



SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT

Seadatanet II – Atlantic Ocean Aggregated dataset

Christine Coatanoan





SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT



Aggregated dataset – North Atlantic

	West	East	North	South
Arctic	-180	180	90	60
South West Shelf	-50	9	60	19
Baltic	31	8	66	53
Black Sea	42	26	47.5	40
Mediterranea2	20	0	45.6	41
Mediterranea1	37	-5.5	41	28
North West Shelf	31.5	-45	71.5	48
Global	-180	180	90	-90

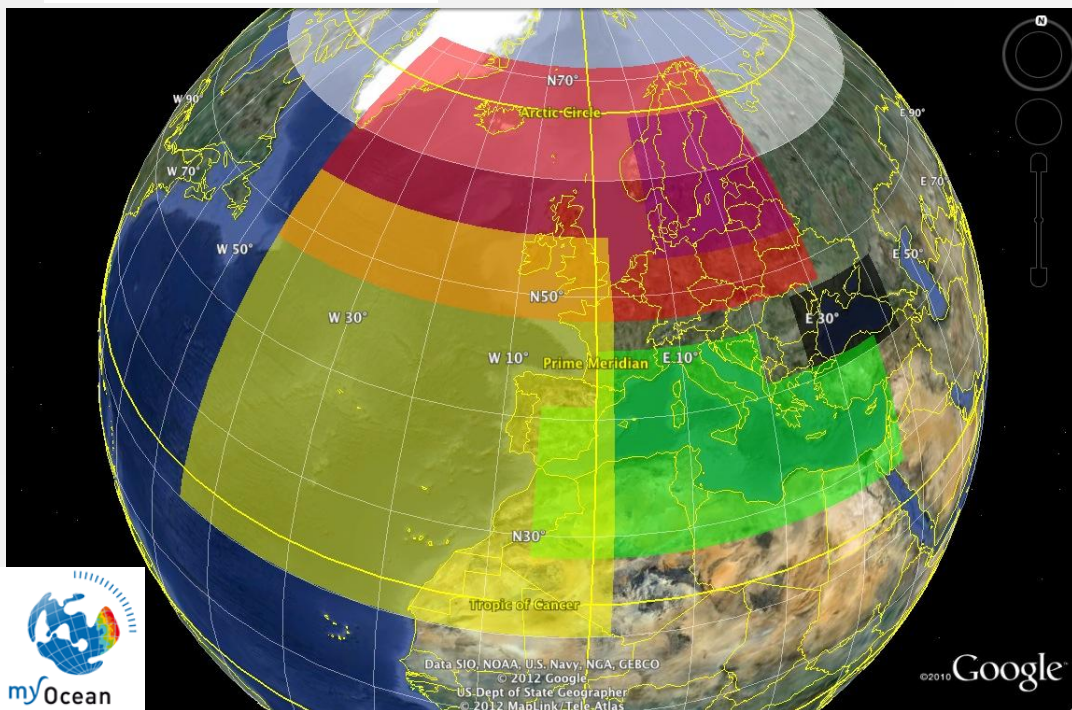
Baltic Sea : N°53-N°66, E°008-E°031
North Sea : N°49-N°62, W°004 – E°010
Arctic: N°65-N°80, E°010-E°075
Med Sea : N°30-N°46, W°009-E°036.5
Black Sea: N°40-N°47, E°026.5-E°042
Atlantic: N°10-N°65, W°082-E°010



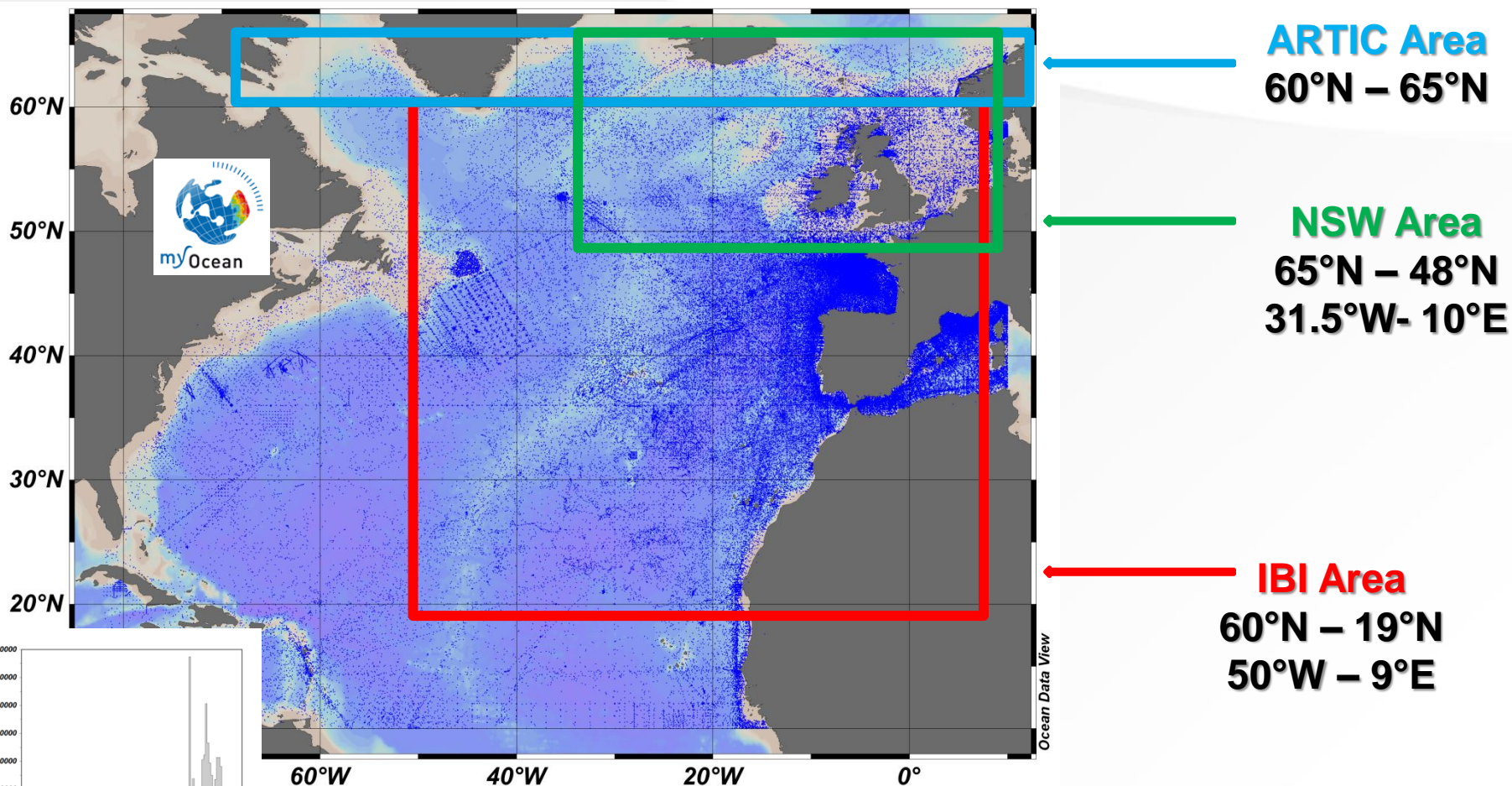
SeaDataNet



MyOcean

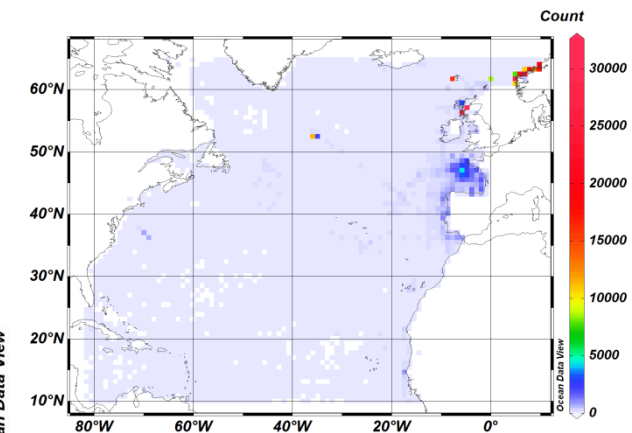
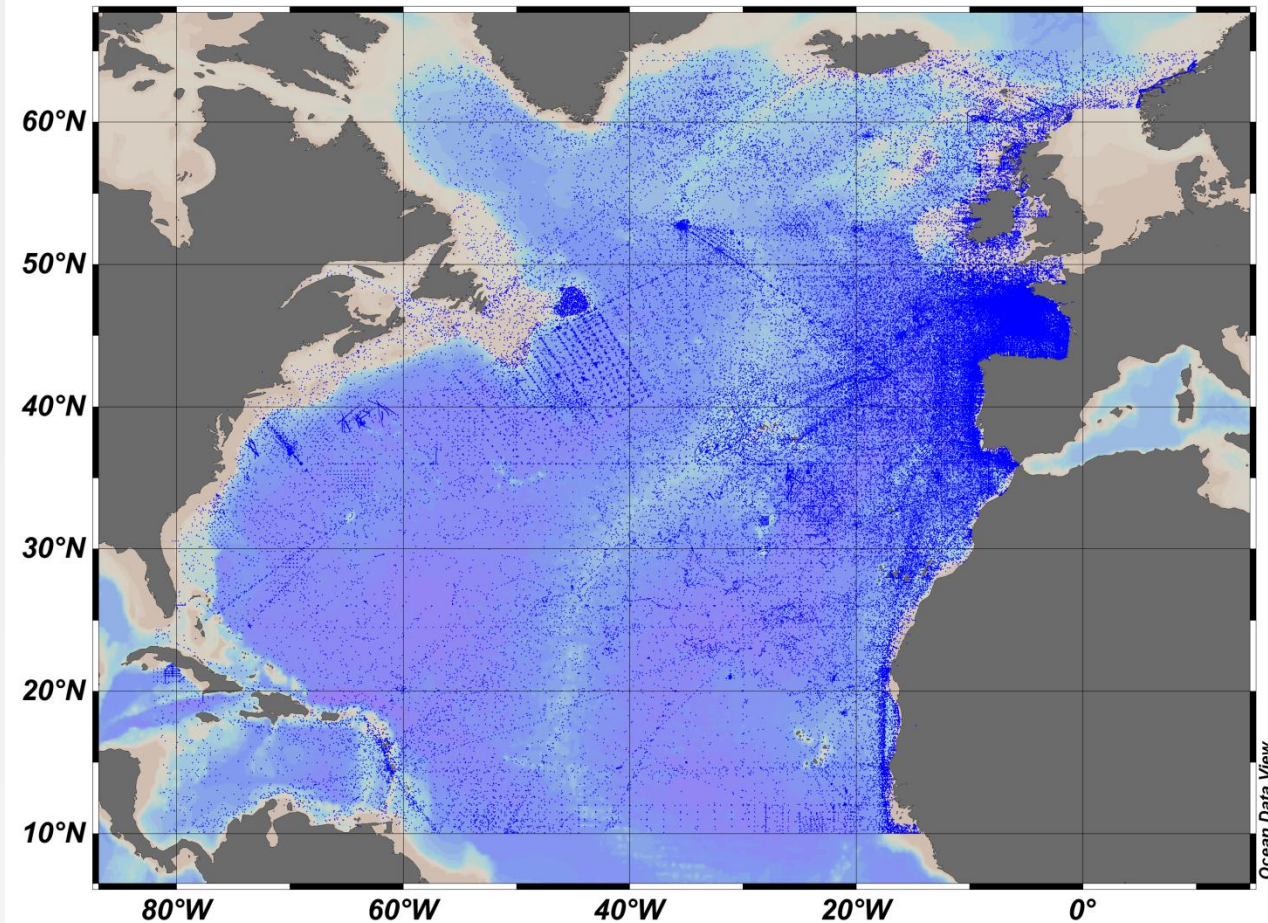
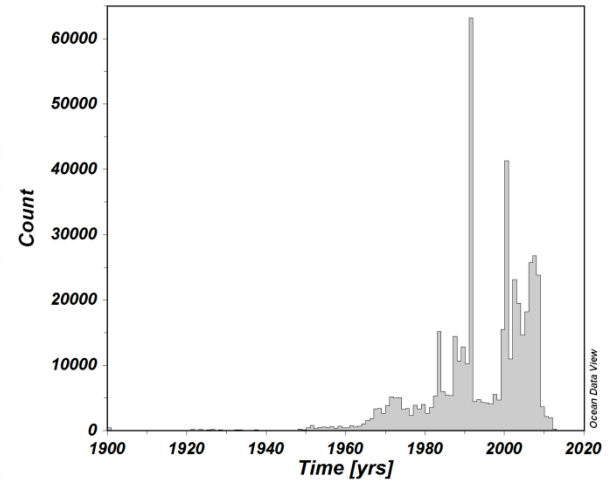


