

# ***ODV – New Developments***



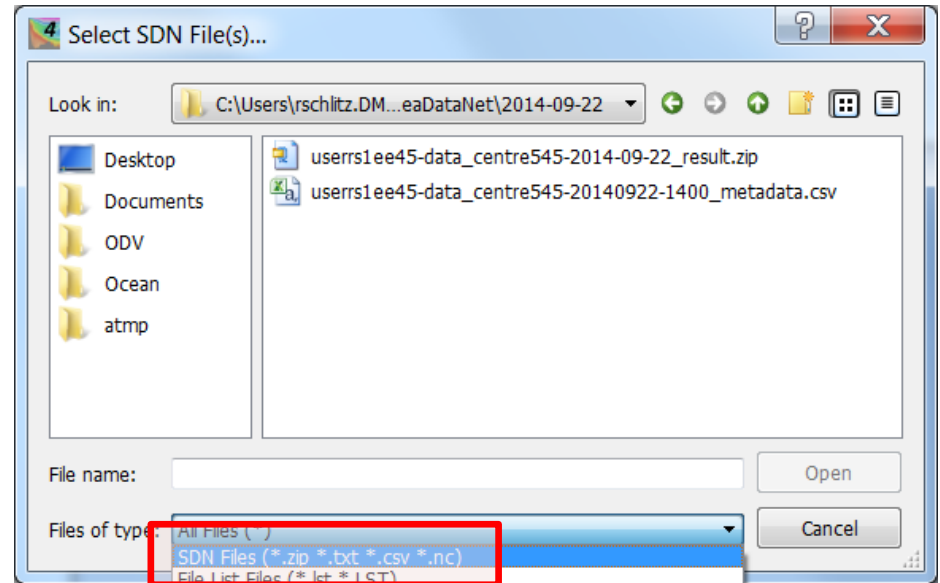
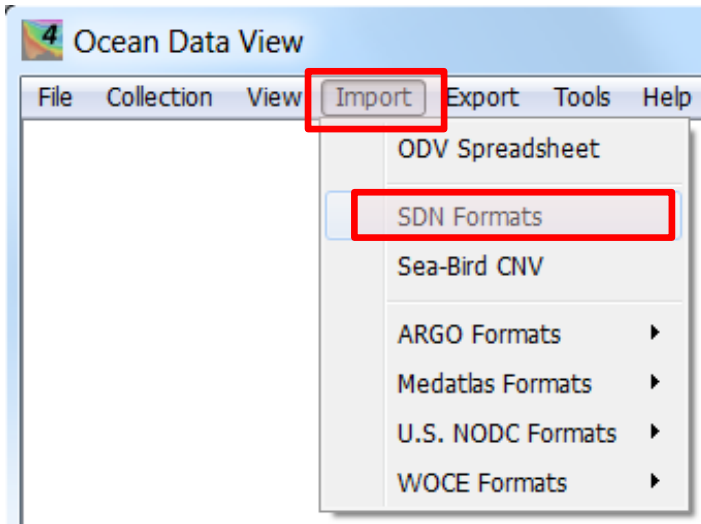
***Reiner Schlitzer***

