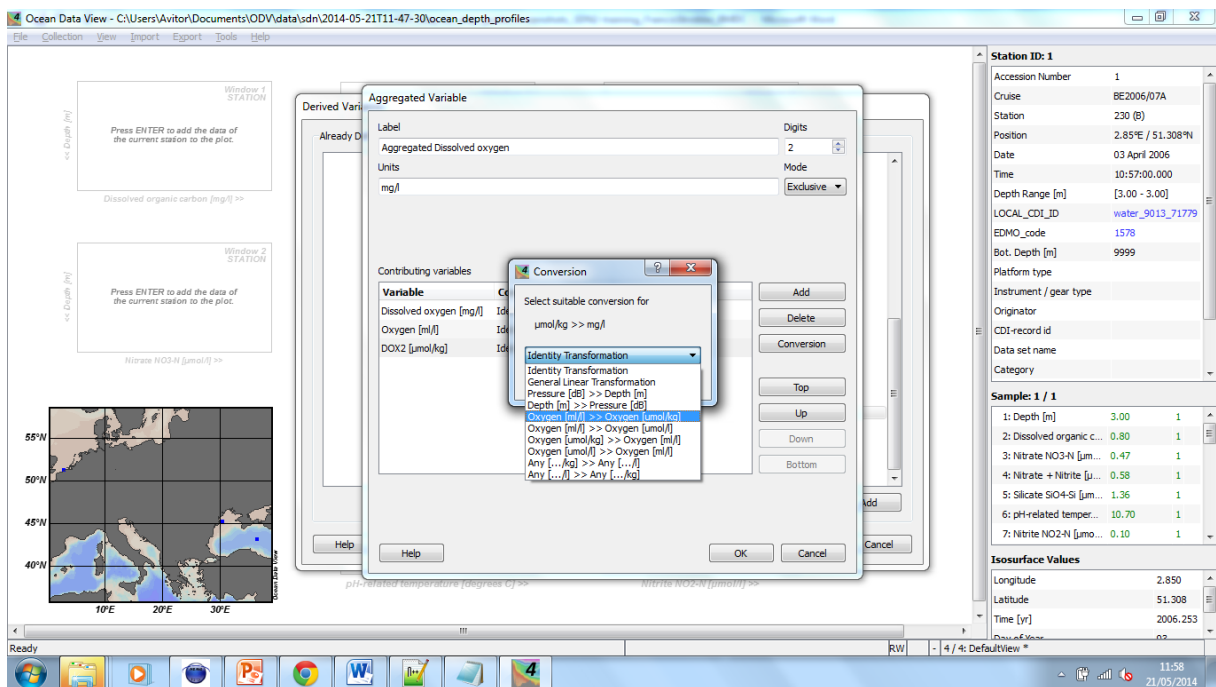
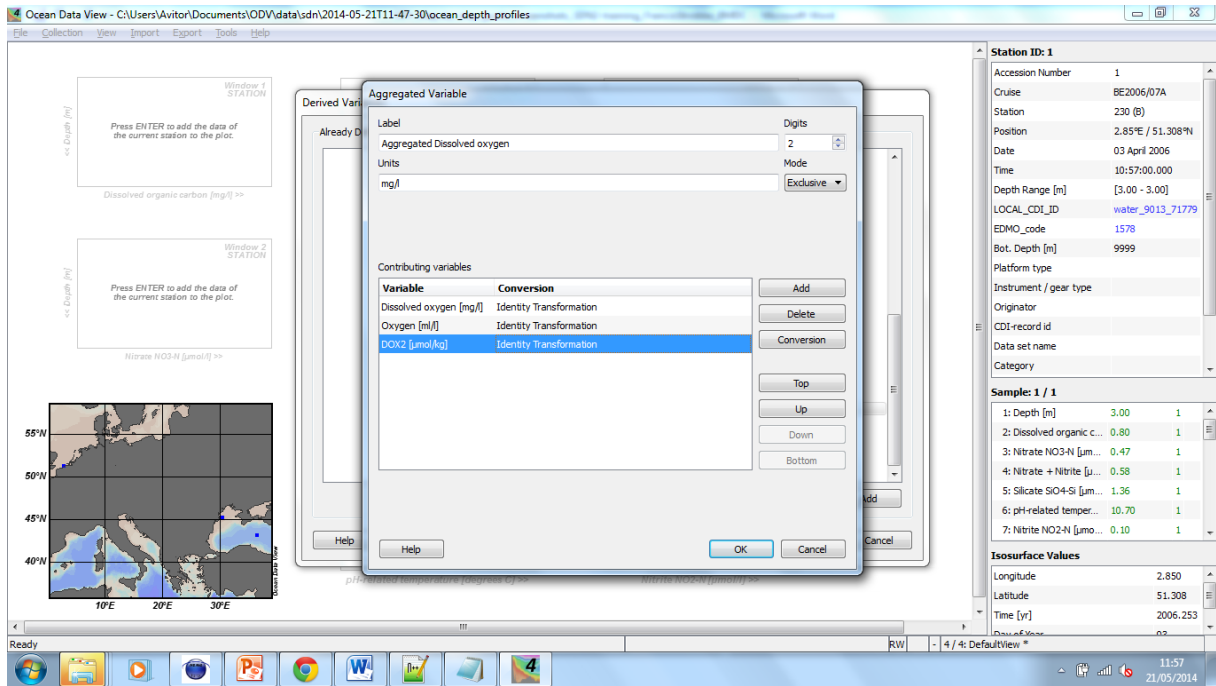
Accession Number: 1
Cruise: BE2006/07A
Station: 230 (B)
Position: 2.85°E / 51.308°N
Date: 03 April 2006
Time: 10:57:00.000
Depth Range [m]: [3.00 - 3.00]
LOCAL_CDI_ID: water_9013_7179
EDMO_code: 1578
Bot. Depth [m]: 9999
Platform type:
Instrument / gear type:
Originator:
CDI-record id:
Data set name:
Category:

Sample: 1 / 1

1: Depth [m]	3.00	1
2: Dissolved organic c...	0.80	1
3: Nitrate NO3-N [µm...	0.47	1
4: Nitrate + Nitrite [µ...	0.58	1
5: Silicate SiO4-Si [µm...	1.36	1
6: pH-related temper...	10.70	1
7: Nitrite NO2-N [µmo...	0.10	1

Isosurface Values

Longitude: 2.850
Latitude: 51.308
Time [yr]: 2006.253



Aggregated Variable

Label: Aggregated Dissolved oxygen
 Units: mg/l
 Digits: 2
 Mode: Exclusive

Contributing variables

Variable	Conversion
Dissolved oxygen [mg/l]	Identity Transformation
Oxygen [ml/l]	Identity Transformation
DOX2 [umol/kg]	Oxygen [ml/l] >> Oxygen [umol/kg]

Conversion

Select suitable conversion for
 umol/kg >> mg/l
 Oxygen [ml/l] >> Oxygen [umol/kg]

Station ID: 1

Accession Number	1
Cruise	BE2006/07A
Station	230 (B)
Position	2.85°E / 51.308°N
Date	03 April 2006
Time	10:57:00.000
Depth Range [m]	[3.00 - 3.00]
LOCAL_CDI_ID	water_9013_7179
EDMO_code	1578
Bot. Depth [m]	9999
Platform type	
Instrument / gear type	
Originator	
CDI-record id	
Data set name	
Category	

Sample: 1 / 1

1: Depth [m]	3.00	1
2: Dissolved organic c...	0.80	1
3: Nitrate NO3-N [um...	0.47	1
4: Nitrate + Nitrite [u...	0.58	1
5: Silicate SiO4-Si [um...	1.36	1
6: pH-related temper...	10.70	1
7: Nitrite NO2-N [umo...	0.10	1

Isosurface Values

Longitude	2.850
Latitude	51.308
Time [yr]	2006.253

Aggregated Variable

Label: Aggregated Dissolved oxygen
 Units: mg/l
 Digits: 2
 Mode: Exclusive

Contributing variables

Variable	Conversion
Dissolved oxygen [mg/l]	Identity Transformation
Oxygen [ml/l]	Identity Transformation
DOX2 [umol/kg]	Oxygen [ml/l] >> Oxygen [umol/kg]

Station ID: 1

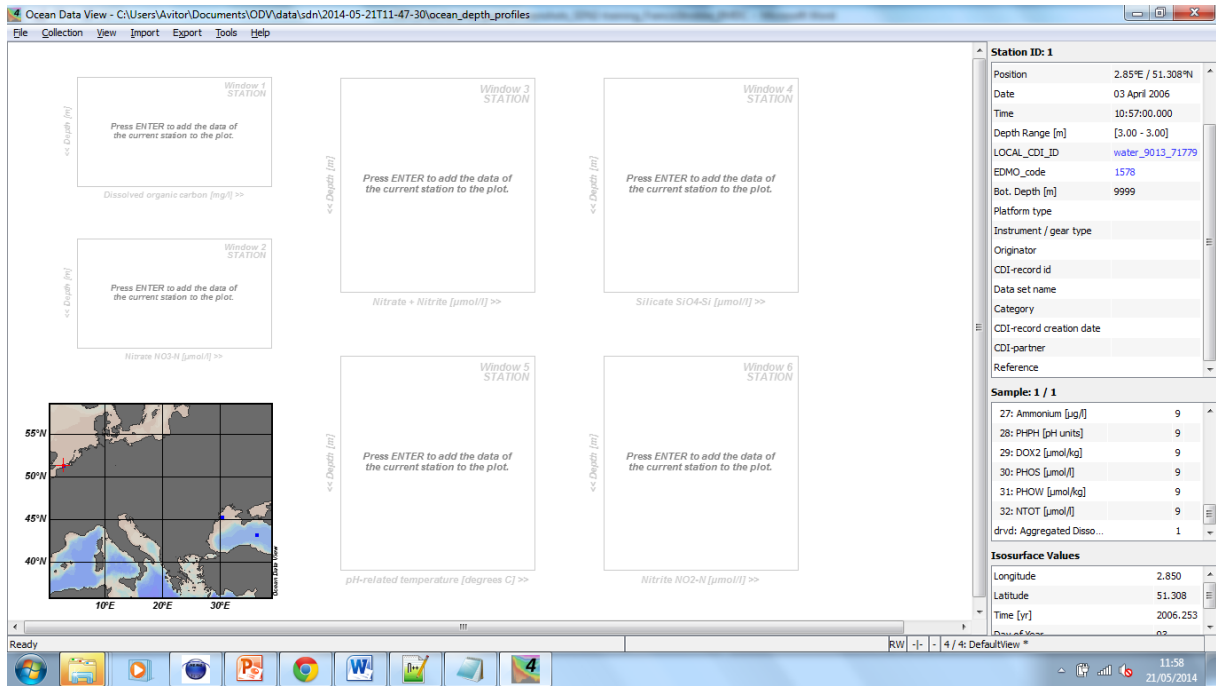
Accession Number	1
Cruise	BE2006/07A
Station	230 (B)
Position	2.85°E / 51.308°N
Date	03 April 2006
Time	10:57:00.000
Depth Range [m]	[3.00 - 3.00]
LOCAL_CDI_ID	water_9013_7179
EDMO_code	1578
Bot. Depth [m]	9999
Platform type	
Instrument / gear type	
Originator	
CDI-record id	
Data set name	
Category	

Sample: 1 / 1

1: Depth [m]	3.00	1
2: Dissolved organic c...	0.80	1
3: Nitrate NO3-N [um...	0.47	1
4: Nitrate + Nitrite [u...	0.58	1
5: Silicate SiO4-Si [um...	1.36	1
6: pH-related temper...	10.70	1
7: Nitrite NO2-N [umo...	0.10	1