Aggregated dataset – North Atlantic – MyOcean1990-2012



North Atlantic Area 1900-2012

SeaDataNet2 : 710039 stations

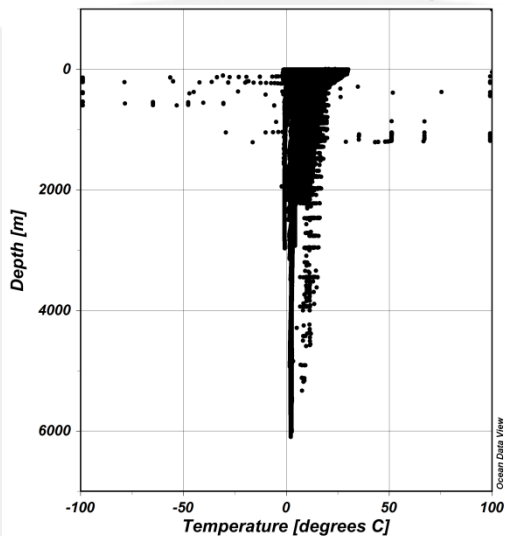




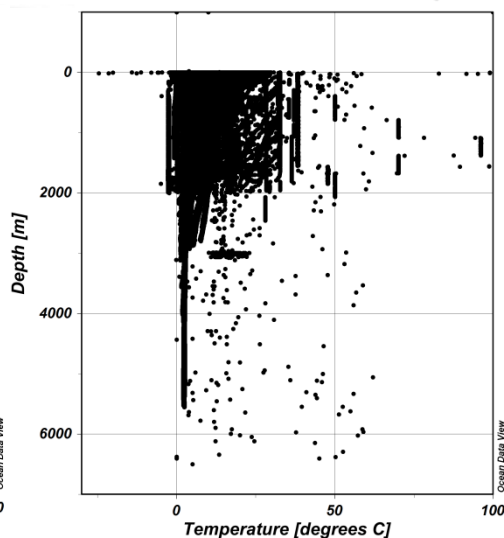
Ranges Z 0-6500m
T -2°C to 32°C
S 0 to 40 psu

SeaDataNet2 : 1990-2012 (1990-1999 & 2000-2012)

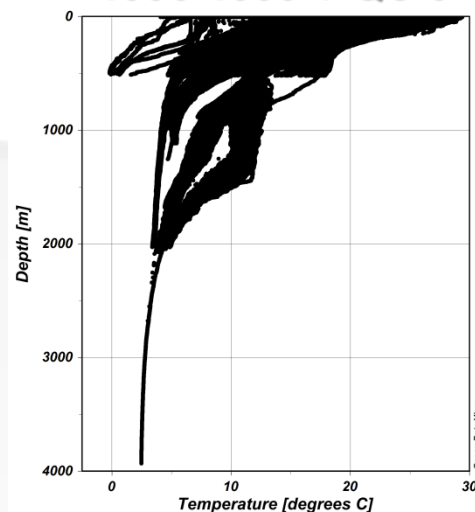
1990-1999 T All QC



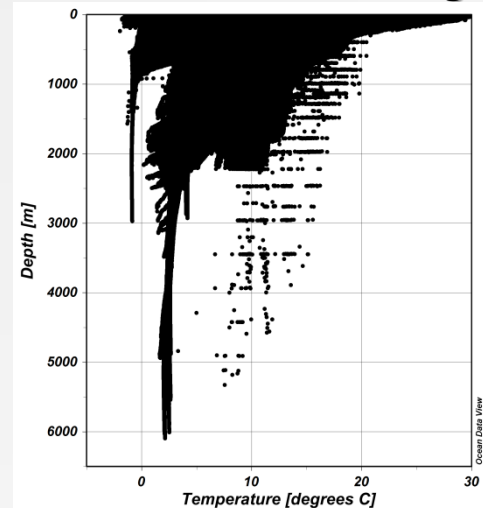
2000-2012 T All QC



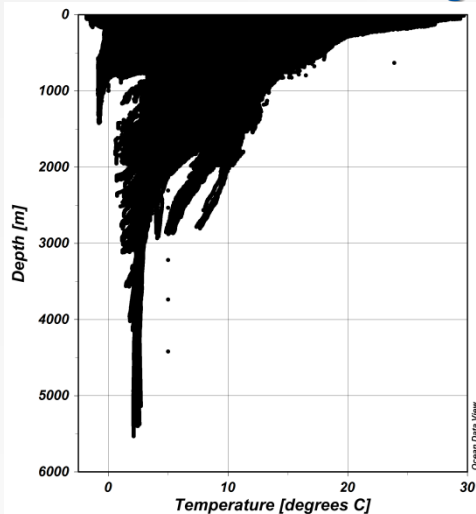
1990-1999 T QC 0



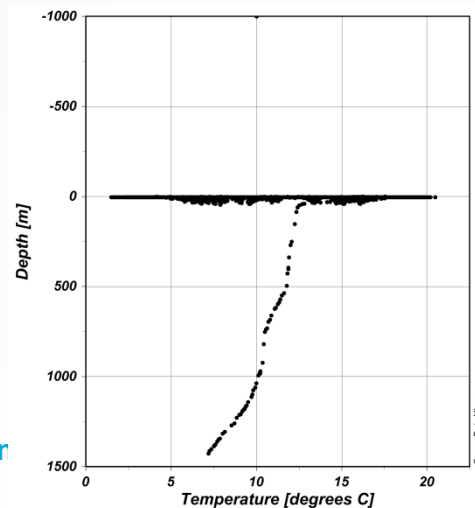
1990-1999 T QC1&2 Range



2000-2012 T QC1&2 Range



2000-2012 T QC 0



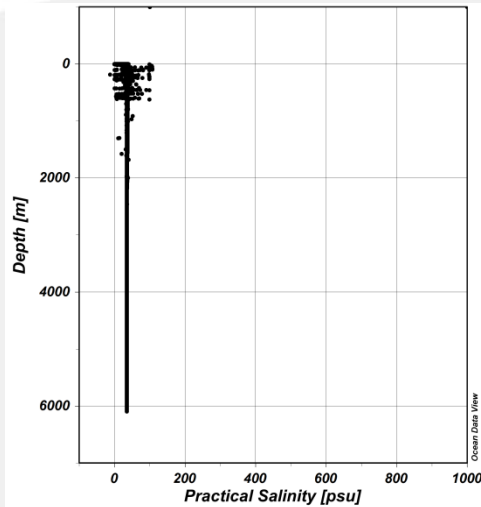
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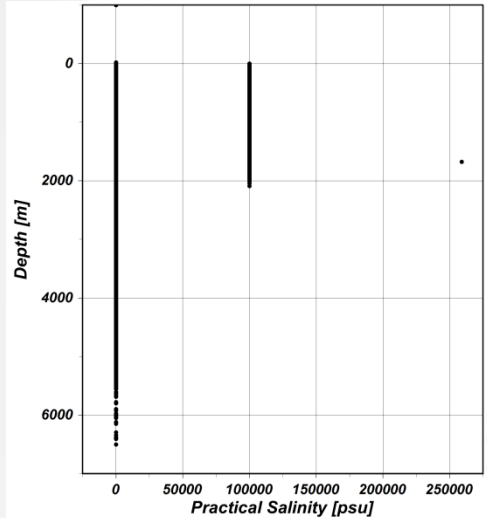
Ranges Z 0-6500m
T -2°C to 32°C
S 0 to 40 psu

SeaDataNet2 : 1990-2012 (1990-1999 & 2000-2012)

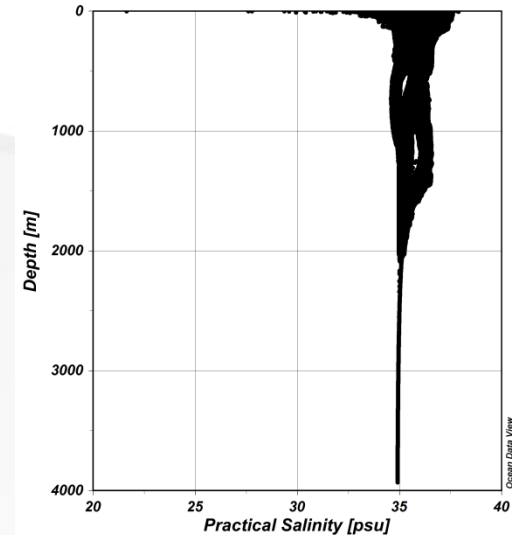
1990-1999 S All QC



2000-2012 S All QC

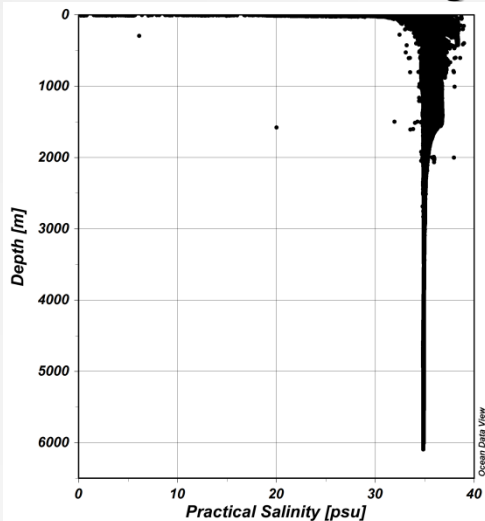


1990-1999 S QC 0

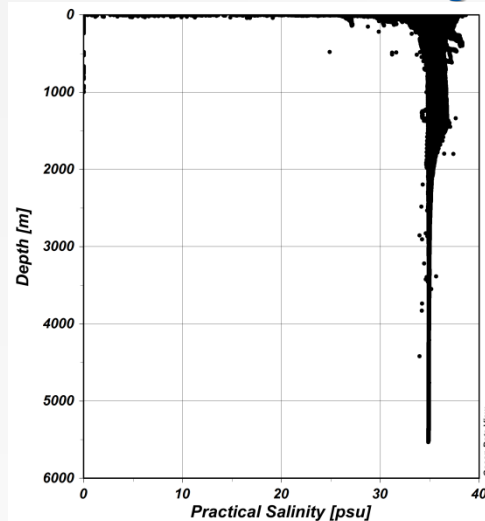


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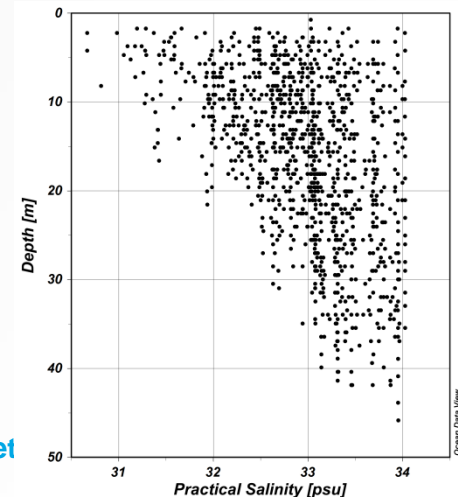
1990-1999 S QC1&2 Range



2000-2012 S QC1&2 Range



2000-2012 S QC 0

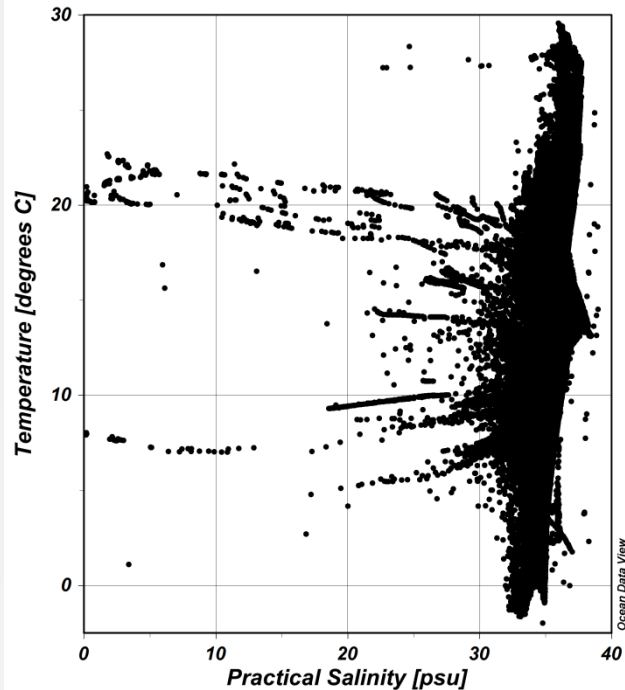




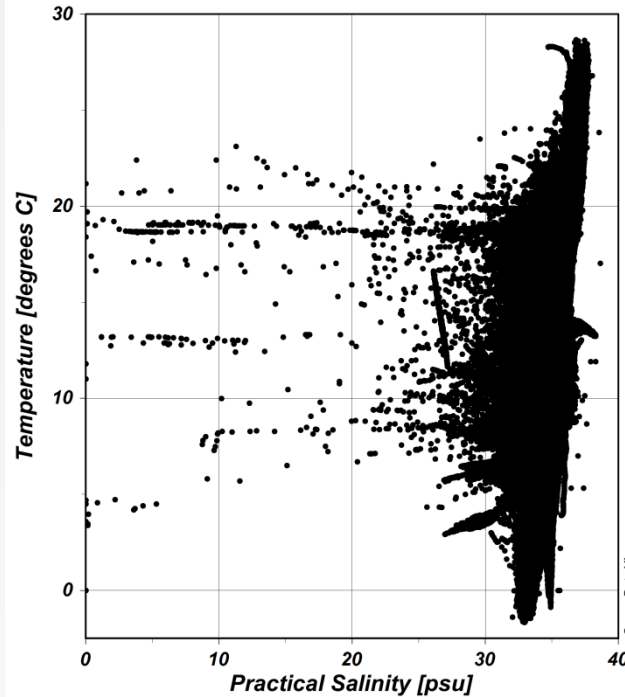
Ranges Z 0-6500m
T -2°C to 32°C
S 0 to 40 psu

SeaDataNet2 : 1990-2012 (1990-1999 & 2000-2012)

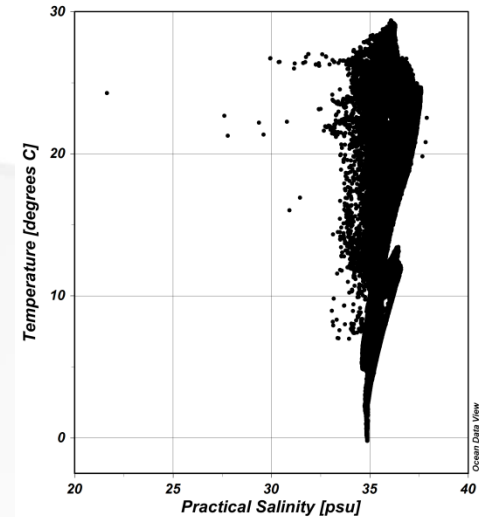
1990-1999 TS QC1&2 Range



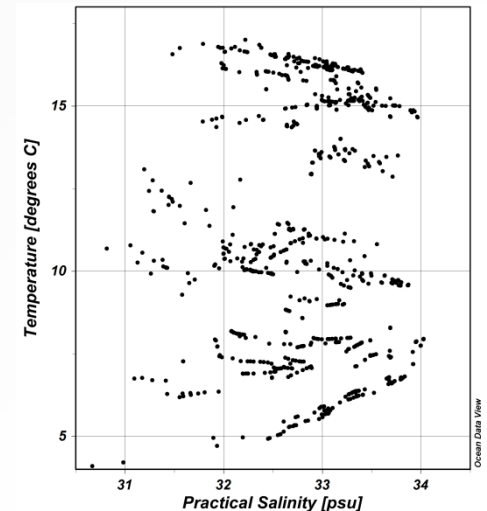
2000-2012 TS QC1&2 Range



1990-1999 TS QC0

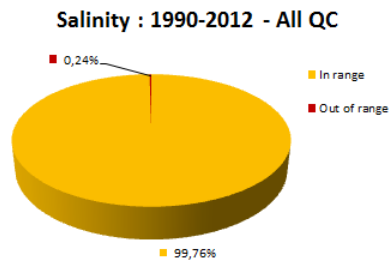
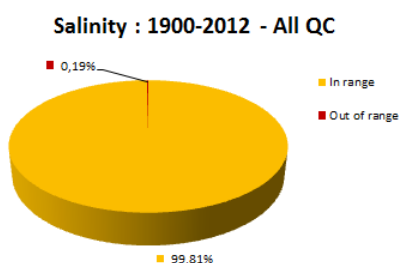
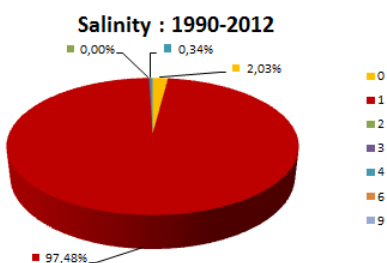
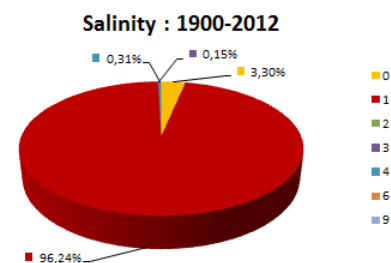
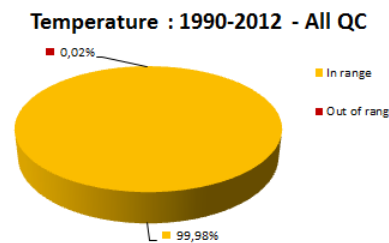
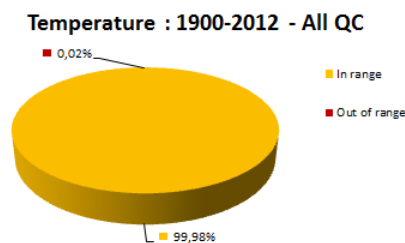
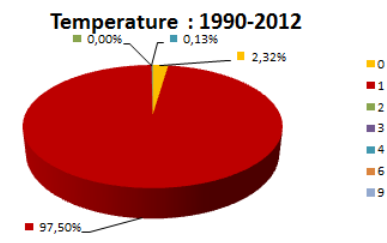
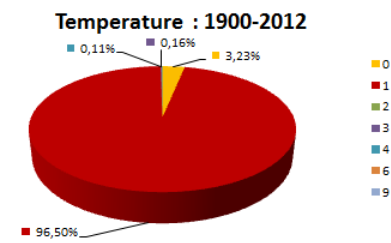
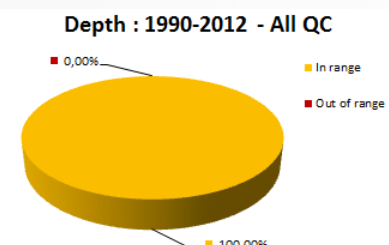
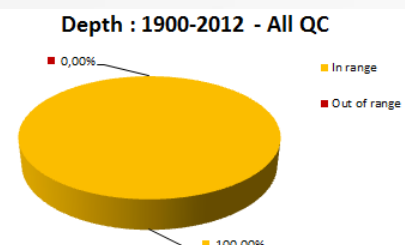
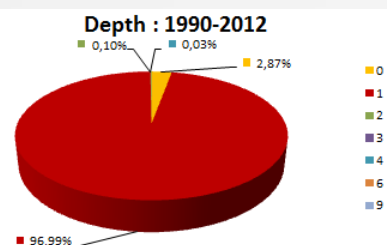
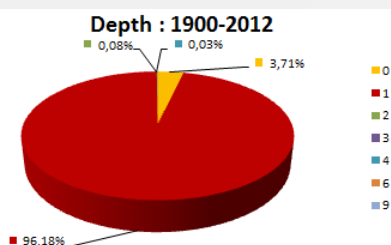