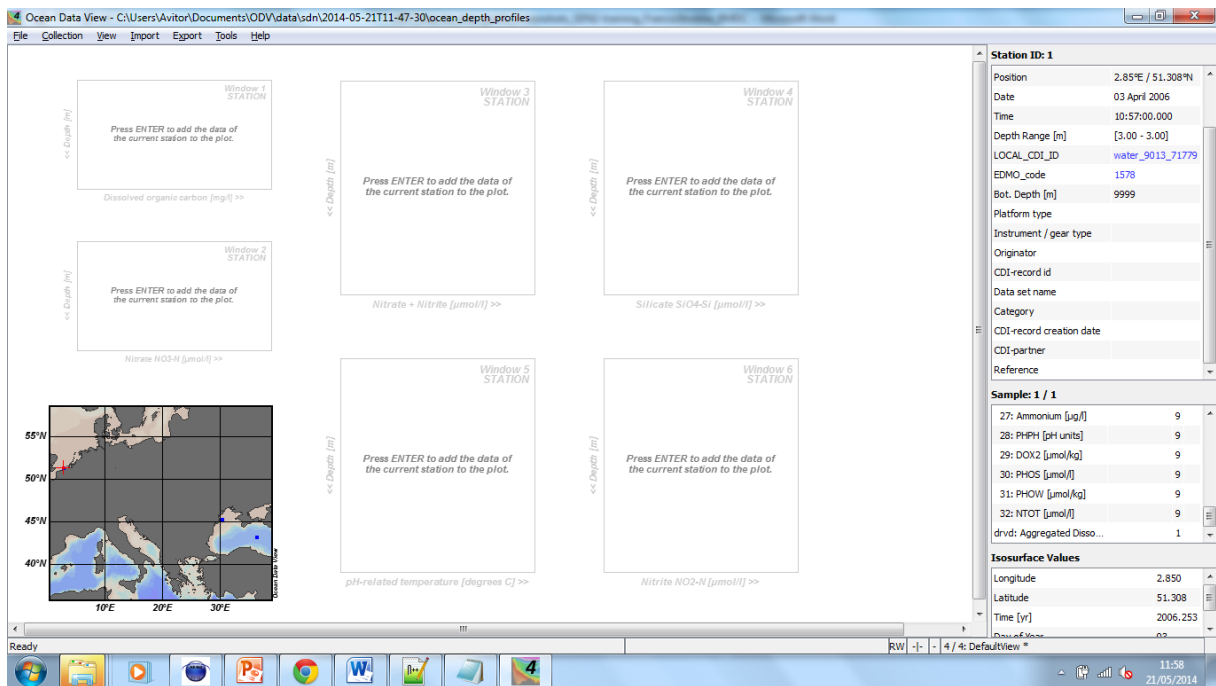
Isosurface Values

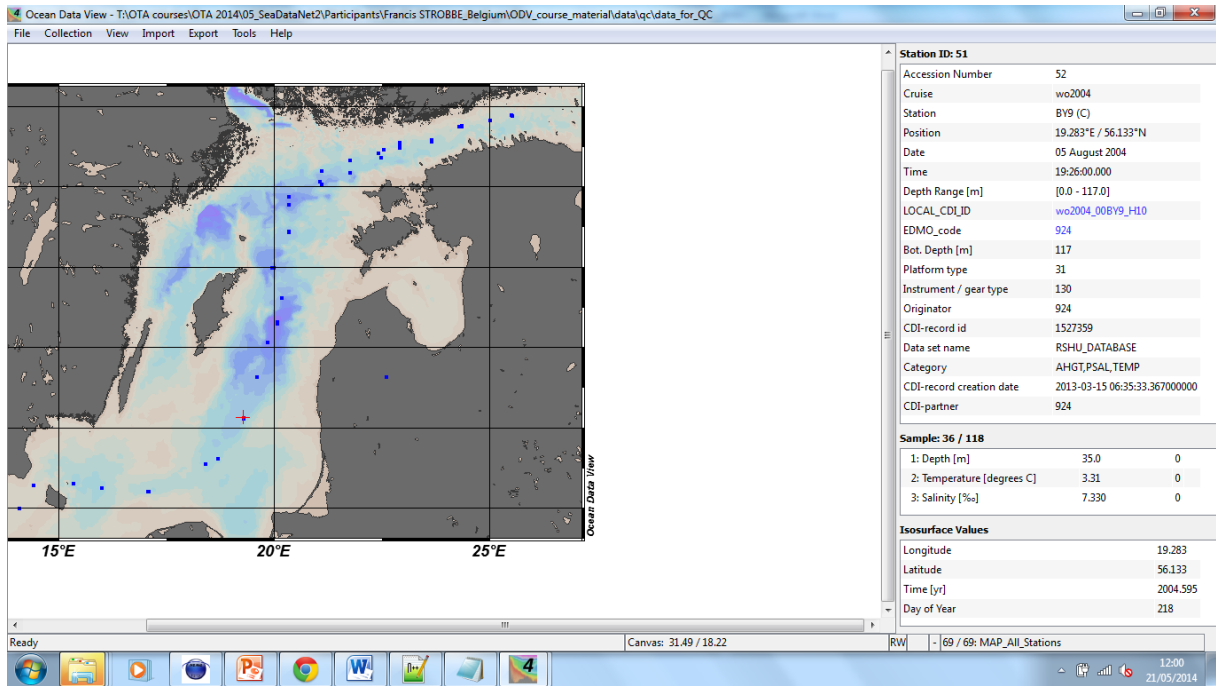
Longitude	2.850
Latitude	51.308
Time [yr]	2006.253



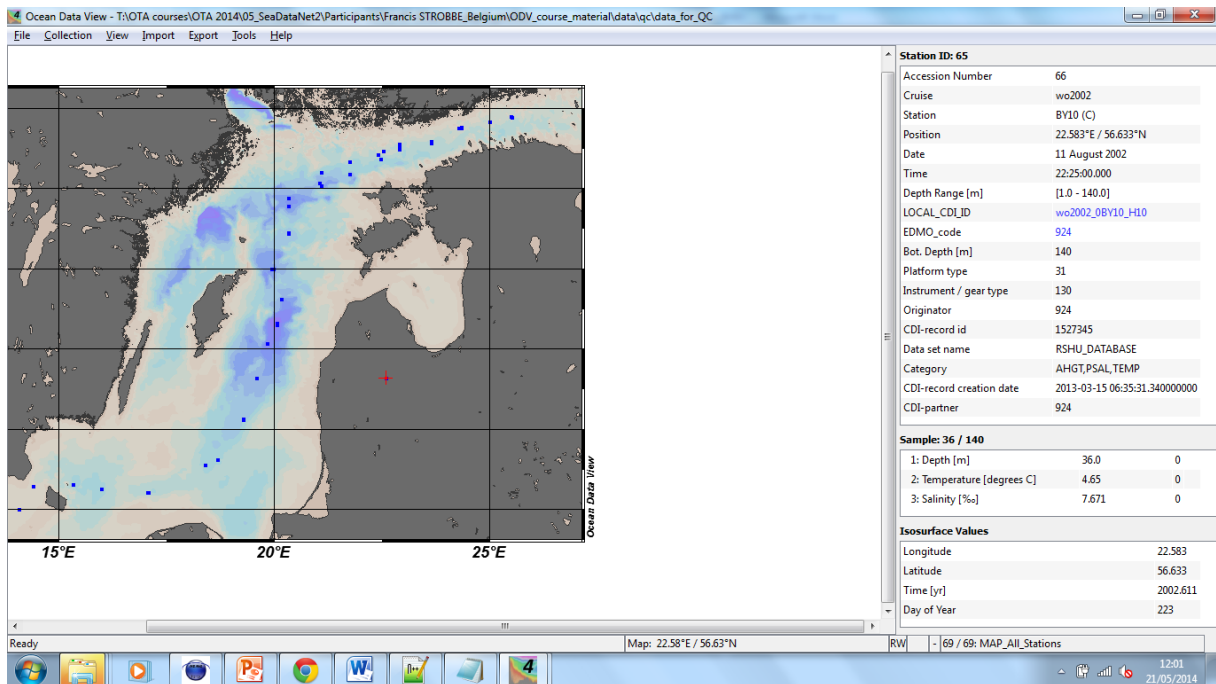
Drvd: Aggregated Disso... 1 IS ADDED

QM

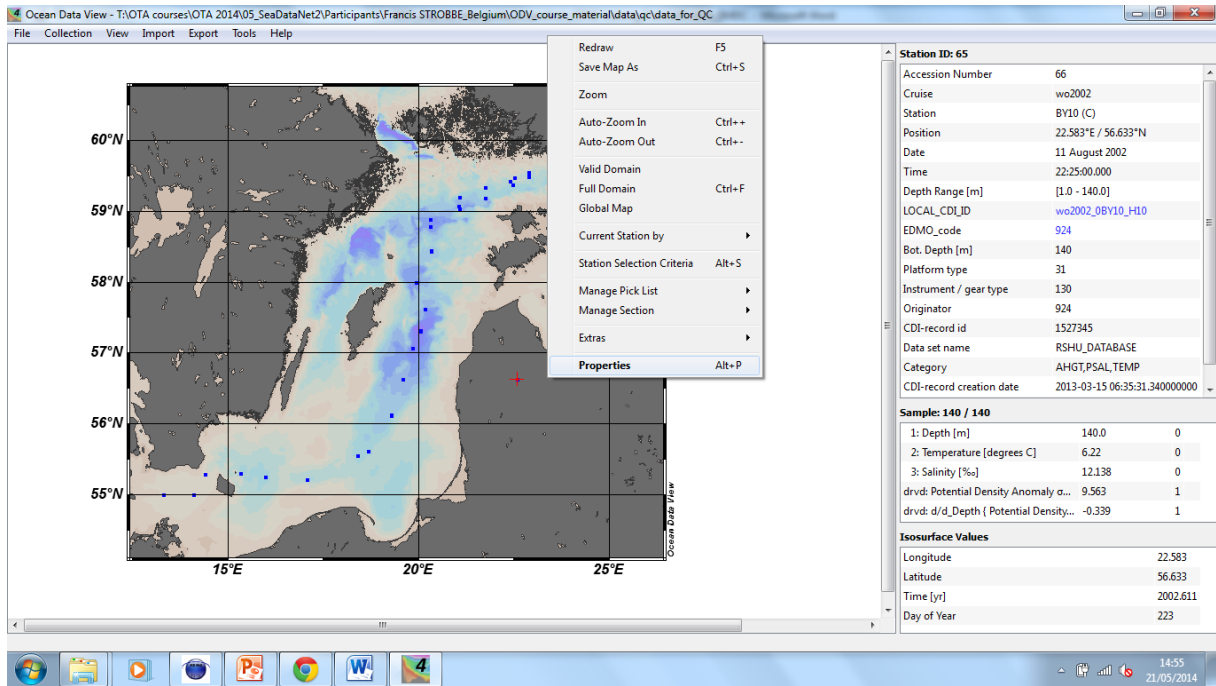




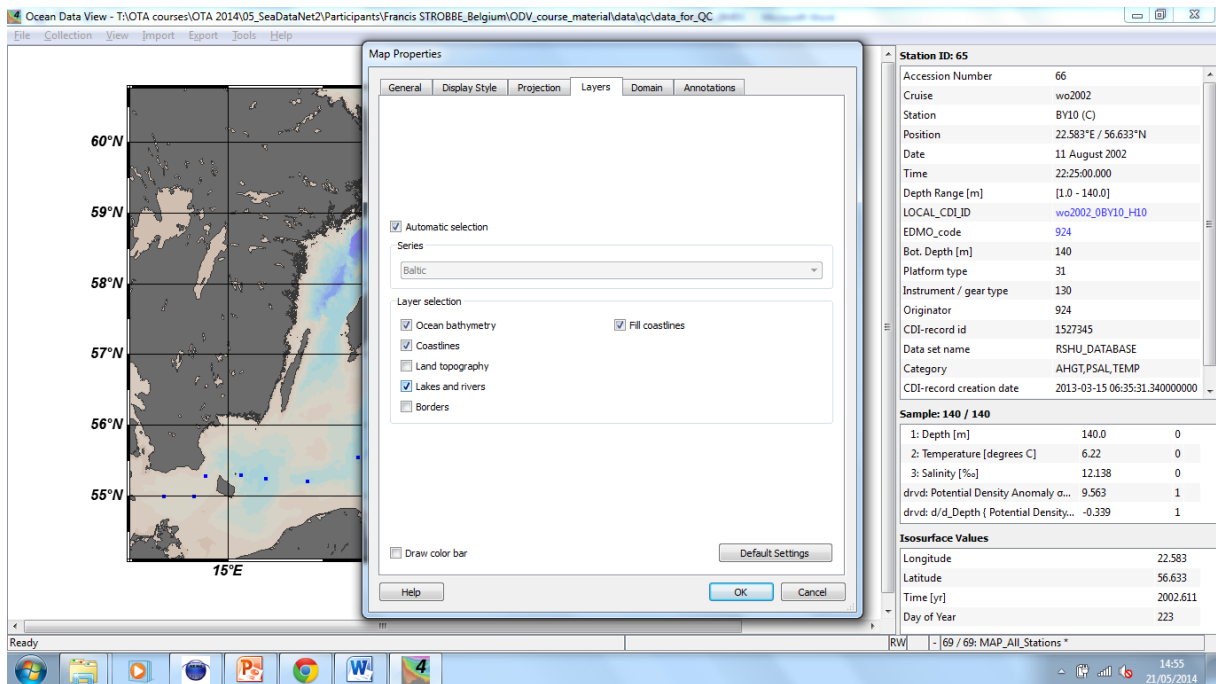
LAND POINT LOOKS WEIRD



CLICK ON THAT POINT, CHECK DATA: 140m below surface, should probably be no river....



But add rivers LAYER



Station ID: 65

Accession Number	66
Cruise	wo2002
Station	BY10 (C)
Position	22.583°E / 56.633°N
Date	11 August 2002
Time	22:25:00.000
Depth Range [m]	[1.0 - 140.0]
LOCAL_CD_ID	wo2002_08V10_H10
EDMO_code	924
Bot. Depth [m]	140
Platform type	31
Instrument / gear type	130
Originator	924
CDI-record id	1527345
Data set name	RSHU_DATABASE
Category	AHGT,PSAL,TEMP
CDI-record creation date	2013-03-15 06:35:31.340000000

Sample: 140 / 140

1: Depth [m]	140.0	0
2: Temperature [degrees C]	6.22	0
3: Salinity [‰]	12.138	0
drvd: Potential Density Anomaly σ_t	9.563	1
drvd: d/d_Depth { Potential Density...	-0.339	1

Isosurface Values

Longitude	22.583
Latitude	56.633
Time [yr]	2002.611
Day of Year	223

Station ID: 65

Accession Number	66
Cruise	wo2002
Station	BY10 (C)
Position	22.583°E / 56.633°N
Date	11 August 2002
Time	22:25:00.000
Depth Range [m]	[1.0 - 140.0]
LOCAL_CD_ID	wo2002_08V10_H10
EDMO_code	924
Bot. Depth [m]	140
Platform type	
Instrument / gear type	
Originator	
CDI-record id	
Data set name	
Category	AHGT,PSAL,TEMP
CDI-record creation date	2013-03-15 06:35:31.340000000

Sample: 140 / 140

1: Depth [m]	140.0	0
2: Temperature [degrees C]	6.22	0
3: Salinity [‰]	12.138	0
drvd: Potential Density Anomaly σ_t	9.563	1
drvd: d/d_Depth { Potential Density...	-0.339	1

Isosurface Values

Longitude	22.583
Latitude	56.633
Time [yr]	2002.611
Day of Year	223

Edit Station Metadata

Field	Value
Cruise	wo2002
Station	BY10
Type	C
Longitude [degrees_east]	22.583
Latitude [degrees_north]	56.633
Year	2002
Month	8
Day	11
Hour	22
Minute	25
Second	0
LOCAL_CDI_ID	wo2002_0BY10_H10
EDMO_code	924