2000-2012 TS QC0



SDN2region	1900-2012												
QC	0	1	2	3	4	6	9	Total	In range	Out of range	Total QC12	In range QC12	Out of range QC12
Depth	1332566	34589413	28822	901	11533	2	973	35964210	35963262	948	34618235	34618234	1
%	3,71	96,18	0,08	0,00	0,03	0,00	0,00	100%	99,997	0,003	100,000	100,000	0,000
Temperature	1118476	33445687	1139	55527	37169	0	6	34658004	34652071	5933	33446826	33446785	41
%	3,23	96,50	0,00	0,16	0,11	0,00	0,00	100%	99,983	0,017	100,000	100,000	0,000
Salinity	956923	27926194	48	44011	89267	0	7	29016450	28961232	55218	27926242	27925325	917
%	3,30	96,24	0,00	0,15	0,31	0,00	0,00	100%	99,810	0,190	99,997	99,997	0,003

SDN2region	1990-2012												
QC	0	1	2	3	4	6	9	Total	In range	Out of range	Total QC12	In range QC12	Out of range QC12
Depth	833719	28163053	28820	492	10135	0	881	29037100	29036547	553	28191873	28191872	1
%	2,87	96,99	0,10	0,00	0,03	0,00	0,00		99,998	0,002		100,000	0,000
Temperature	644093	27124534	451	14104	35443	0	6	27818631	27812737	5894	27124985	27124957	28
%	2,32	97,50	0,00	0,05	0,13	0,00	0,00		99,979	0,021		100,000	0,000
Salinity	472474	22671361	48	35520	79179	0	7	23258589	23203476	55113	22671409	22670493	916
%	2,03	97,48	0,00	0,15	0,34	0,00	0,00		99,763	0,237		99,996	0,004



Flag Description	ODV	GLSPP	ARGO	SEADATANET	ESEAS	WOD	WODSTATION	WOCBOTTLE	WOCCTID	WOCESAMPLE	QARTOD	BODC	PANGAEA	SMHI	OceanSITES
good quality	0	1	1	1	1	0	0	2	2	2	3	blank	blank	blank	1
unknown quality	1	0	0	0	0	0	0	2	2	2	0	blank	*	blank	0
questionable quality	4	3	3	3	3	4	3	3	3	7	2	K	?	?	3
bad quality	8	4	4	4	4	4	3	4	4	7	1	K	?	B	4

QC analysis results : First step

- **QC 0**
 - 1900-2012 : 3,4% of measurements
 - 1990-2012 : 2,4% of measurements

Question : QC 0=ODV QC? If yes, what about QC1

ODV QC 0 = good quality & 1 = unknown quality

Mixing of QC 1& 0 for a same cruise

- **QC outliers** (take into account QC 1&2 for Z,T,S) :
very short list
 - 1900-2012 : **Z=1 T=41 S=917** ← To be updated in QC4
 - 1990-2012 : Z=1 T=28 S=916
 - Check others measurements on the profil where outliers are detected (see ex. after)

Green = QC 1
White = QC 0

Scoop² - Ensemble de stations 5740 stations - Profil : Coriolis

Profils Verticaux Carte

Informations sur le profil vertical...

Station ID 29037695 - N° - 6 niveaux - MAJ : 03/04/2013 14:57:28

Date: 26/11/1990 13:00:00 Latitude: 57.10417 Bathymétrie statistique: 18
Status: 51 Longitude: 6.58333 Bathymétrie mesurée:

Plate-forme EXSD0418
SeaDataNet 77AR1990
00 UNKNOWN OR NOT DEFINED
SD - 99 - Unknown recording system
9900 UNKNOWN INSTITUTION
9900 UNKNOWN INSTITUTION
Cycle 0 du 01/01/1990 au 31/12/2050
BSH Argo Project

Commentaires

Informations visualisées

Groupe

Groupe Coriolis

Climatologie

LEVITUS 2005 (1x1)

Outils

Informations

Options d'affichages

- ☒ Profil courant
- ☐ Jeu de données
- ☐ Stations plate-forme
- ☐ Autres plates-formes

☒ Mode Super-Profil

- ☒ Pts profil courant
- ☐ Pts autres profils
- ☐ Conserver bornes
- ☐ Conserver paramètres

Profil avant
Profil après

Code qualités visibles

☒ (Tous visible)

☐ 0 - non contrôlée

☒ 1 - bonne

☐ 2 - moyenne

☐ 3 - douteuse

☐ 4 - mauvaise

☐ 5 - modérée

☐ 8 - intermédiaire

☐ 9 - absente

Option de suppression

☐ ☐

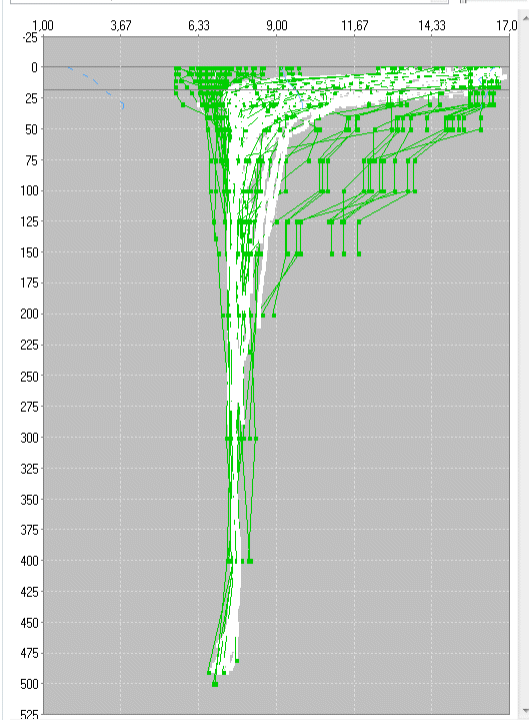
Code qualité visualisé

☐ Niveau

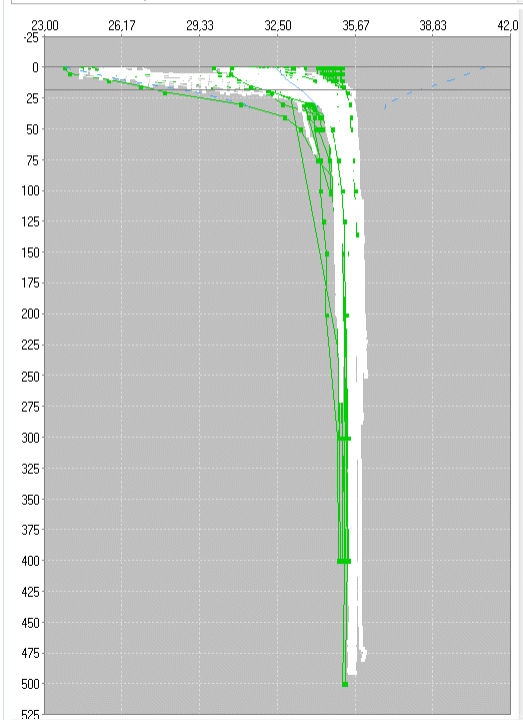
☒ Valeur

Edition

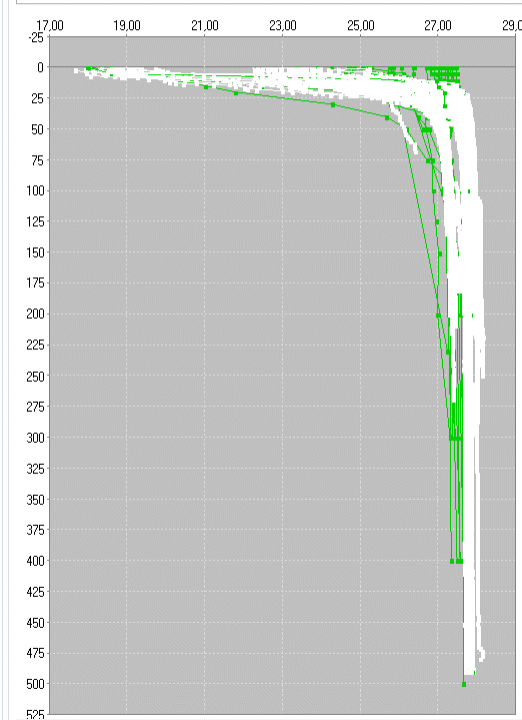
Zone 1
35-TEMP-Sea temperature



Zone 2
30-PSAL-Practical salinity

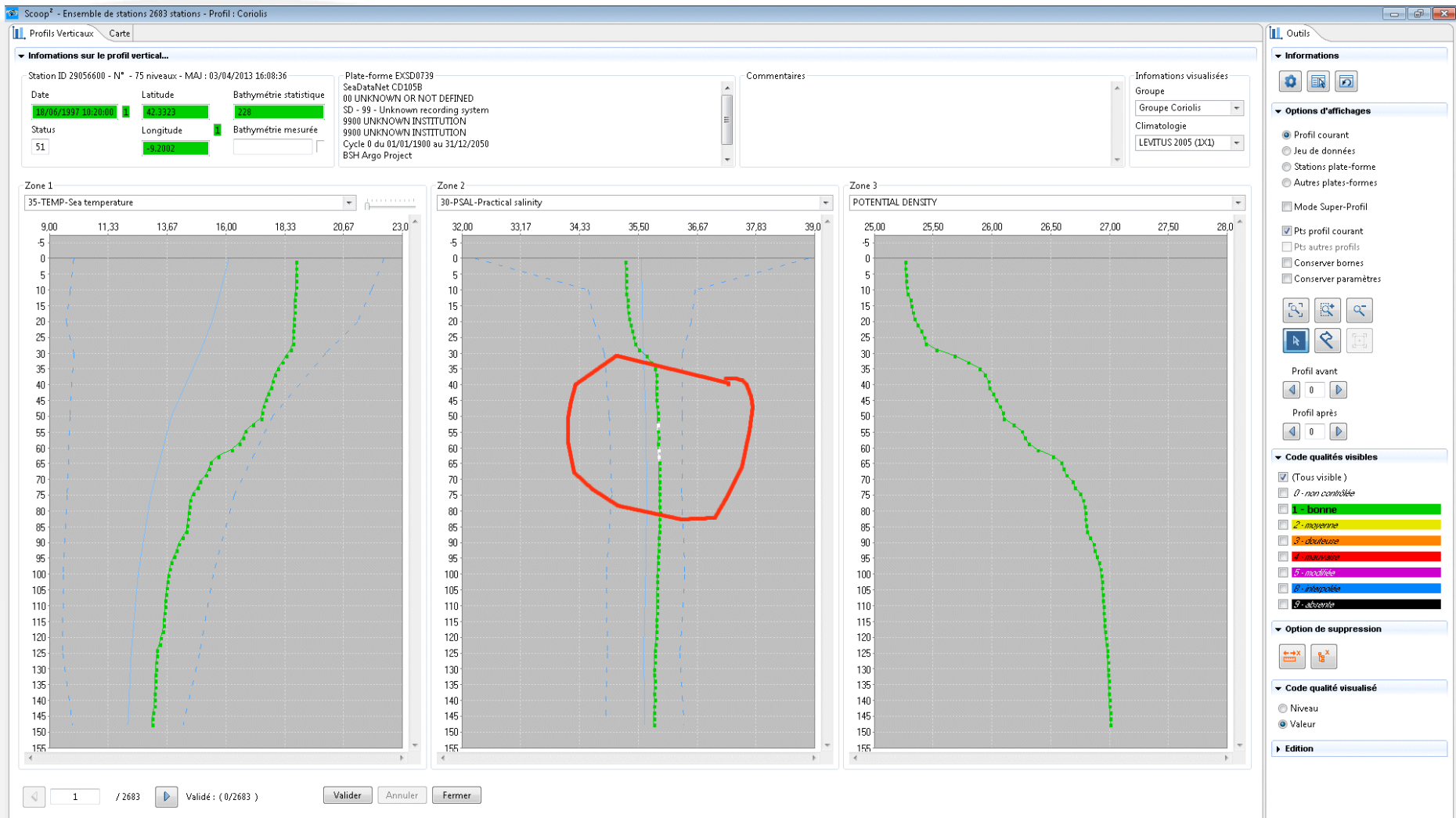


Zone 3
POTENTIAL DENSITY

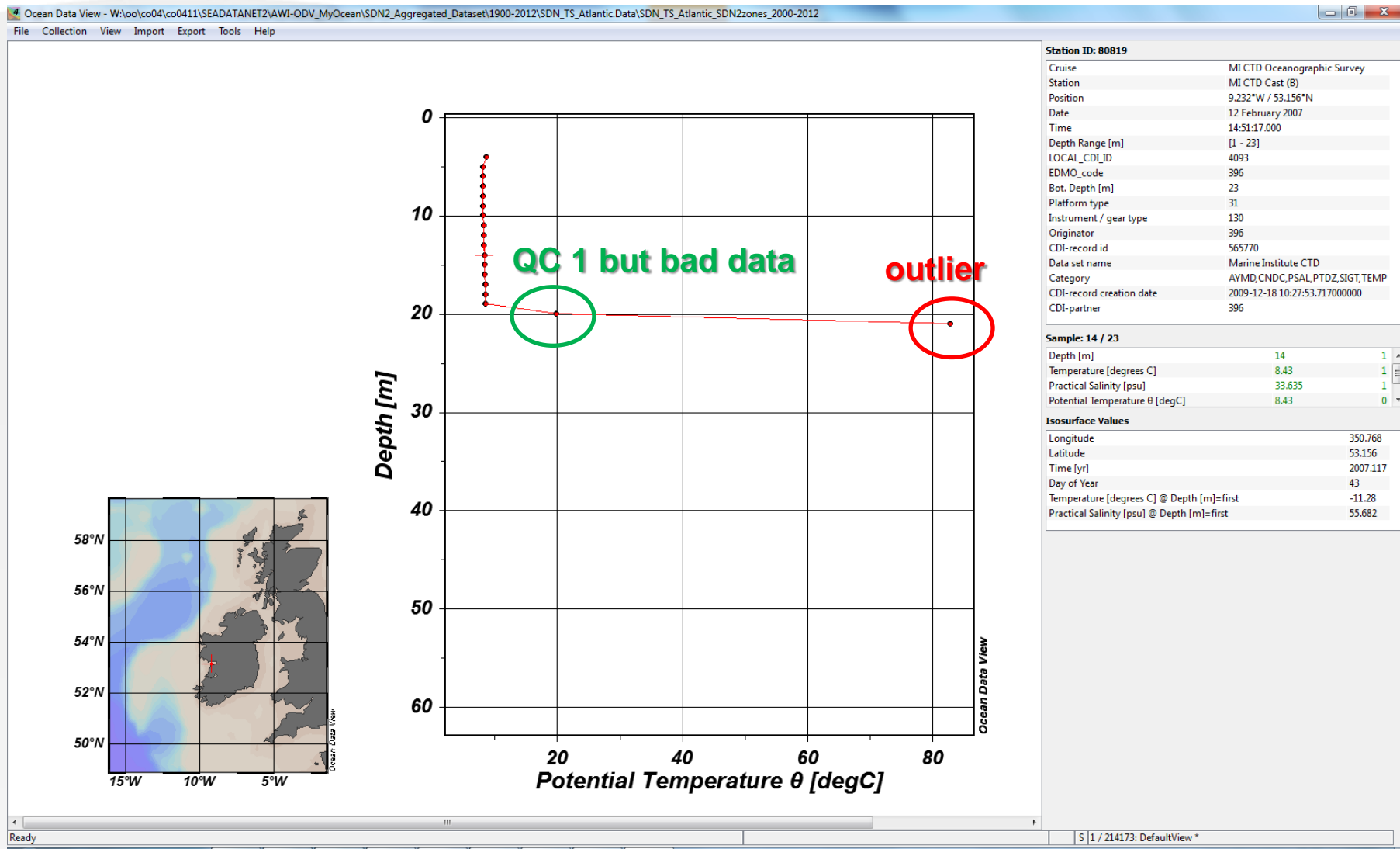


21 / 41 Validé : (0/5740)

Valider Annuler Fermer



Anomalies – QC 1 and outliers

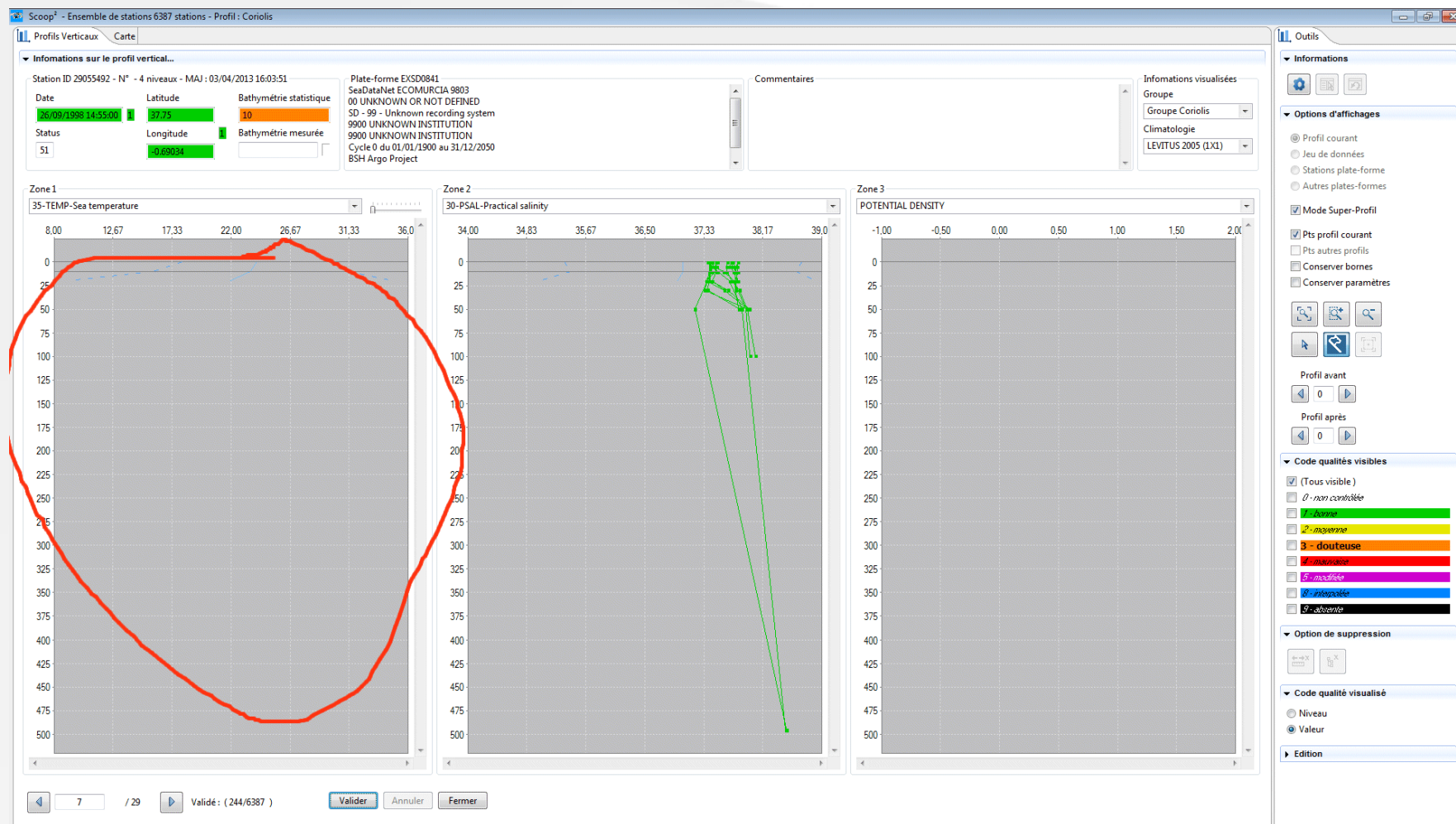




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Station with only salinity parameter