Station ID: 65

Accession Number	66
Cruise	wo2002
Station	BY10 (C)
Position	22.583°E / 56.633°N
Date	11 August 2002
Time	22:25:00.000
Depth Range [m]	[1.0 - 140.0]
LOCAL_CDI_ID	wo2002_0BY10_H10
EDMO_code	924
Bot. Depth [m]	140
Platform type	31
Instrument / gear type	130
Originator	924
CDI-record id	1527345
Data set name	RSHU_DATABASE
Category	AHGT,PSAL,TEMP
CDI-record creation date	2013-03-15 06:35:31.340000000

Sample: 140 / 140

1: Depth [m]	140.0	0
2: Temperature [degrees C]	6.22	0
3: Salinity [‰]	12.138	0
drvd: Potential Density Anomaly σ_t	9.563	1
drvd: d/d_Depth { Potential Density...	-0.339	1

Isosurface Values

Longitude	22.583
Latitude	56.633
Time [yr]	2002.611
Day of Year	223

Edit Station Metadata

Field	Value
Cruise	wo2002
Station	BY10
Type	C
Longitude [degrees_east]	19.583
Latitude [degrees_north]	56.633
Year	2002
Month	8
Day	11
Hour	22
Minute	25
Second	0
LOCAL_CDI_ID	wo2002_0BY10_H10
EDMO_code	924

Station ID: 65

Accession Number	66
Cruise	wo2002
Station	BY10 (C)
Position	22.583°E / 56.633°N
Date	11 August 2002
Time	22:25:00.000
Depth Range [m]	[1.0 - 140.0]
LOCAL_CDI_ID	wo2002_0BY10_H10
EDMO_code	924
Bot. Depth [m]	140
Platform type	31
Instrument / gear type	130
Originator	924
CDI-record id	1527345
Data set name	RSHU_DATABASE
Category	AHGT,PSAL,TEMP
CDI-record creation date	2013-03-15 06:35:31.340000000

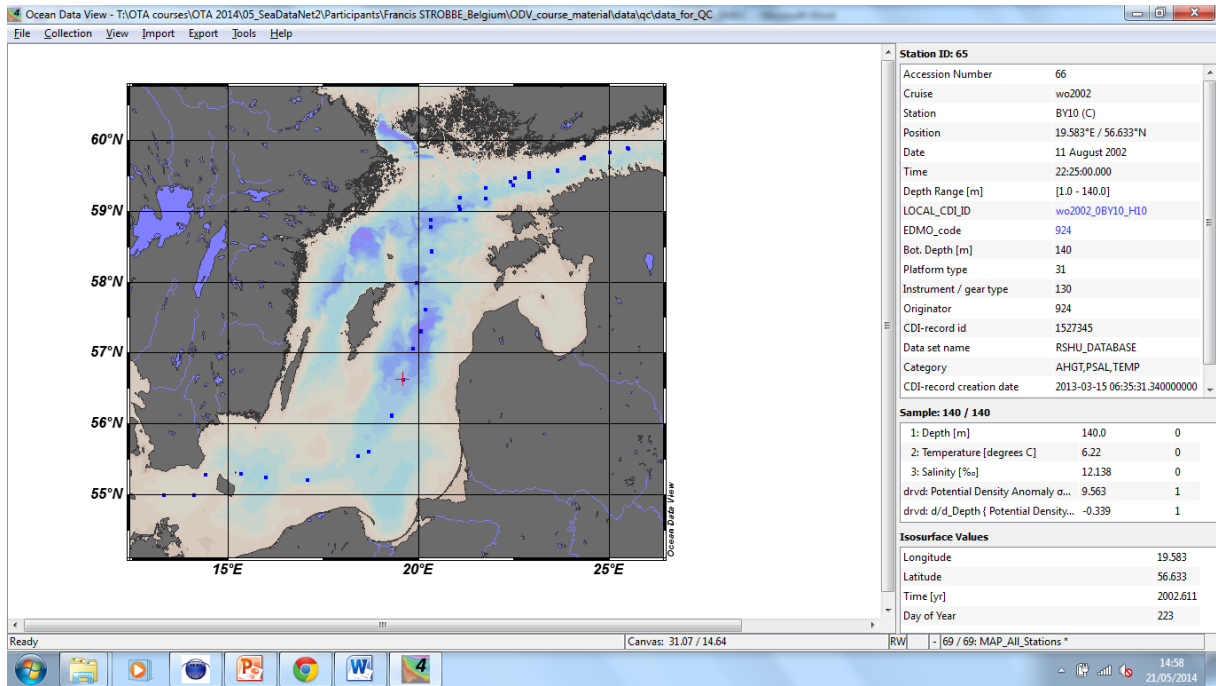
Sample: 140 / 140

1: Depth [m]	140.0	0
2: Temperature [degrees C]	6.22	0
3: Salinity [‰]	12.138	0
drvd: Potential Density Anomaly σ_t	9.563	1
drvd: d/d_Depth { Potential Density...	-0.339	1

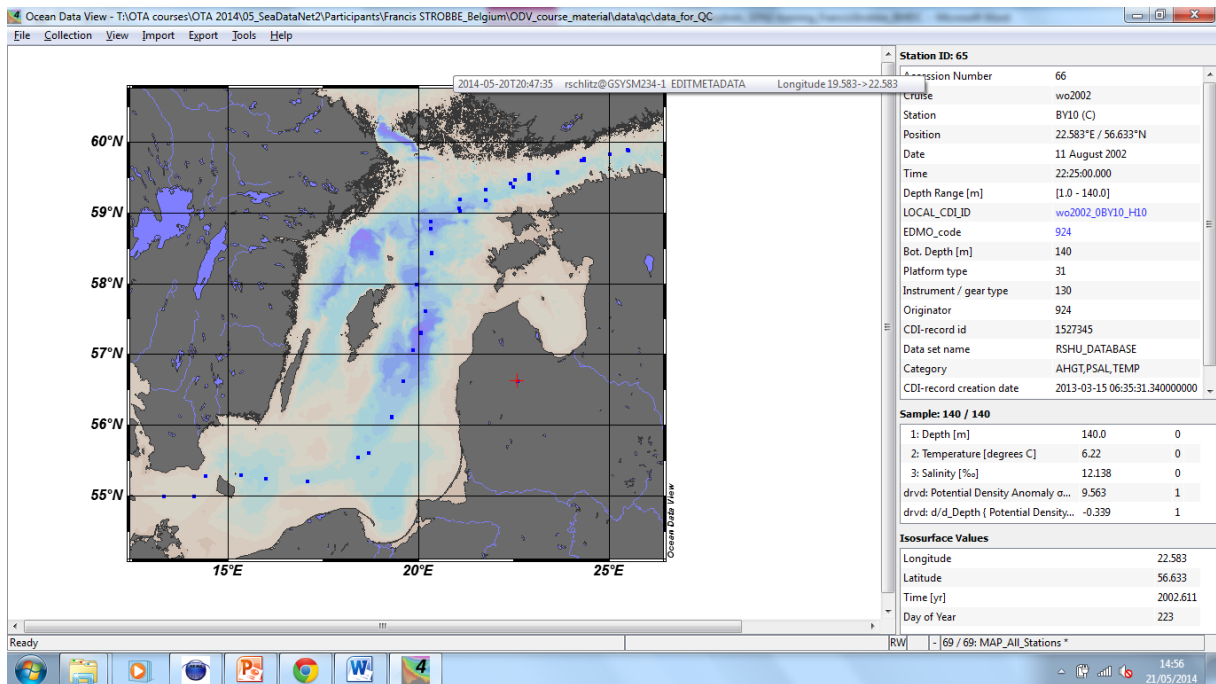
Isosurface Values

Longitude	22.583
Latitude	56.633
Time [yr]	2002.611
Day of Year	223

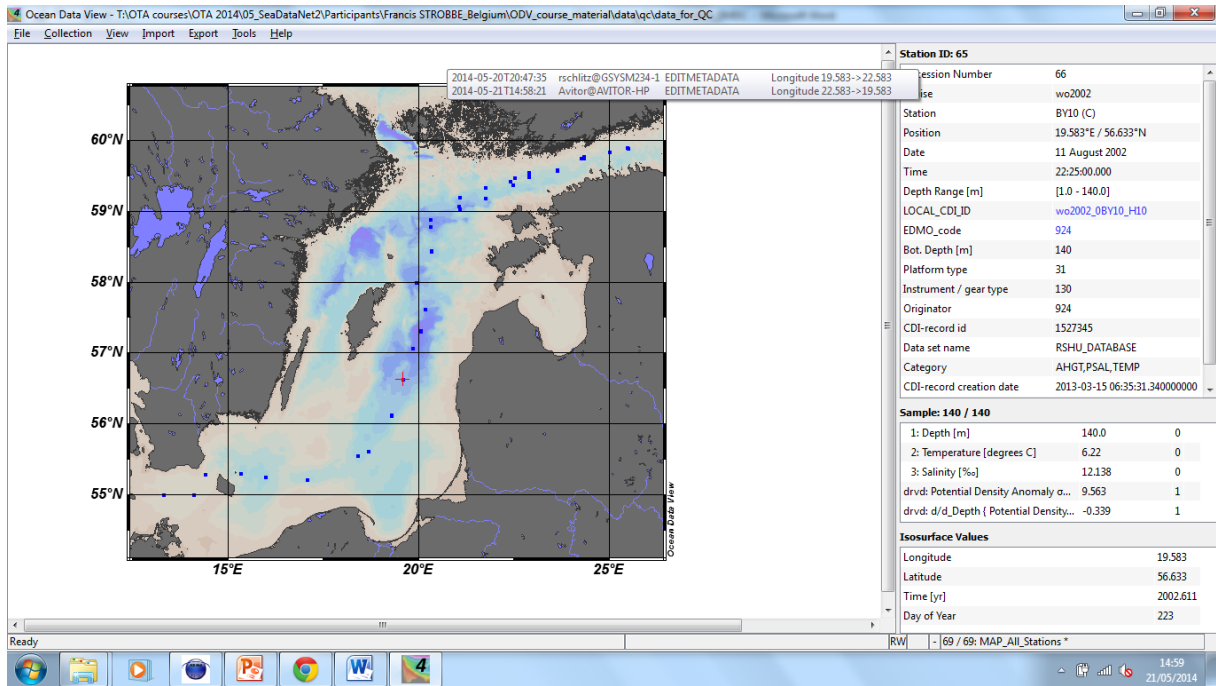
Change the longitude



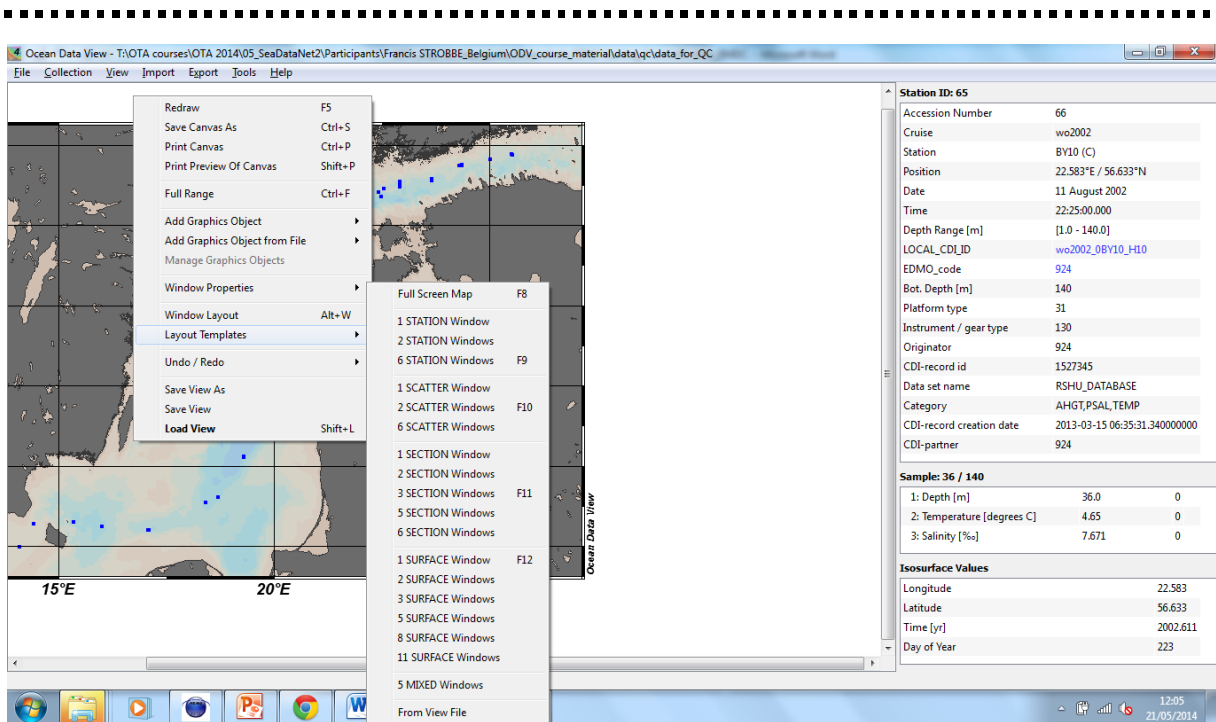
Point is (back) in the sea!



Actually, when you hover over the station, you saw the longitude was changed...

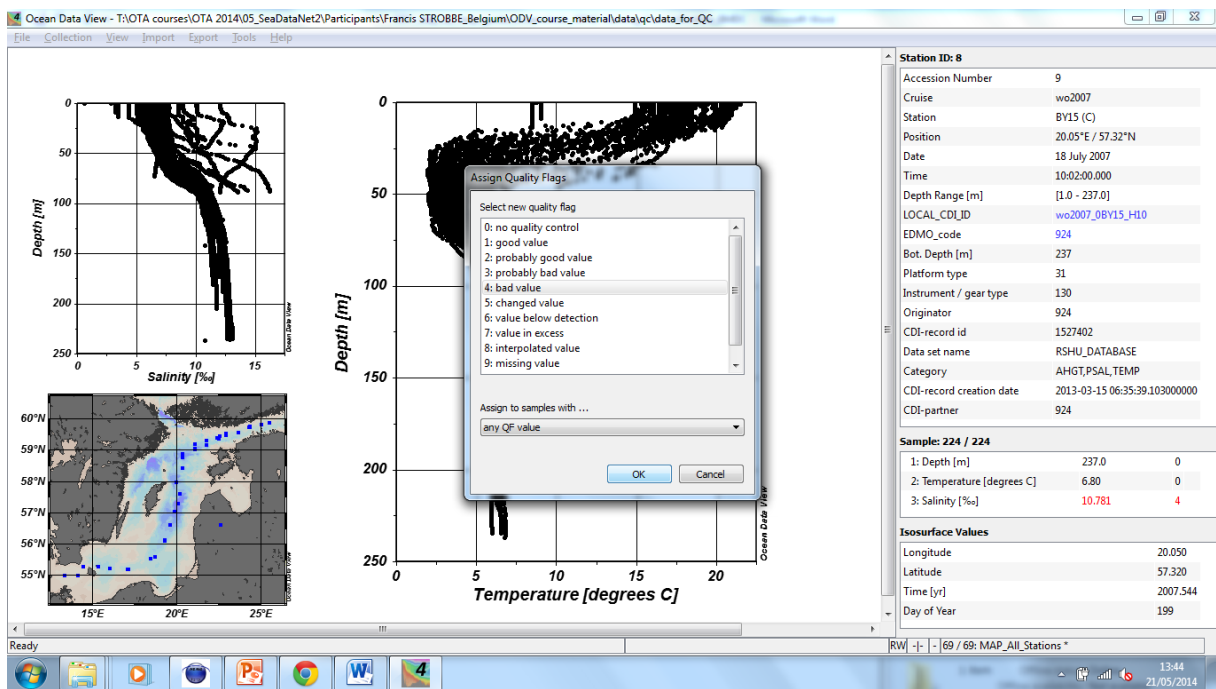
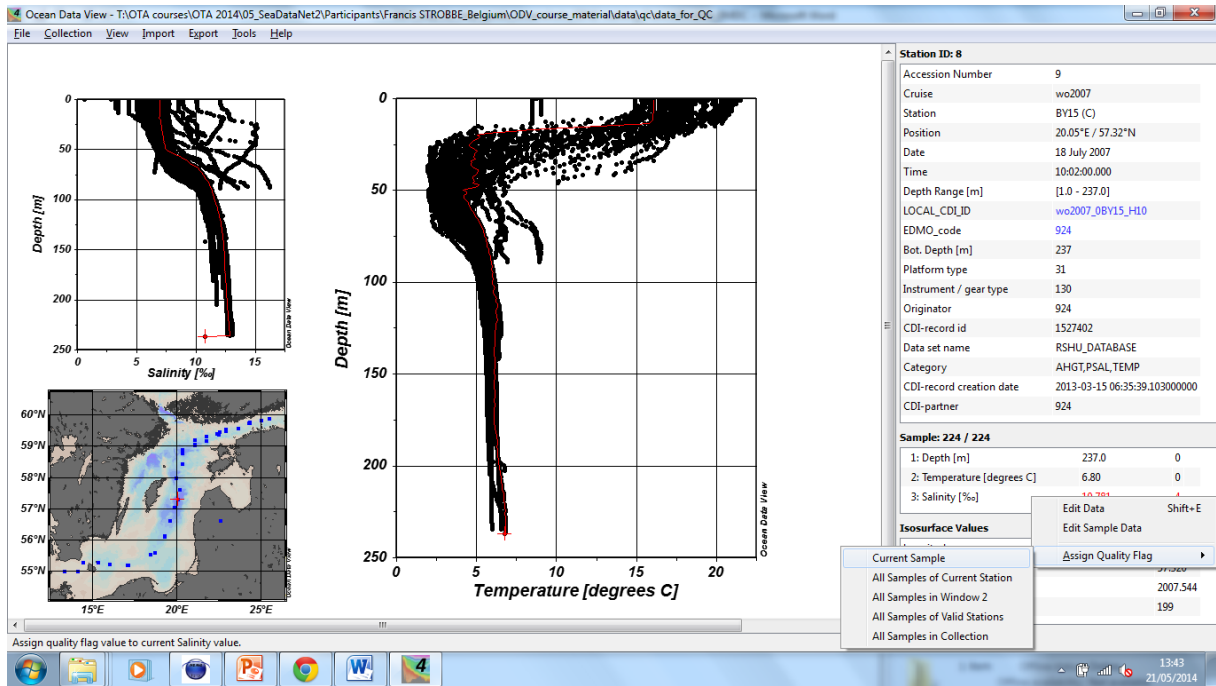


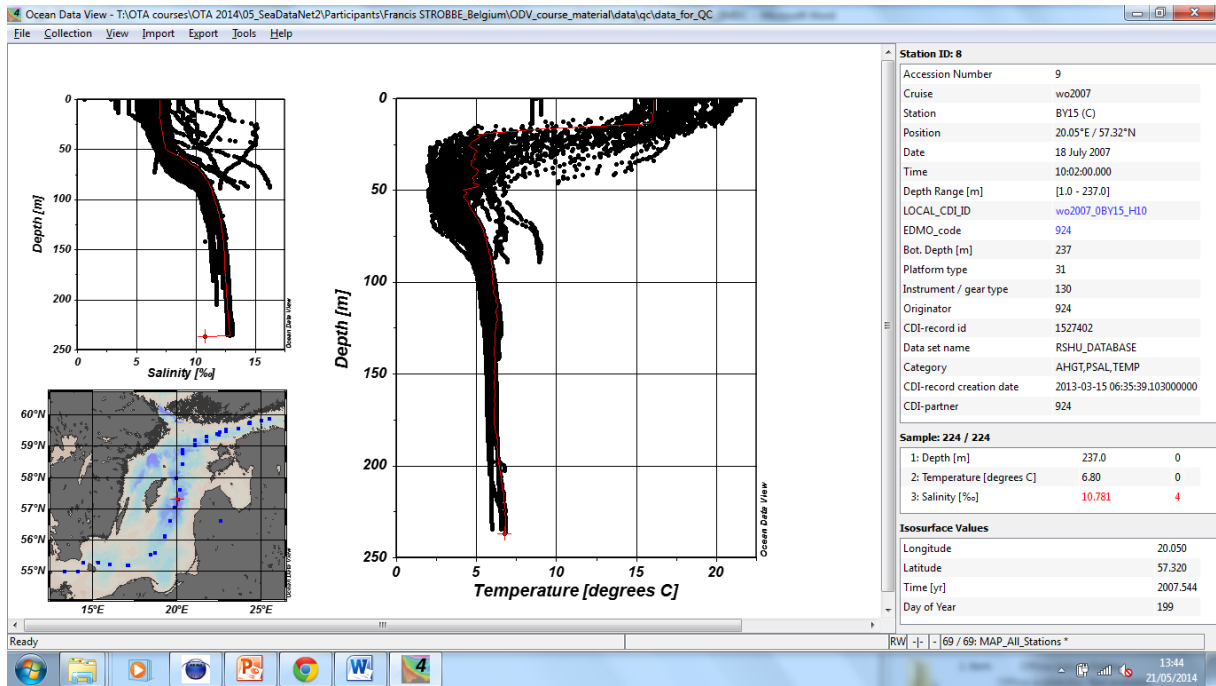
And now it changed back to its correct position



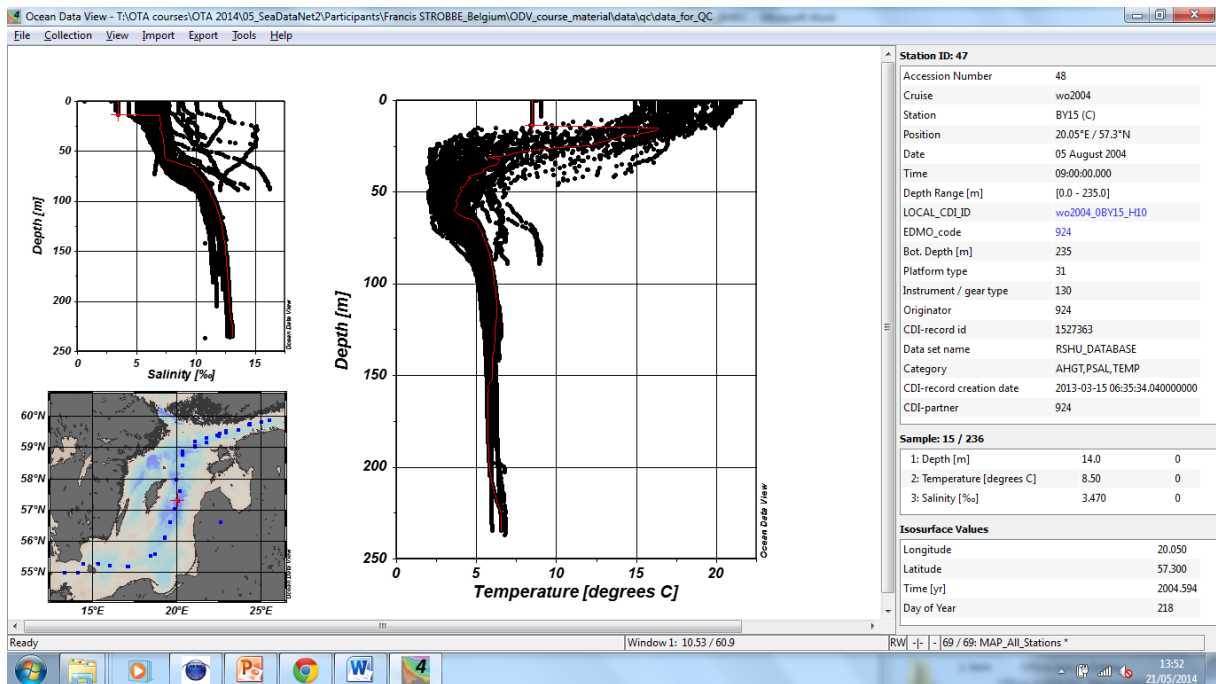
Right click on white background, to get layout windows OR

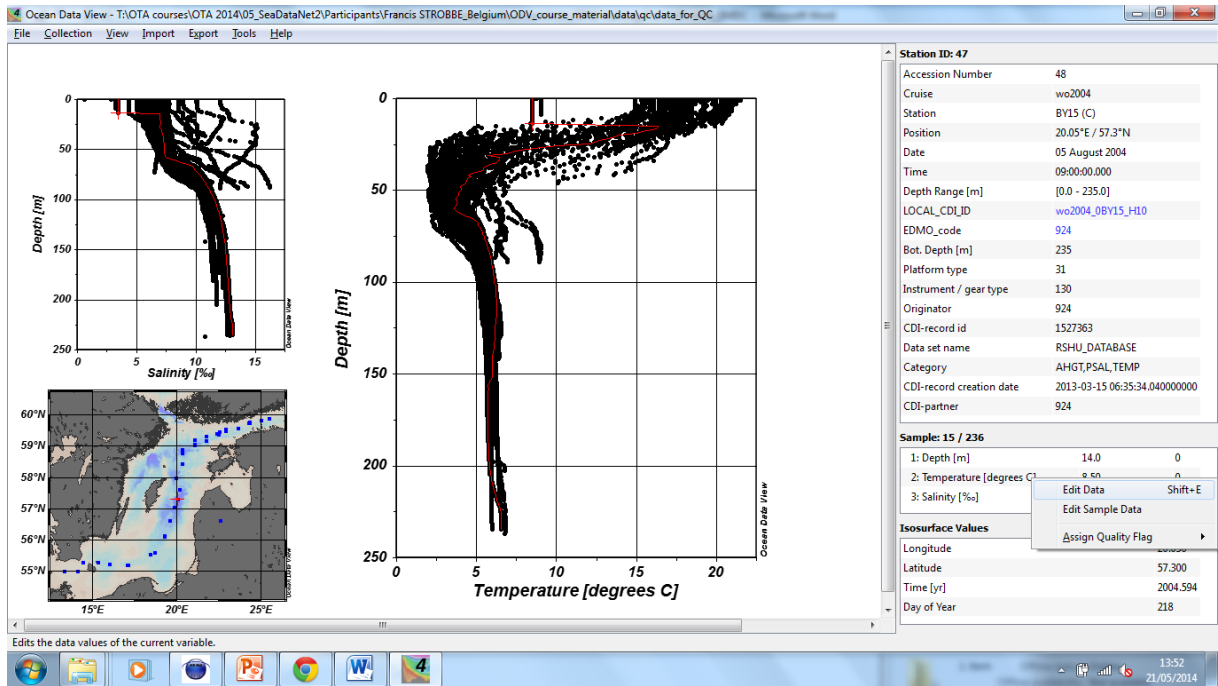
Use F8 – F9 – F10 – F11 FUNCTION BUTTONS to quickly change between views