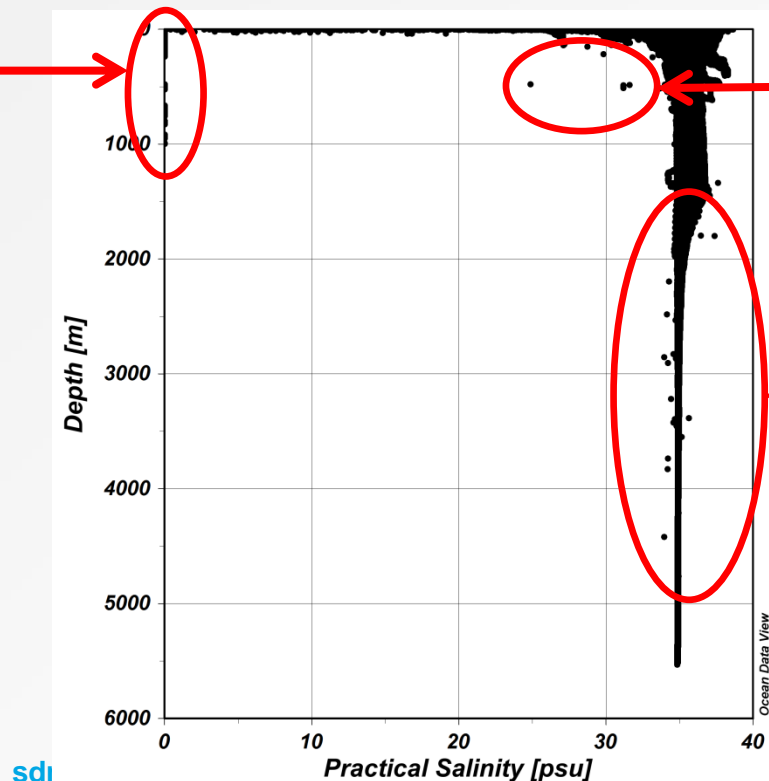


QC analysis results : Second step

- QC 1 & 2
- Existing spike, doubtful data, low value

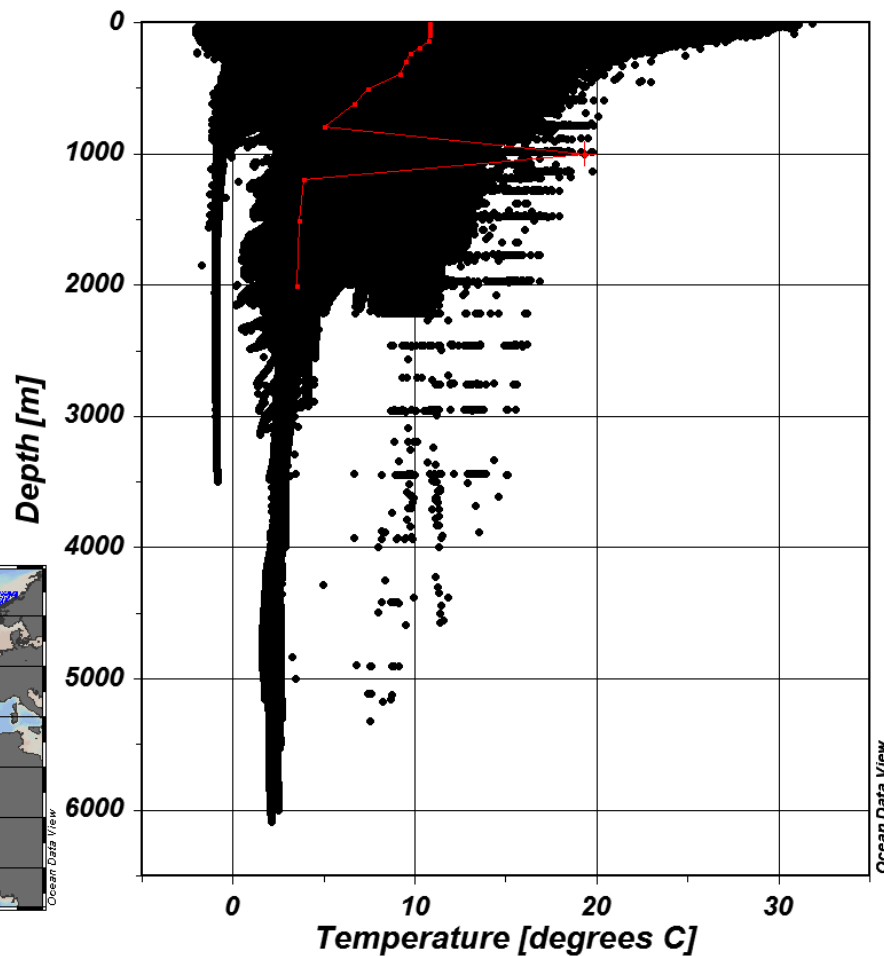
**Bad Salinity
0 psu**

**Salinity and Depth
QC 1& 2
Range Check
SDN2 2000-2012**



Ocean Data View - W:\oo\co04\co0411\SEADATANET2\AWI-ODV_MyOcean\SDN2_Aggregated_Dataset\1900-2012\SDN_TS_Atlantic\Data\data_from_SDN_TS_Atlantic_SDN2zones_1900-1999_correction

File Collection View Import Export Tools Help



Station ID: 31725

Cruise	18302
Station	43 (B)
Position	26°W / 50°N
Date	15 April 1990
Time	05:30:00.000
Depth Range [m]	[0 - 2011]
LOCAL_CDI_ID	RNODC_Bottle_18302_43
EDMO_code	681
Bot. Depth [m]	3820
Platform type	31
Instrument / gear type	30
Originator	931
CDI-record id	288200
Data set name	RNODC_Bottle_18302
Category	MPMN,TEMP,PSAL,DOXY
CDI-record creation date	2009-03-10 10:52:24.950000000
CDI-partner	681

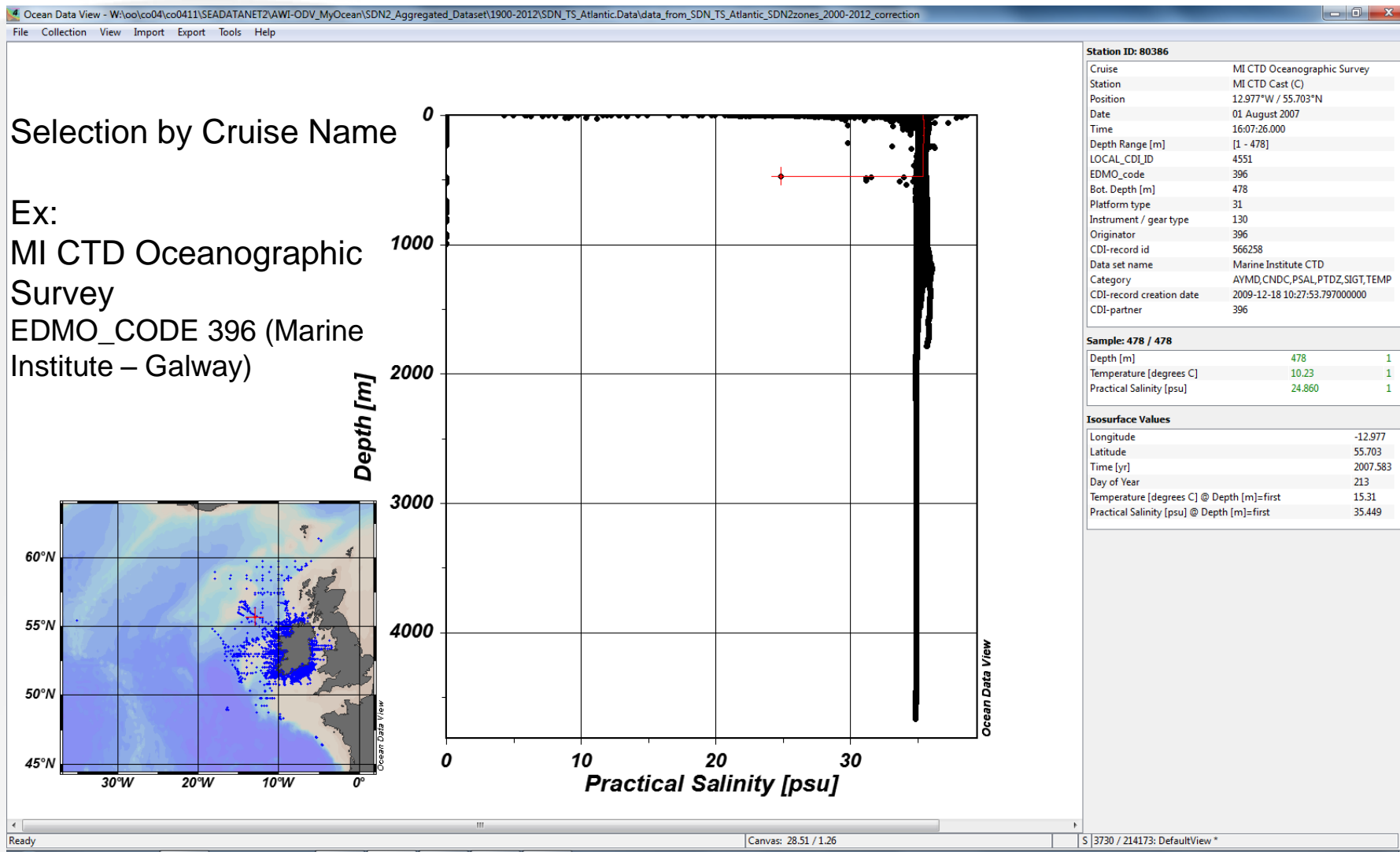
Sample: 16 / 19

Depth [m]	1007	1
Temperature [degrees C]	19.32	2
Practical Salinity [psu]	34.904	1

Isosurface Values

Longitude	-26.000
Latitude	50.000
Time [yr]	1990.286
Day of Year	105
Temperature [degrees C] @ Depth [m]=first	10.83
Practical Salinity [psu] @ Depth [m]=first	35.505