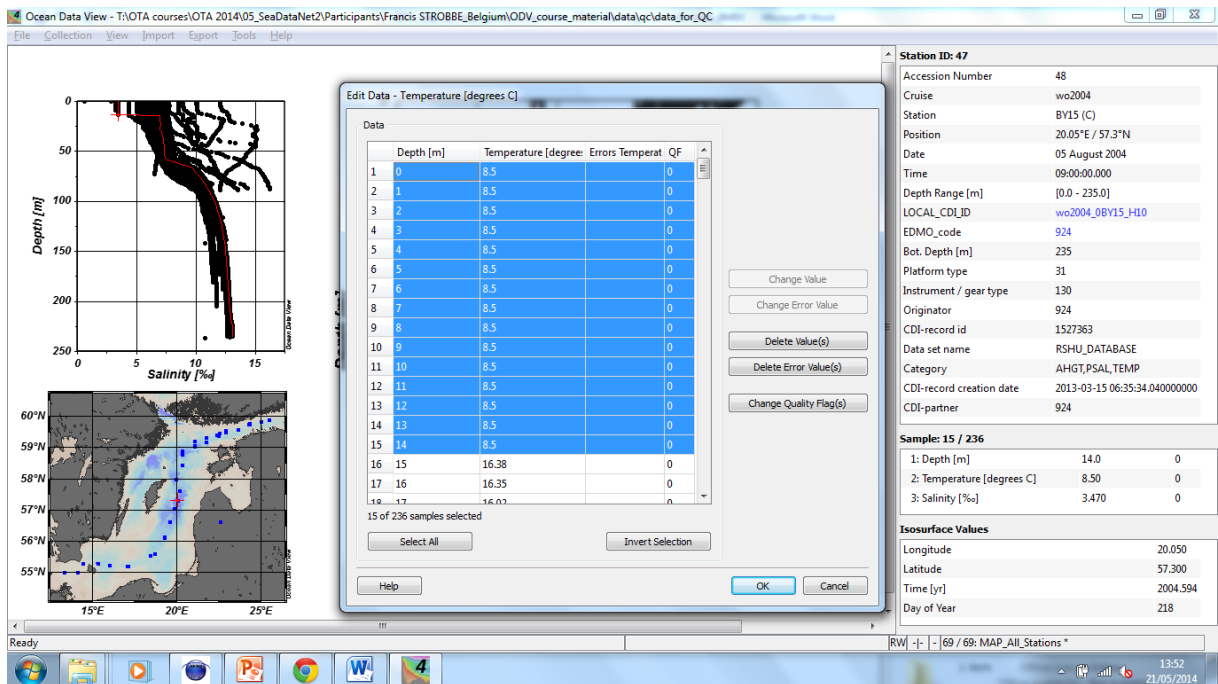


Flag and NOT DELETE a value





ALSO for a lot of point in a series (use arrows up and down)

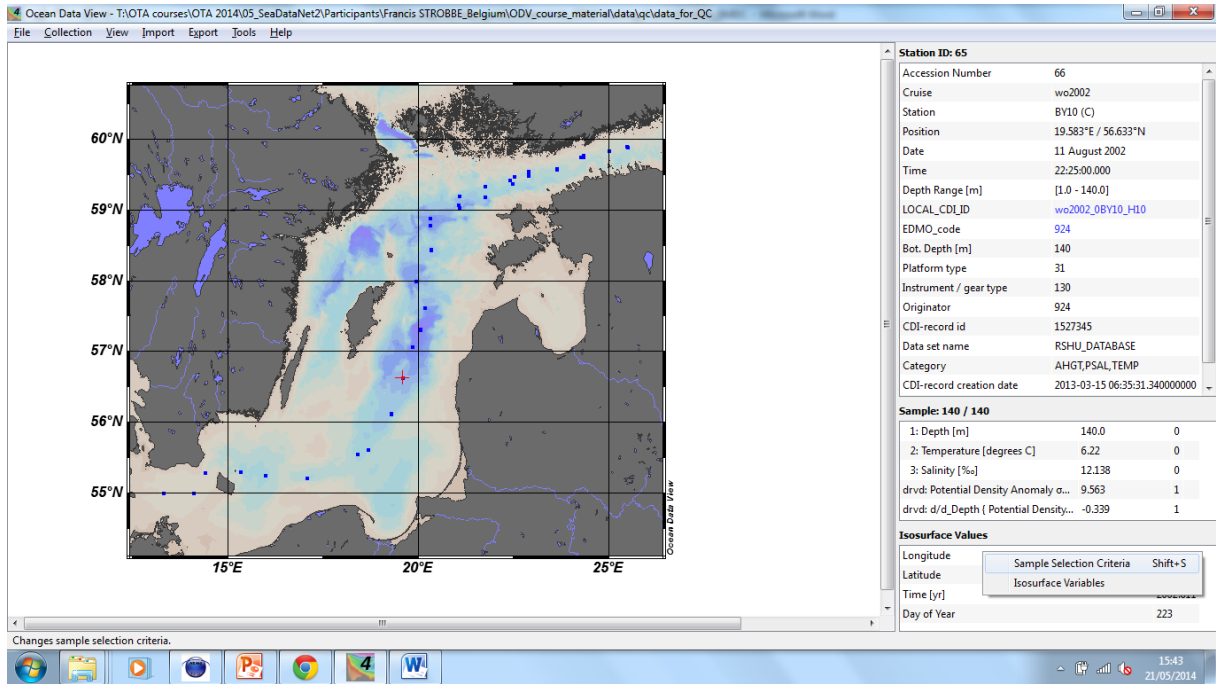


Sample selection criteria

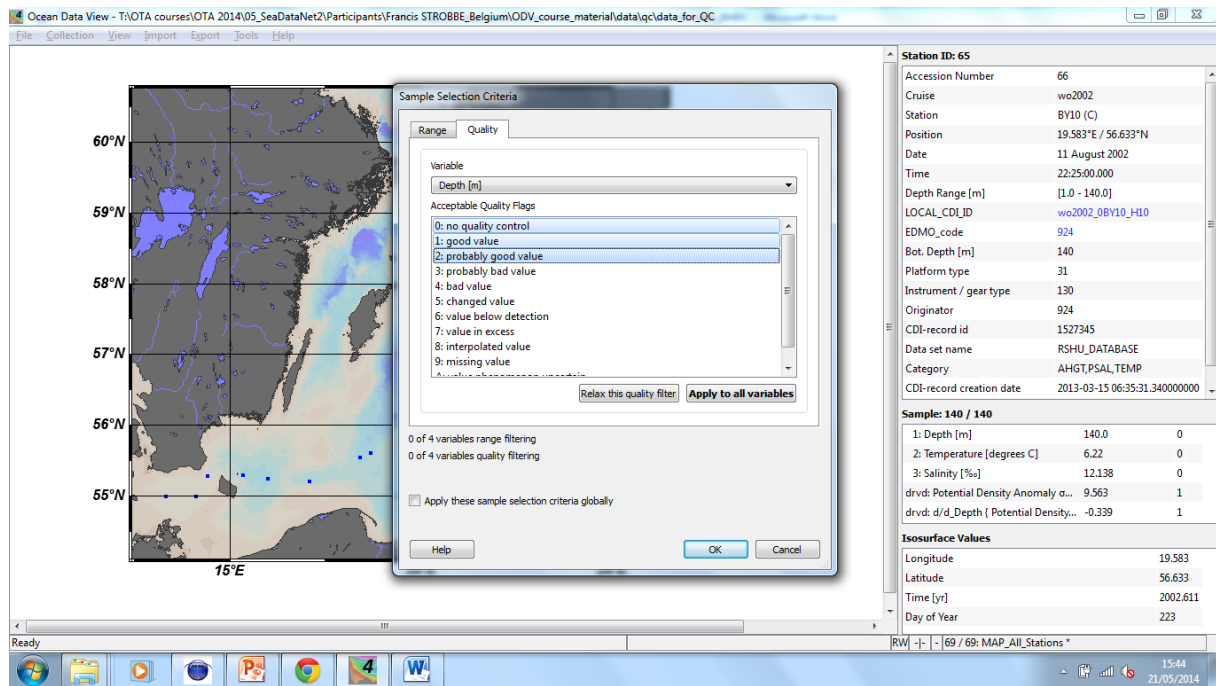
The screenshot shows the Ocean Data View interface. On the left, there are two plots: a vertical profile of Salinity [%] vs Depth [m] (0 to 250 m) and a map of the study area (55°N to 60°N, 15°E to 25°E). In the center, an 'Edit Data - Temperature [degrees C]' dialog box is open, with the 'Edit Quality Flags' sub-dialog active. This dialog lists 15 data points and offers quality flags from 0 (no quality control) to 9 (missing value), plus an 'A' flag for uncertain phenomena. The '4: bad value' flag is selected. On the right, a 'Station ID: 47' panel displays metadata for station BY15 (C) on 05 August 2004, including depth range [0.0 - 235.0] and sample data for Depth [m], Temperature [degrees C], and Salinity [%].

This screenshot shows the same Ocean Data View interface but with the Temperature [degrees C] vs Depth [m] profile plot displayed. The 'Edit Quality Flags' dialog box remains open, showing the same 15 data points and quality flag options. The '4: bad value' flag is still selected. The 'Station ID: 47' panel on the right is also visible, showing the same station metadata and sample data as in the previous screenshot.