QC analysis results : Second step

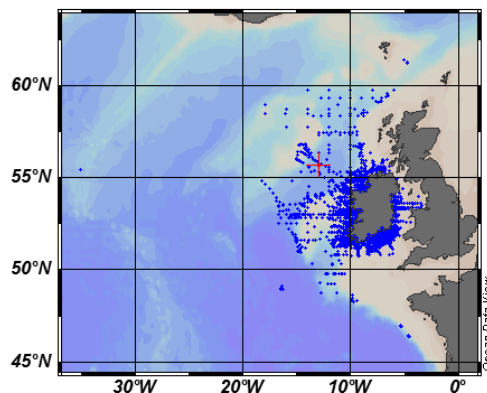
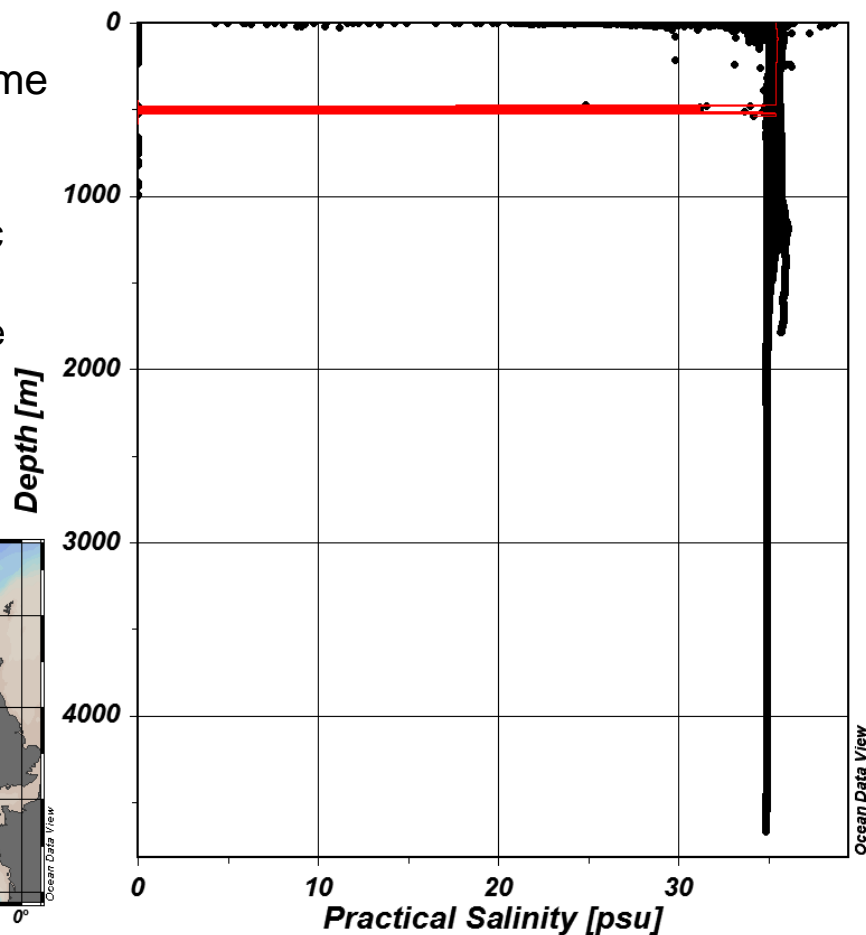


Ocean Data View - W:\oo\co04\co0411\SEADATANET2\AWI-ODV_MyOcean\SDN2_Aggregated_Dataset\1900-2012\SDN_TS_Atlantic\Data\data_from_SDN_TS_Atlantic_SDN2zones_2000-2012_correction

File Collection View Import Export Tools Help

Selection by Cruise Name

Ex:
MI CTD Oceanographic
Survey
EDMO_CODE 396 (Marine
Institute – Galway)



Station ID: 80387

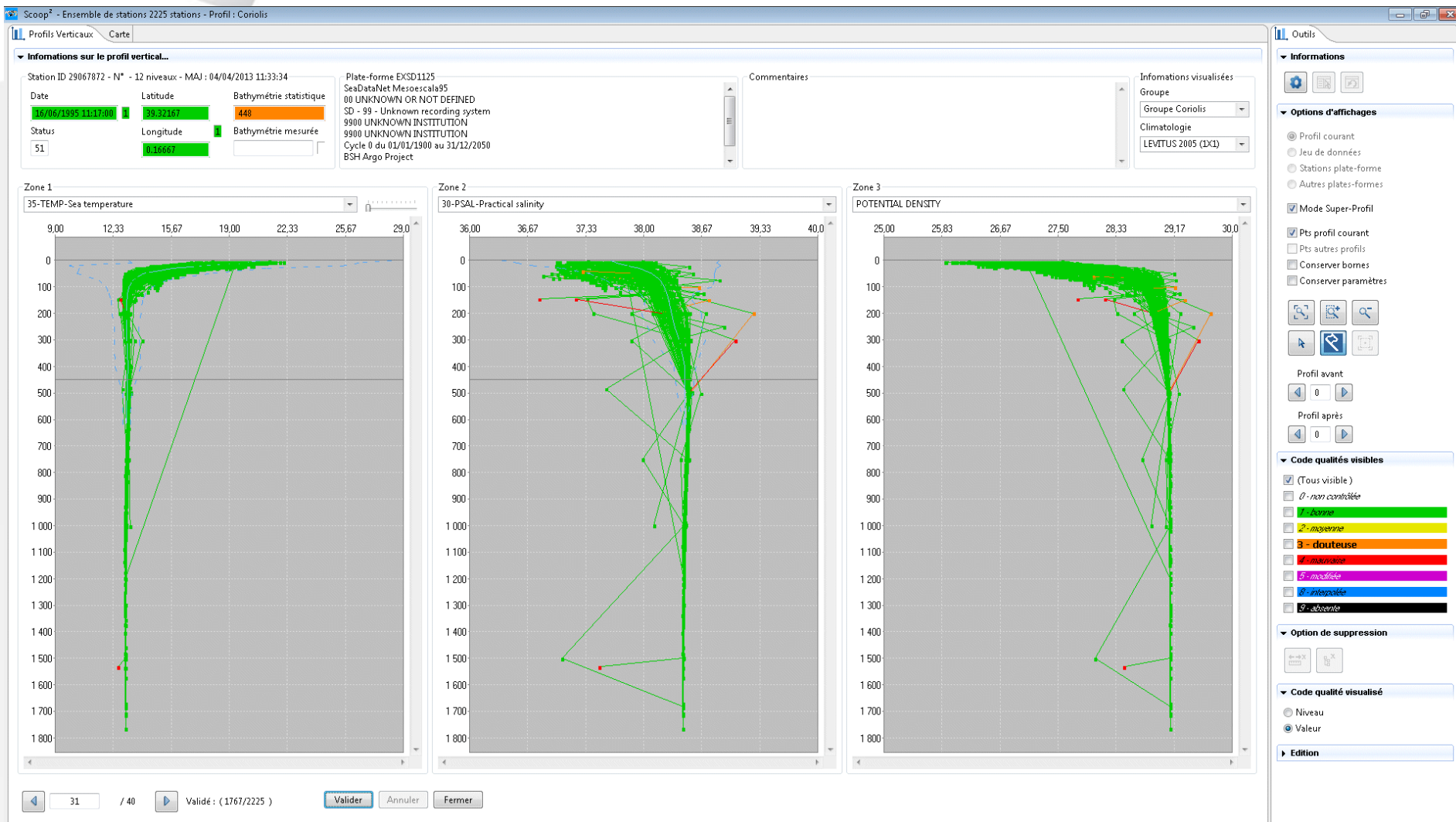
Cruise	MI CTD Oceanographic Survey
Station	MI CTD Cast (C)
Position	12.976°W / 55.703°N
Date	01 August 2007
Time	15:01:23.000
Depth Range [m]	[1 - 543]
LOCAL_CDI_ID	4550
EDMO_code	396
Bot. Depth [m]	543
Platform type	31
Instrument / gear type	130
Originator	396
CDI-record id	566257
Data set name	Marine Institute CTD
Category	AYMD,CNDC,PSAL,PTDZ,SIGT,TEMP
CDI-record creation date	2009-12-18 10:27:53.797000000
CDI-partner	396

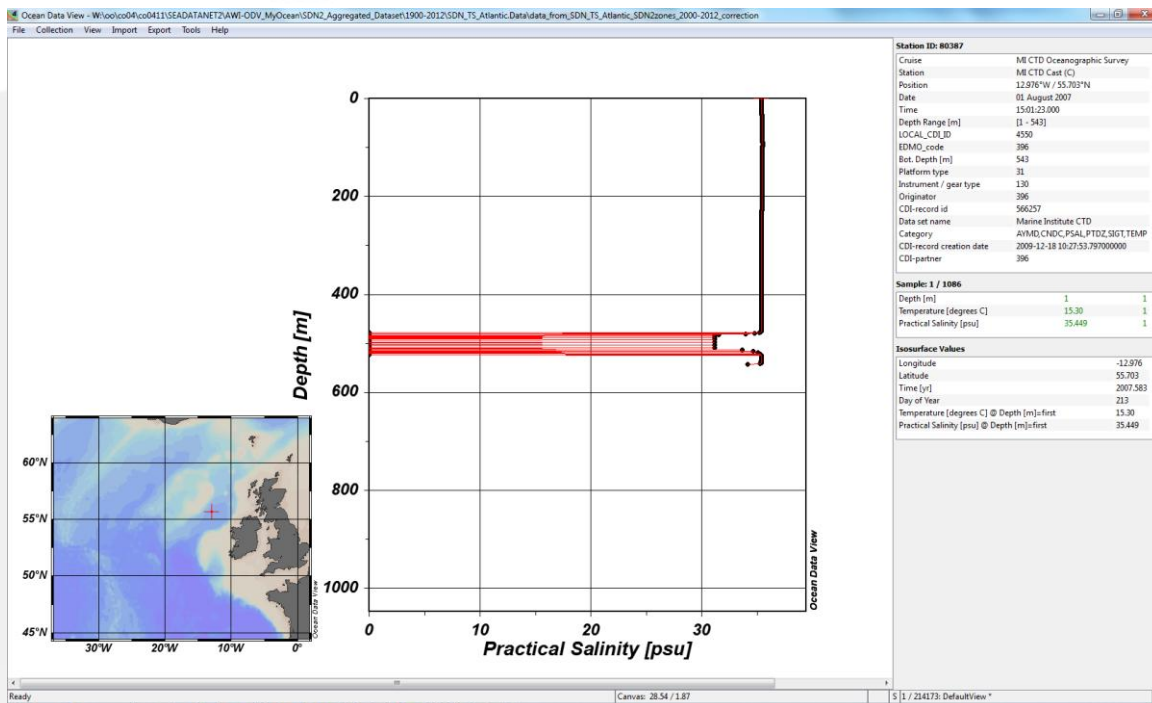
Sample: 1042 / 1086

Depth [m]	521	1
Temperature [degrees C]	0.00	1
Practical Salinity [psu]	0.000	1

Isosurface Values

Longitude	-12.976
Latitude	55.703
Time [yr]	2007.583
Day of Year	213
Temperature [degrees C] @ Depth [m]=first	15.30
Practical Salinity [psu] @ Depth [m]=first	35.449