Quality filter

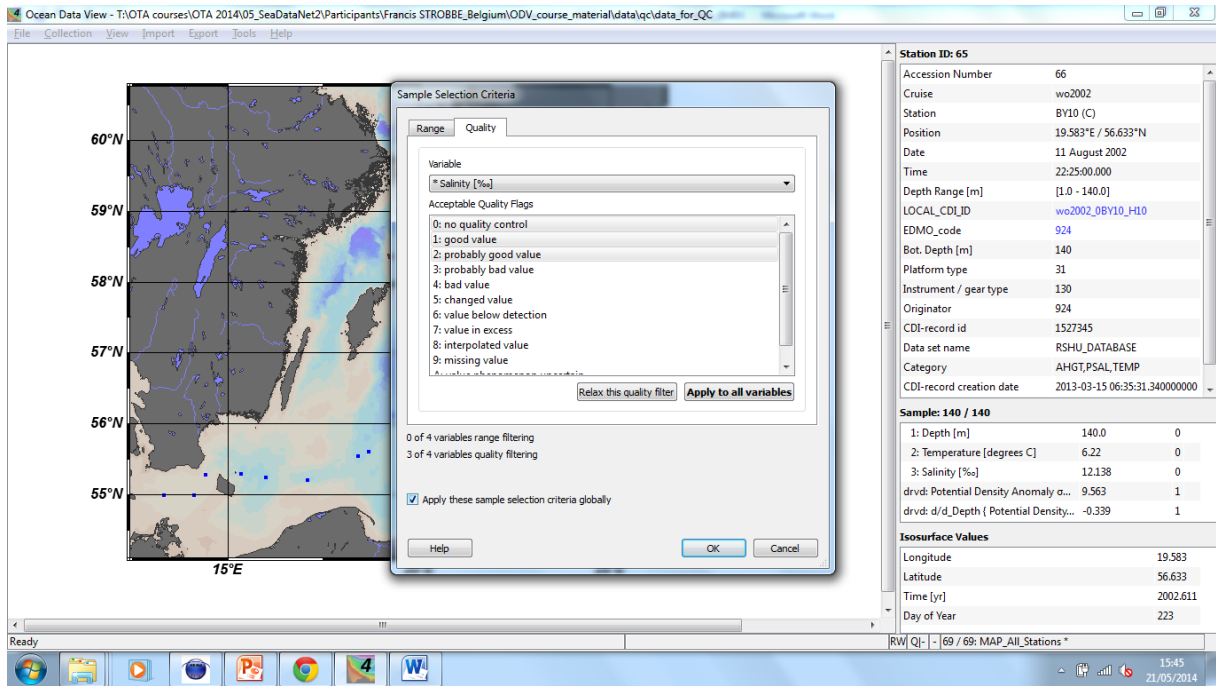


quality filter

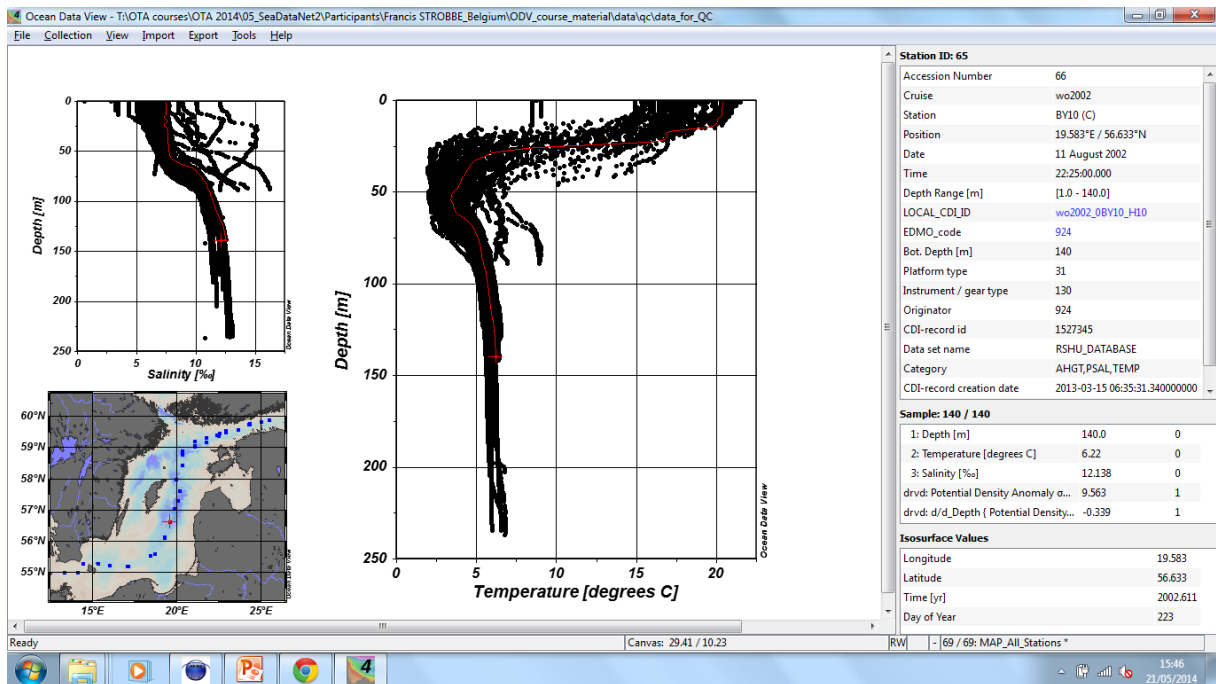


Select: No quality control – Good Value – Probably good value

Apply to all filters



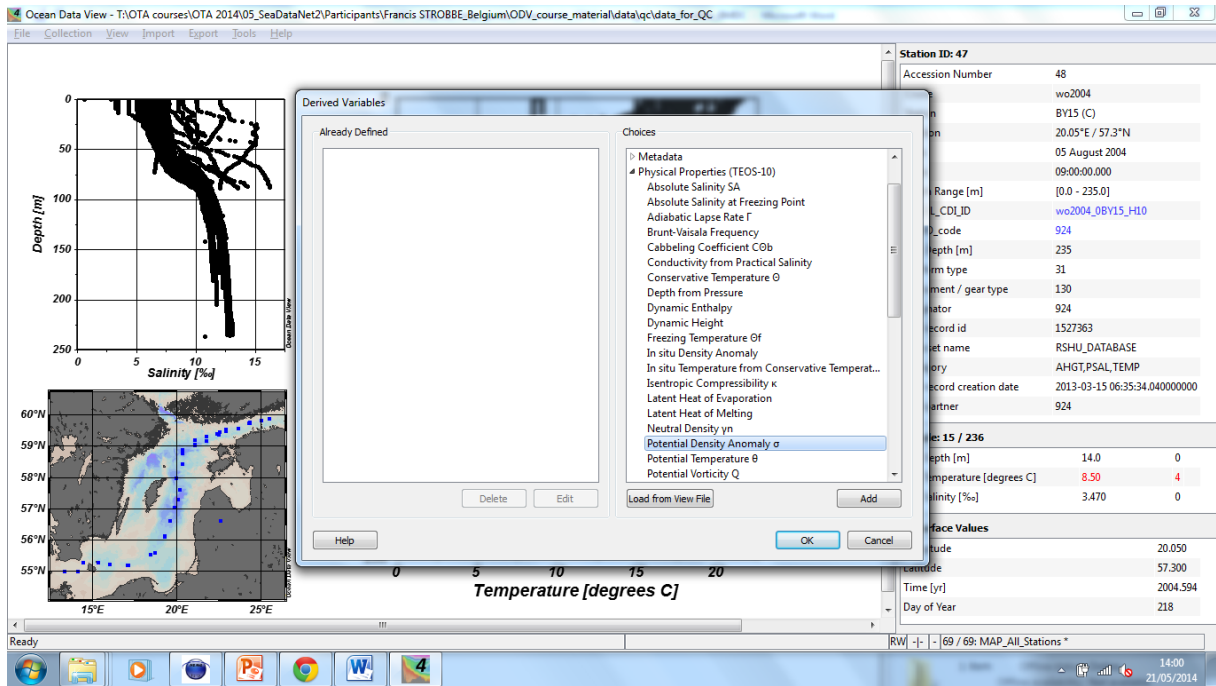
Extra: use filter for other markers!



So: on the map outliers no longer shown, ones that looked wrong also no longer shown

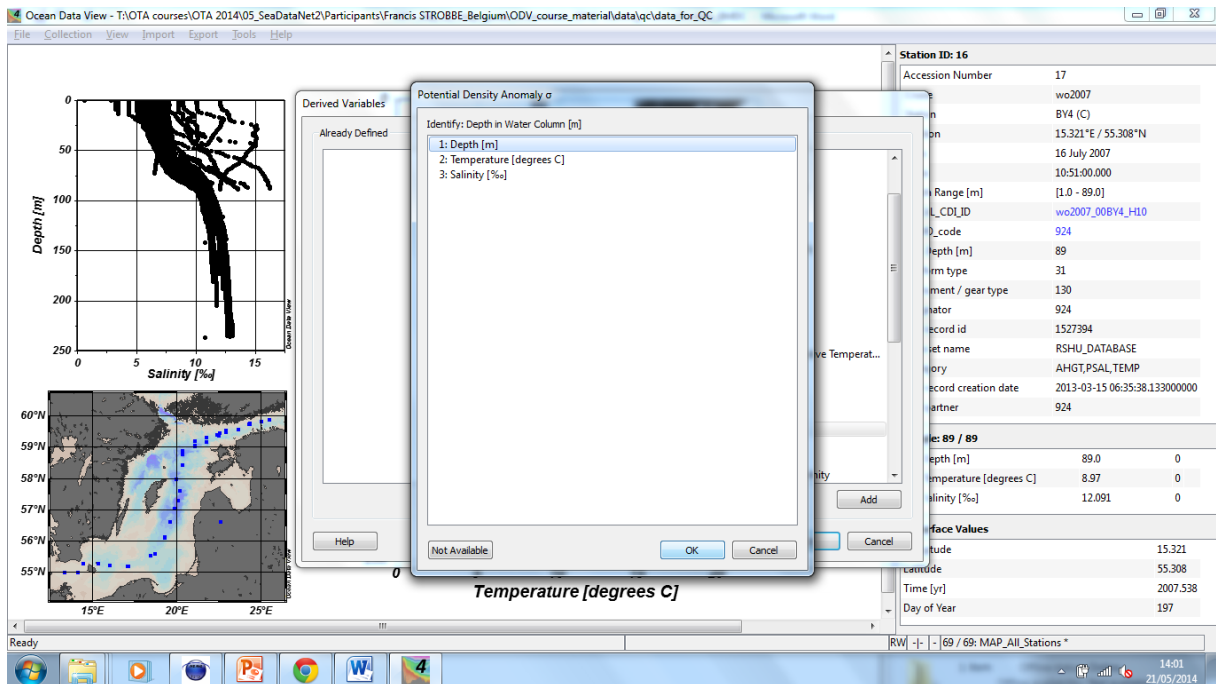
Other methods for QC

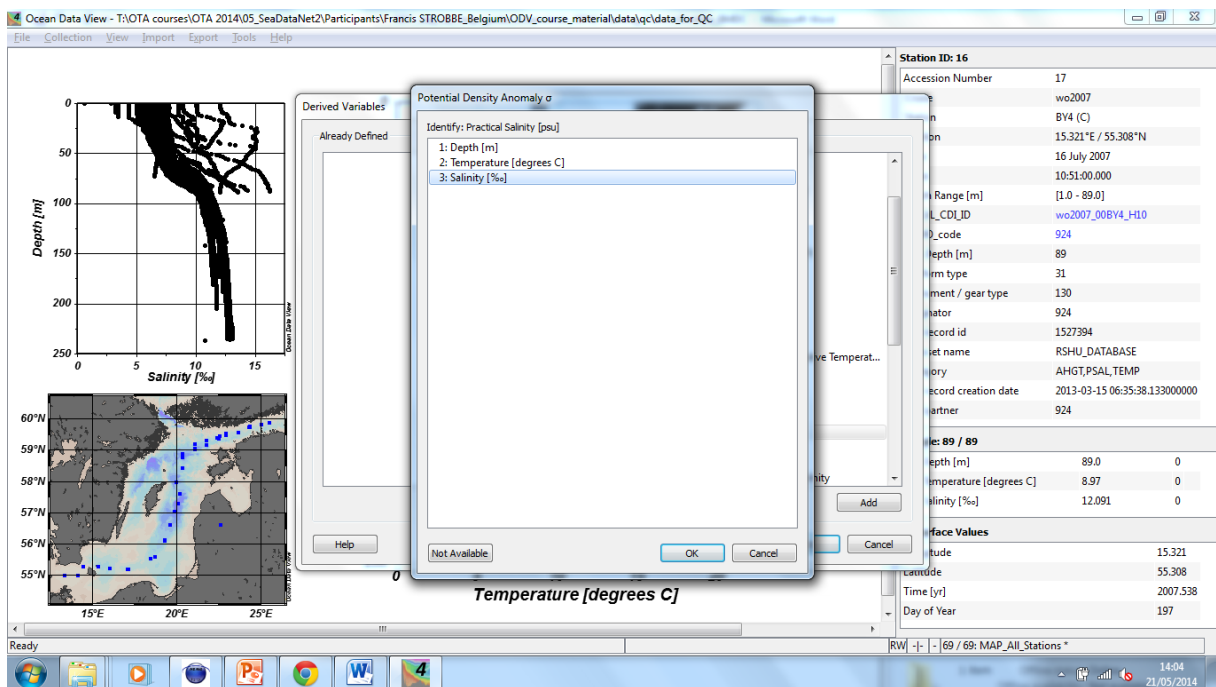
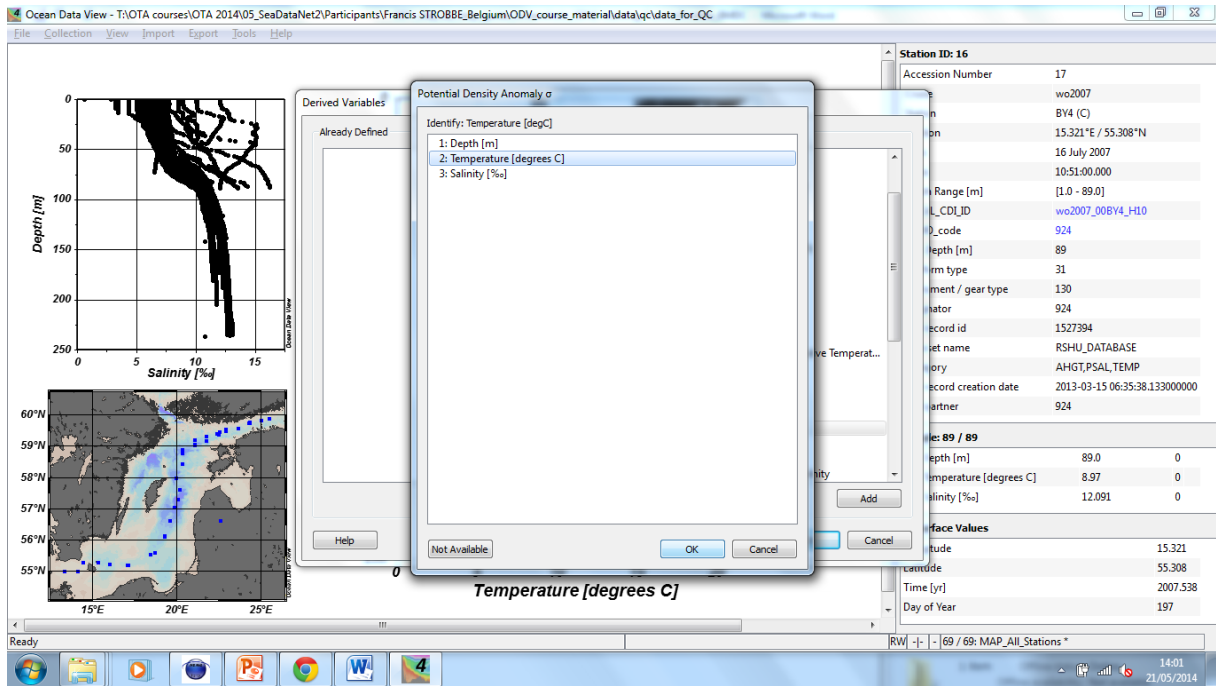
No qc complete is you haven't looked at density



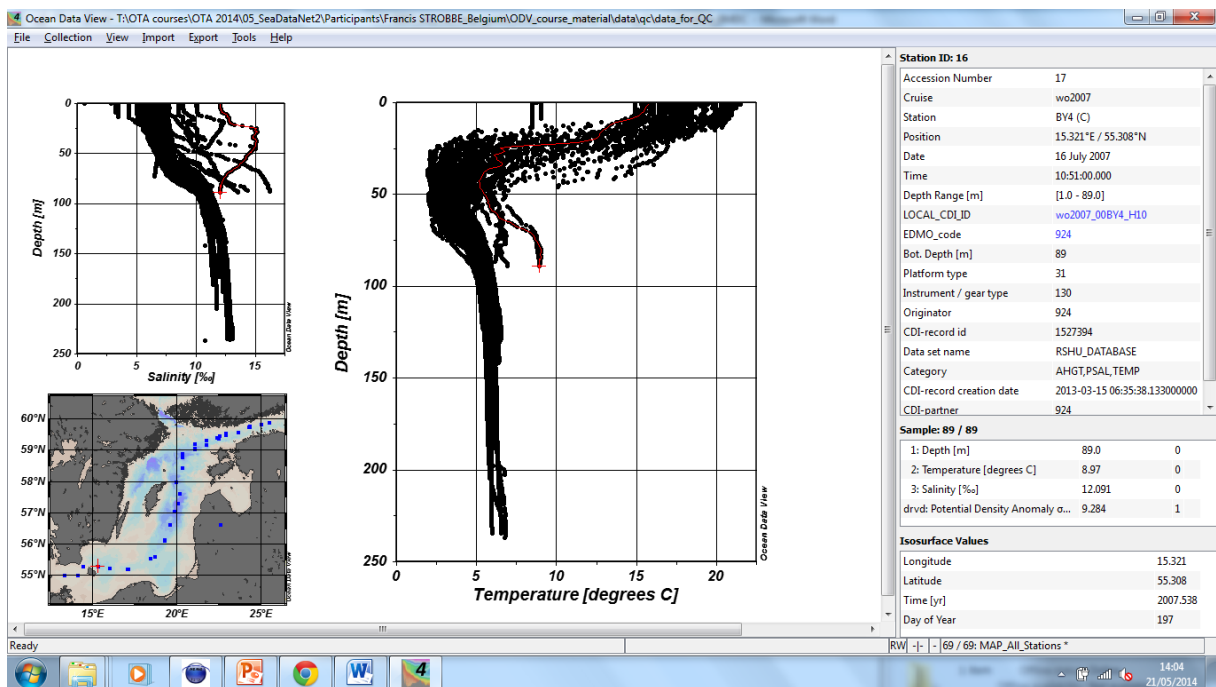
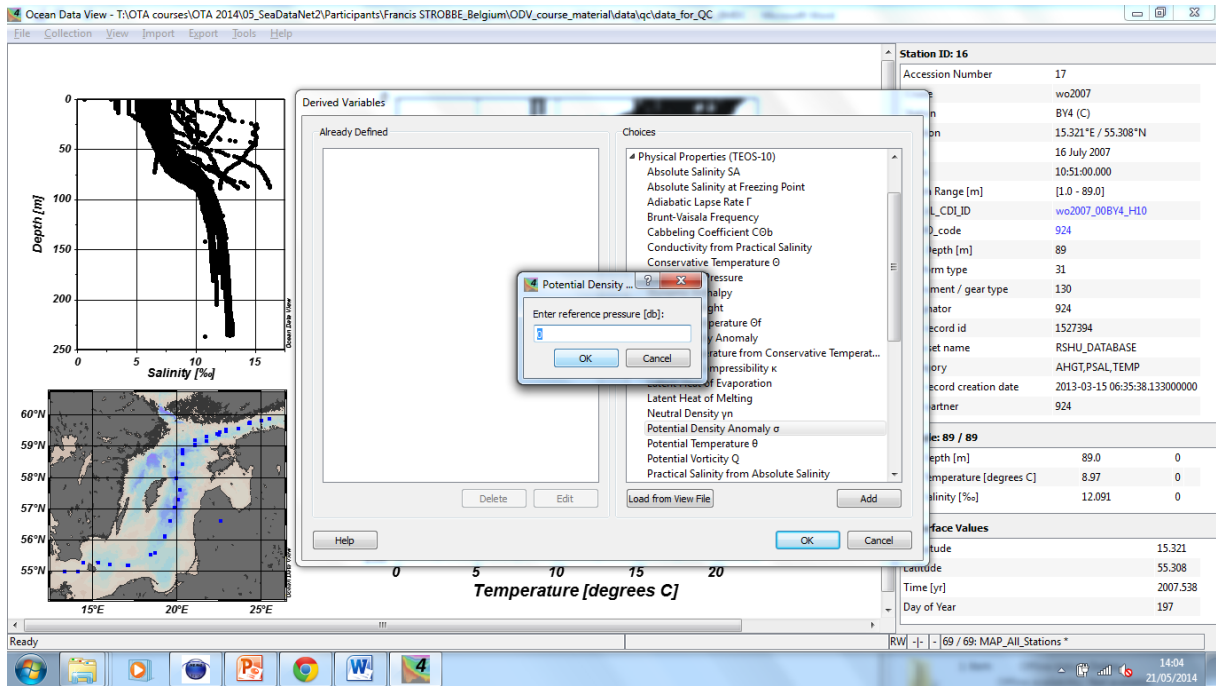
Look at density inversion, density increases with depth (LAW)

Density is a derived variable

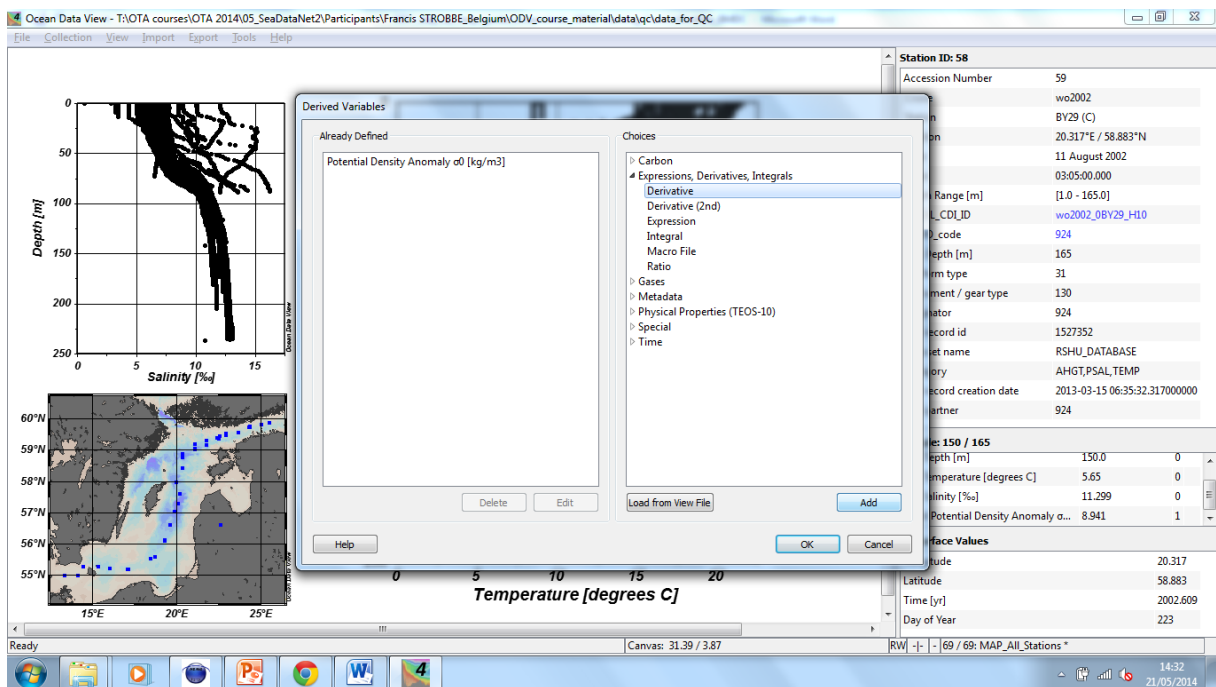
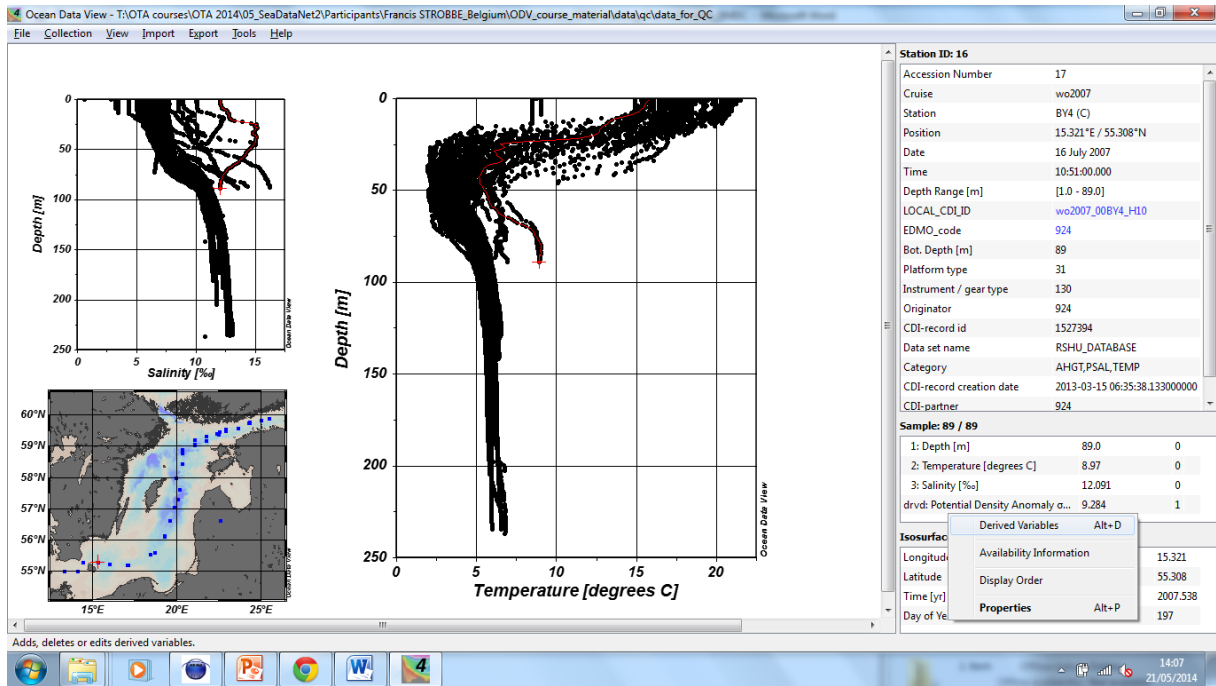




Select depth, temperature, salinity (TRIVIAL, click once, will never ask again)



Added: drdv:Potential Density Anomaly...



The screenshot shows the Ocean Data View interface. On the left, there are two plots: a vertical profile of Salinity [%] vs Depth [m] (0 to 250m) and a map of the North Atlantic region (55°N to 60°N, 15°E to 25°E) with data points. The main window displays a 'Temperature [degrees C]' plot. A 'Derivative' dialog box is open, showing the following content:

Identify: Variable to be differentiated

- 1: Depth [m]
- 2: Temperature [degrees C]
- 3: Salinity [‰]

drvd: Potential Density Anomaly σ_θ [kg/m³]

Buttons: Help, Not Available, OK, Cancel

The screenshot shows the Ocean Data View interface with the 'Derived Variables' dialog box open. The 'Already Defined' list contains:

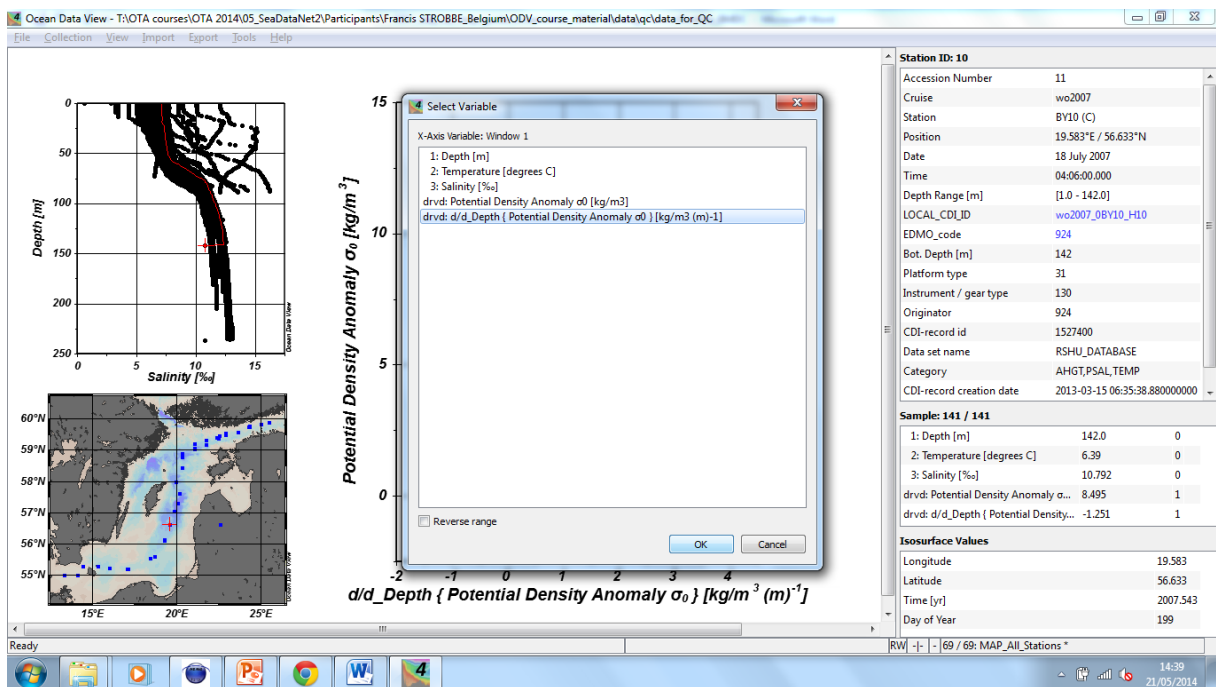
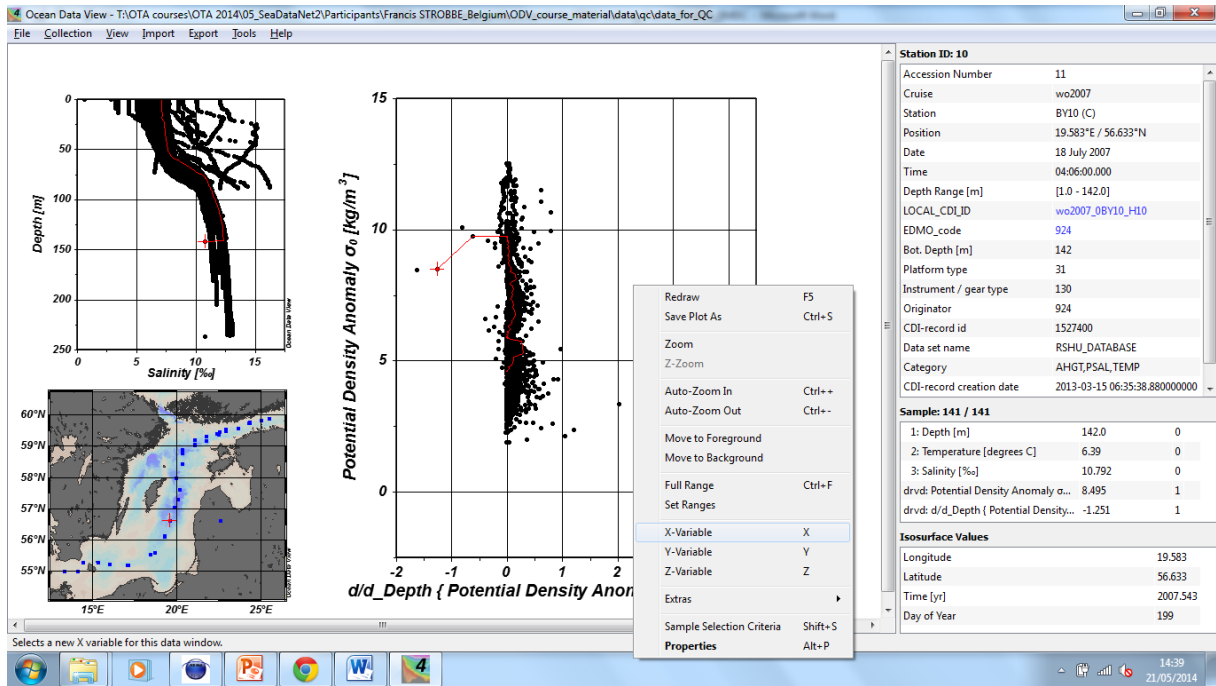
- Potential Density Anomaly σ_θ [kg/m³]
- d/d_Depth (Potential Density Anomaly σ_θ) [kg/m³ (m)-1]