Station ID: 80387

Cruise	MI CTD Oceanographic Survey
Station	MI CTD Cast (C)
Position	12.976°W / 55.703°N
Date	01 August 2007
Time	15:01:23.000
Depth Range [m]	[1 - 543]
LOCAL_CDI_ID	4550
EDMO_code	396
Bot. Depth [m]	543
Platform type	31
Instrument / gear type	130
Originator	396
CDI-record id	566257
Data set name	Marine Institute CTD
Category	AYMD,CNDC,PSAL,PTDZ,SIGT,TEMP
CDI-record creation date	2009-12-18 10:27:53.797000000
CDI-partner	396

Sample: 1 / 1086

Depth [m]	1	1
Temperature [degrees C]	15.30	1
Practical Salinity [psu]	35.449	1

Isosurface Values

Longitude	-12.976
Latitude	55.703
Time [yr]	2007.583
Day of Year	213
Temperature [degrees C] @ Depth [m]=first	15.30
Practical Salinity [psu] @ Depth [m]=first	35.449

Sample: 2 / 1086

Depth [m]	1	1
Temperature [degrees C]	15.30	1
Practical Salinity [psu]	35.449	1

Isosurface Values

Longitude	-12.976
Latitude	55.703
Time [yr]	2007.583
Day of Year	213
Temperature [degrees C] @ Depth [m]=first	15.30
Practical Salinity [psu] @ Depth [m]=first	35.449

Sample: 4 / 1086

Depth [m]	2	1
Temperature [degrees C]	15.30	1
Practical Salinity [psu]	35.450	1

Isosurface Values

Longitude	-12.976
Latitude	55.703
Time [yr]	2007.583
Day of Year	213
Temperature [degrees C] @ Depth [m]=first	15.30
Practical Salinity [psu] @ Depth [m]=first	35.449

Sample: 3 / 1086

Depth [m]	2	1
Temperature [degrees C]	15.30	1
Practical Salinity [psu]	35.450	1

Isosurface Values

Longitude	-12.976
Latitude	55.703
Time [yr]	2007.583
Day of Year	213
Temperature [degrees C] @ Depth [m]=first	15.30
Practical Salinity [psu] @ Depth [m]=first	35.449

SeaDataNet QC update

TEMP QC									
2000-2012									
Cruise	LOCAL_CDI_ID	EDMO_CODE	Originator	Data set name	CDI-record id	ODV_station_id	Level	Old_QC	New_QC
09-220	1844_000130_H10	422	null	null	null	10666	All	1	4
64PE229	CTDCAST_105_204	630	630	64PE229_105_204	1446	14857	630	1	4
MI CTD Oceanographic survey	4093	396	396	Marine Institute CTD	565770	49409	[1:3] [20:23]	1	4
MI CTD Oceanographic survey	5327	396	396	Marine Institute CTD	567064	48294	[2:19]	1	4
MI CTD Oceanographic survey	1807	396	396	Marine Institute CTD	564113	50731	all TEMP=0 in [31:69]	1	4
MI CTD Oceanographic survey	713	396	396	Marine Institute CTD	567687	47767	284	1	4
MI CTD Oceanographic survey	4550	396	396	Marine Institute CTD	566257	48977	all TEMP=0 in [479:524] measure in double for each level	1	4
MI CTD Oceanographic survey	5592	396	396	Marine Institute CTD	567317	48090	392	1	4
MI CTD Oceanographic survey	4187	396	396	Marine Institute CTD	565868	49321	all TEMP=0 in [796:827]	1	4
MI CTD Oceanographic survey	4192	396	396	Marine Institute CTD	565873	49317	TEMP=0 in [663:709] & [918:94	1	4
MI CTD Oceanographic survey	4855	396	396	Marine Institute CTD	566561	48738	all TEMP=0 in [991:996]	1	4
MI CTD Oceanographic survey	3897	396	396	Marine Institute CTD	565560	49596	all TEMP=0 in [672:718]	1	4

Aggregated dataset – List of outliers : text file

Outlier-Scan (scanMode=0):
statID valid smplID Value QF varID=3 Practical Salinity [psu] [0 - 40]
<Cruise Station Type>

Outlier-Scan (scanMode=0): statID	valid	varID=3 smplID	Practical Salinity [psu] Value	[0 - 40] QF	<Cruise Station Type>
7629	7629	24	41.67	1	<02-030 000230 (C)>
8897	8897	57	40.339	1	<05-490 00ZG02 (C)>
8897	8897	59	44.606	1	<05-490 00ZG02 (C)>
8897	8897	60	42.899	1	<05-490 00ZG02 (C)>
8897	8897	61	51.891	1	<05-490 00ZG02 (C)>
8897	8897	62	49.852	1	<05-490 00ZG02 (C)>
8897	8897	63	64.521	1	<05-490 00ZG02 (C)>
8897	8897	64	62.389	1	<05-490 00ZG02 (C)>
8897	8897	65	87.006	1	<05-490 00ZG02 (C)>
8897	8897	66	85.118	1	<05-490 00ZG02 (C)>
8897	8897	67	99	1	<05-490 00ZG02 (C)>
8897	8897	68	99	1	<05-490 00ZG02 (C)>
8897	8897	69	99	1	<05-490 00ZG02 (C)>
8897	8897	70	99	1	<05-490 00ZG02 (C)>
8897	8897	71	99	1	<05-490 00ZG02 (C)>
9089	9089	37	53.728	1	<06-040 000120 (C)>
9089	9089	38	63.996	1	<06-040 000120 (C)>
9089	9089	39	99	1	<06-040 000120 (C)>
9089	9089	40	99	1	<06-040 000120 (C)>
9089	9089	41	99	1	<06-040 000120 (C)>
10666	10666	1	1999	1	<09-220 000130 (C)>
10666	10666	2	204.101	1	<09-220 000130 (C)>
10666	10666	3	291.055	1	<09-220 000130 (C)>
10666	10666	4	1999	1	<09-220 000130 (C)>
10666	10666	5	530.044	1	<09-220 000130 (C)>
10666	10666	6	1999	1	<09-220 000130 (C)>
10666	10666	7	1218.77	1	<09-220 000130 (C)>
10666	10666	8	1999	1	<09-220 000130 (C)>
10666	10666	9	1999	1	<09-220 000130 (C)>
10666	10666	10	1999	1	<09-220 000130 (C)>
10666	10666	11	1999	1	<09-220 000130 (C)>
10666	10666	12	1999	1	<09-220 000130 (C)>
10666	10666	13	1999	1	<09-220 000130 (C)>
10666	10666	14	1999	1	<09-220 000130 (C)>
10666	10666	15	1999	1	<09-220 000130 (C)>
10666	10666	16	1999	1	<09-220 000130 (C)>
10666	10666	17	1999	1	<09-220 000130 (C)>
10666	10666	18	1999	1	<09-220 000130 (C)>
10666	10666	19	1999	1	<09-220 000130 (C)>
10666	10666	20	1999	1	<09-220 000130 (C)>
10666	10666	21	1999	1	<09-220 000130 (C)>
10667	10667	46	40.348	1	<09-220 000215 (C)>
10667	10667	48	69.589	1	<09-220 000215 (C)>
10667	10667	49	68.063	1	<09-220 000215 (C)>
10667	10667	50	126.512	1	<09-220 000215 (C)>
10667	10667	51	125.002	1	<09-220 000215 (C)>
10667	10667	52	251.516	1	<09-220 000215 (C)>
10667	10667	53	249.915	1	<09-220 000215 (C)>
10667	10667	54	577.577	1	<09-220 000215 (C)>
10668				

**PSAL
out of range 0-40**

*But for feedback to
NODC SDN,
LOCAL_ID &
EDMO_CODE
are needed*

Log of modification of QC from ODV

2013-03-06T17:03:50	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {125.9:1} -> 4
2013-03-06T17:03:54	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {124.9:1} -> 4
2013-03-06T17:04:01	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {121.9:1} -> 4
2013-03-06T17:04:04	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {121:1} -> 4
2013-03-06T17:04:08	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {120:1} -> 4
2013-03-06T17:04:13	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {119:1} -> 4
2013-03-06T17:04:18	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {117:1} -> 4
2013-03-06T17:04:22	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {116:1} -> 4
2013-03-06T17:04:26	ccoatano@NTSISM75	EDITFLAGS	<28213: FLEMISH CAP 1991 01160 (C)>	Practical Salinity [psu] @ Depth [m] = {115:1} -> 4
2013-03-06T17:07:18	ccoatano@NTSISM75	EDITFLAGS	<9721: 18232 37 (B)>	Practical Salinity [psu] @ Depth [m] = {802:1} -> 4
2013-03-06T17:08:43	ccoatano@NTSISM75	EDITFLAGS	<11407: 18844 69 (B)>	Practical Salinity [psu] @ Depth [m] = {786:1} -> 4
2013-03-07T08:54:57	ccoatano@NTSISM75	EDITFLAGS	<10746: 18397 56 (B)>	Practical Salinity [psu] @ Depth [m] = {1007:1} -> 4
2013-03-07T08:57:00	ccoatano@NTSISM75	EDITFLAGS	<10728: 18397 38 (B)>	Practical Salinity [psu] @ Depth [m] = {599:1} -> 4

*But for feedback to NODC SDN :
LOCAL_ID & EDMO_CODE
are needed*

Feedback from MyOcean to SeaDataNet

"station_id" contain sdn_local_cdi_id and sdn_edmo_code, the separator is blank (" ")

"platform_code" contain the sdn_cruise identifier

Example (sdn_local_cdi_id=98959 ; sdn_edmo_code=729 ; sdn_cruise=0) :

station_id,platform_code,station_date_start,station_date_stop,update_date,parameter,
qc_action, old_qc,new_qc,vertical_reference_start,vertical_reference_stop
98959 729,0,2001-04-25T06:26:00Z,2001-04-25T06:26:00Z,2013-04-
04T16:04:03Z,TEMP,Spike,1,4,1.17,1.6