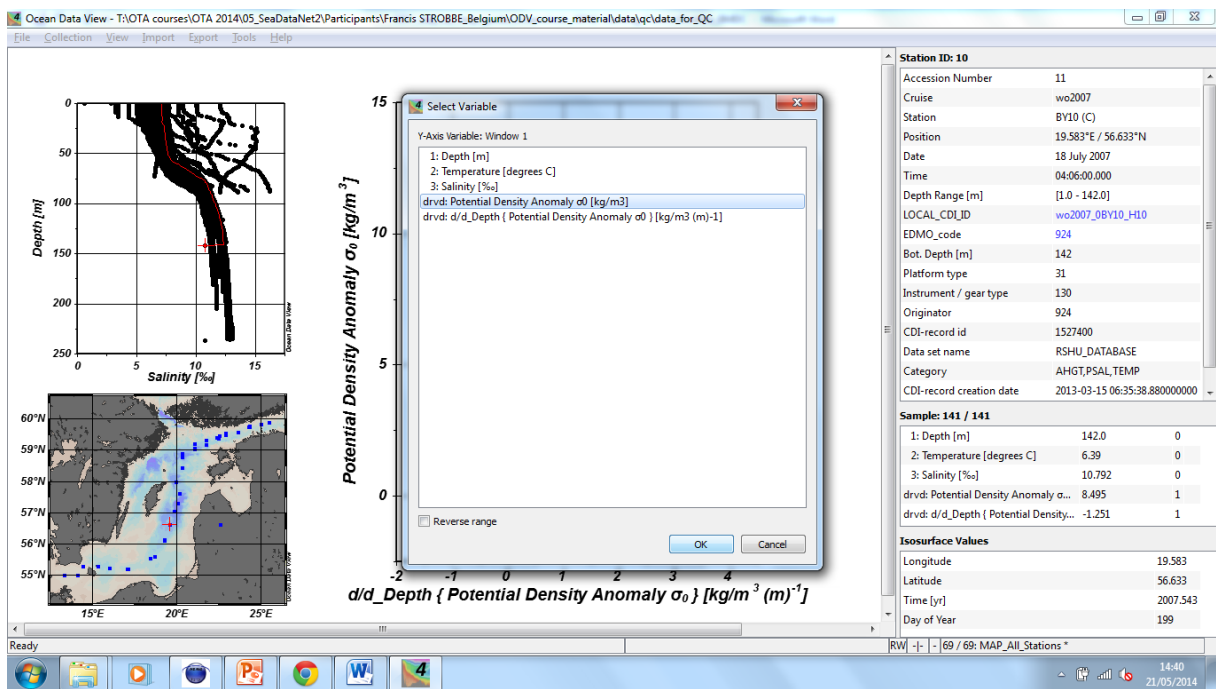
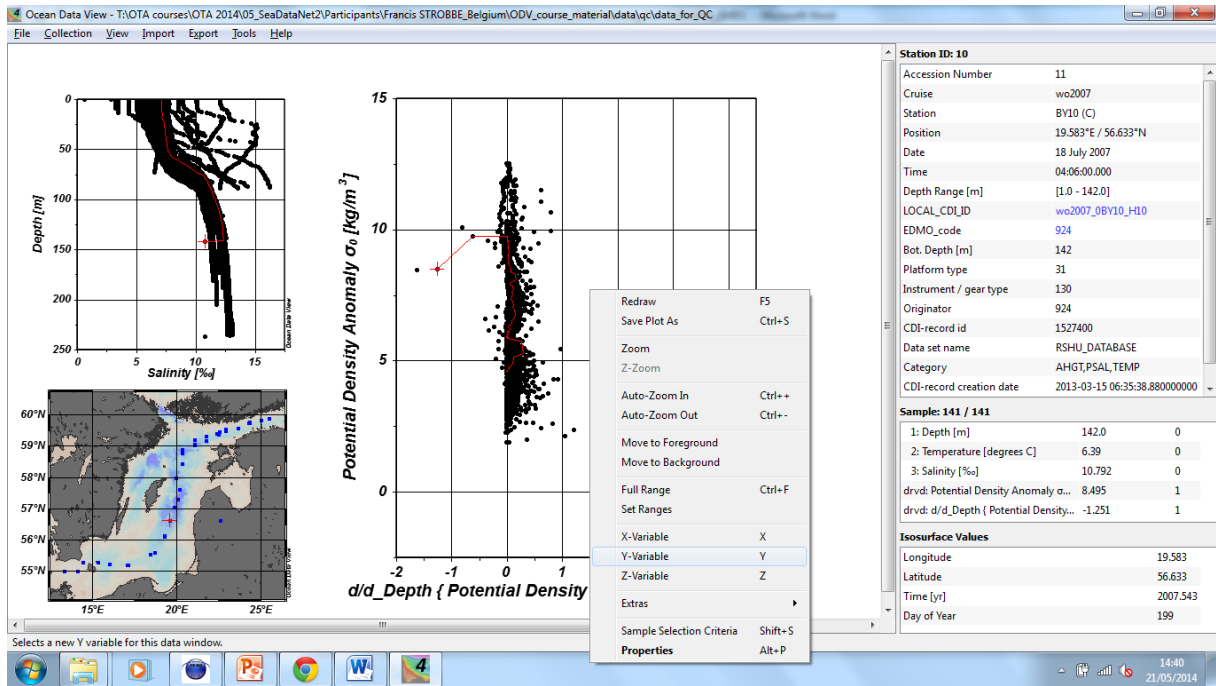
The 'Choices' list includes:

- Carbon
- Expressions, Derivatives, Integrals
- Derivative
- Derivative (2nd)
- Expression
- Integral
- Macro File
- Ratio
- Gases
- Metadata
- Physical Properties (TEOS-10)
- Special
- Time

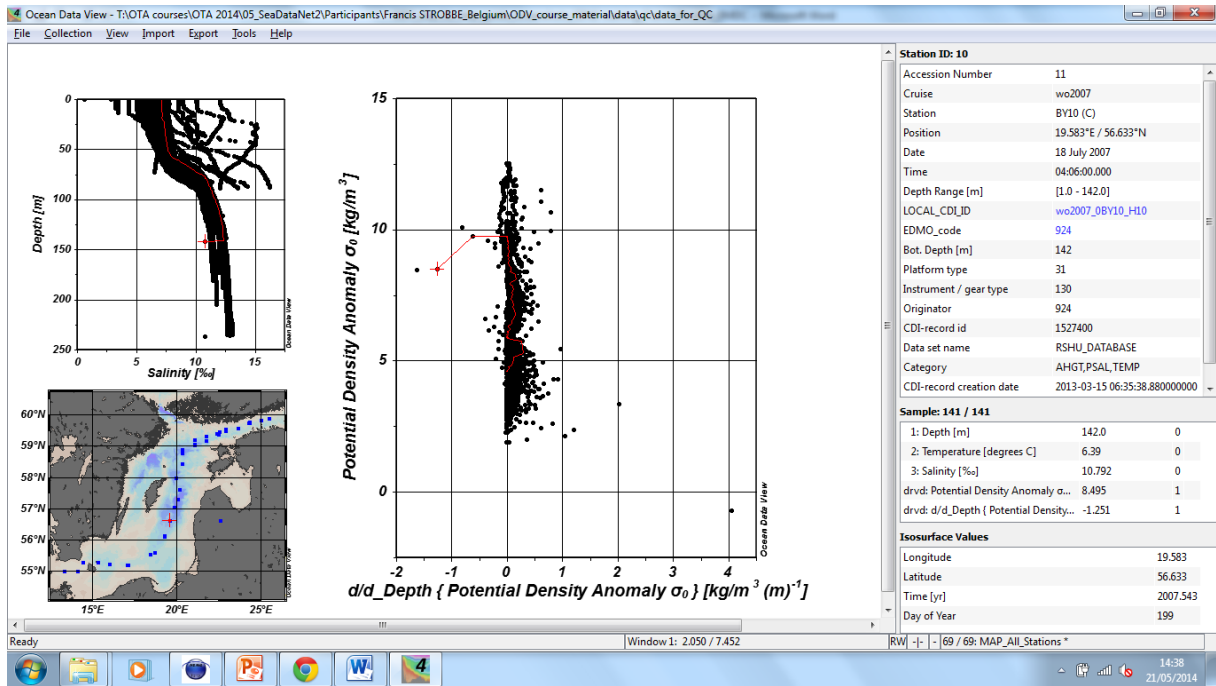
Buttons: Help, Delete, Edit, Load from View File, Add, OK, Cancel

Add inversed drvd : d/d_Depth...



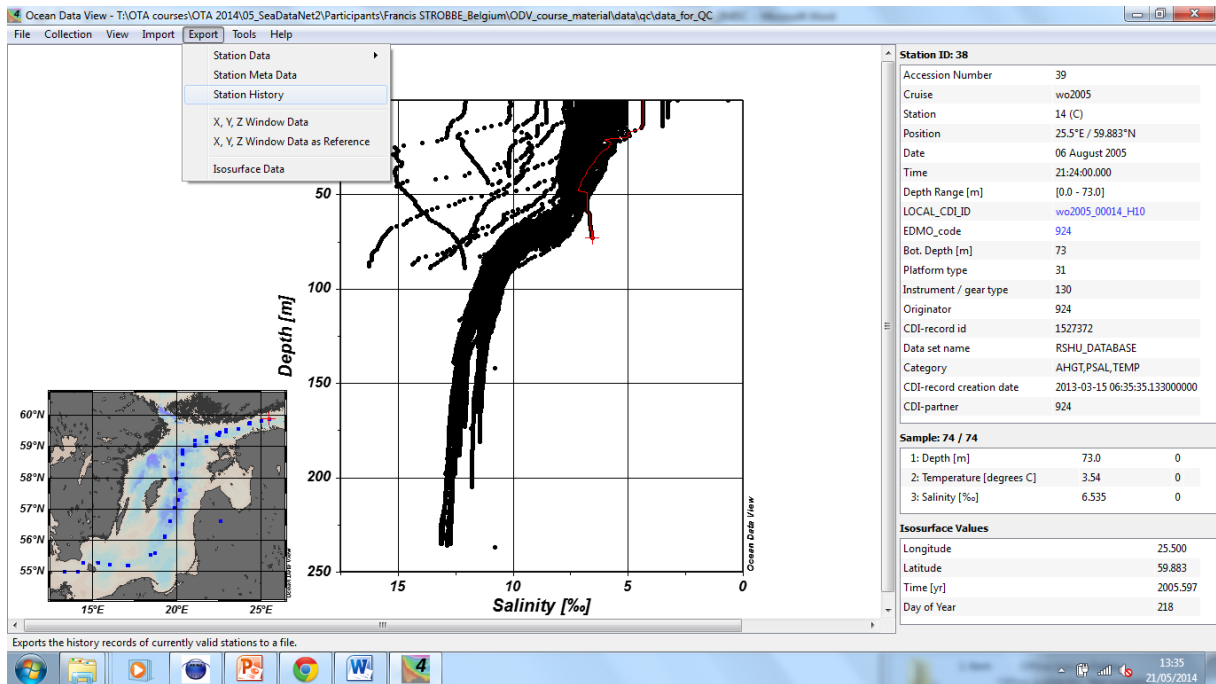


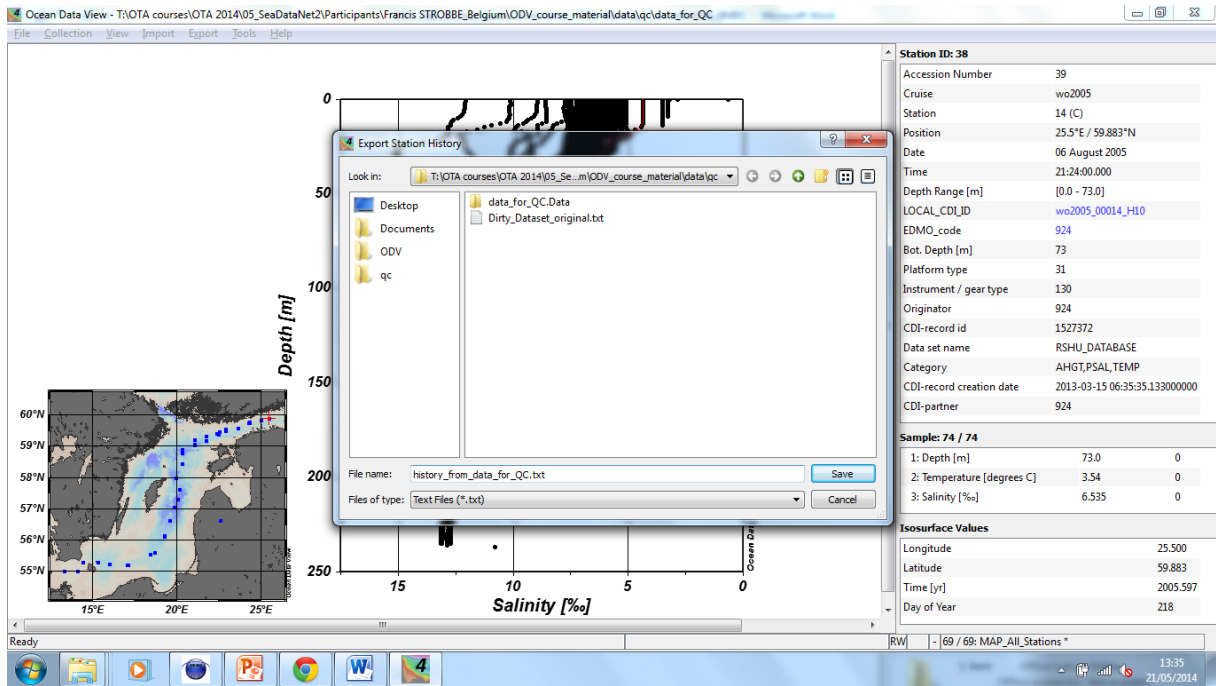
Create depth over $d>d_{\text{depth}}$ plot and look at the result.



NEGATIVES will be wrong somewhere!

Get all the log messages out





Export → station history → save as → all log history will be saved on a .text file