***Alfred Wegener Institute for Polar and Marine Research***

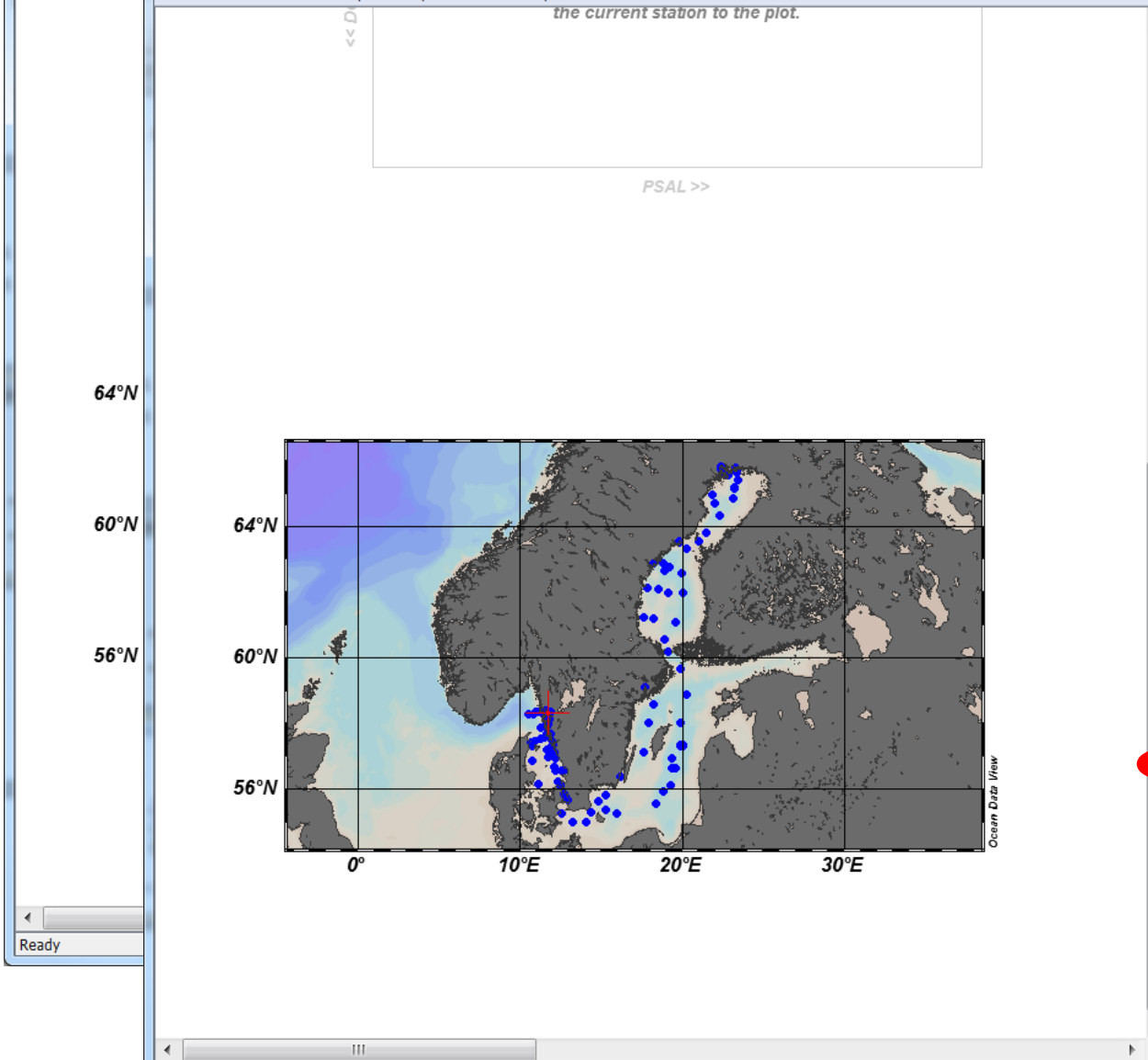
***1. SDN Import Extensions***

***2. P35 Parameter Aggregation***

# SDN Import Extensions



- Metadata enrichment (imports **all** CDI fields provided via csv files)
- Imports *instrument code* and *fall-rate* information from data files
- Supports SDN netCDF files in addition to SDN/ODV txt files
- New 64-bit ODV allows import of all SDN data files in one go



**Station ID: 1**

Vertical resolution

Vertical resoluti...

Instrument / ge... discrete water samplers

Track resolution

Track resolution...

Frequency

Frequency unit

Platform type research vessel

Cruise name 77SN2013

Alternative cruis... 77SN2013

Cruise start date 20130101

Station name HAVSTENSFJORD

Alternative stati... HAVSTENSFJORD

Station start date 19580116

Originator Swedish Meteorological and Hydrological Institute (545)

Data Holding ce... Swedish Meteorological and Hydrological Institute (545)

Project name

EDMED referen...

CSR references

Publication refer...

Data Distributor Swedish Meteorological and Hydrological Institute (545)

Database refere... SHARK

Access/ordering... web data access with registration

Access restriction SeaDataNet licence

CDI-record id 2019071

CDI-record crea... 20140729

CDI-ext...

Reference

**Sample: 1 / 8**

1: Depth [m]	0.00	1
2: TEMP [degrees C]	9.93	1
3: PSAL	22.85	1
4: PPHP [pH units]		9

**Isosurface Values**

Longitude	11.773
Latitude	58.312
Time [yr]	2013.843
Day of Year	308

# Per-Station Data History

The screenshot shows a software interface with a menu bar (File, Collection, View, Import, Export, Tools, Help) and a main window. A red oval highlights a table of data history and a plot below it. The table contains the following rows:

Date	User	Action	Description
2013-08-28T09:21:10	rschlitz@GSYSM234-1	IMPORT (ADD)	from D:/rschlitz/data/importFormats/NODC/WOD09/OSDO5605.gz (2013-07-12T11:54:46)
2013-08-28T11:47:56	rschlitz@GSYSM234-1	EDITFLAGS	Temperature [°C] @ Depth [m] = {0:1 5:1 10:1 25:1 50:1 75:0 100:0 150:0 200:0 250:0} -> 1
2013-08-28T11:57:03	rschlitz@GSYSM234-1	EDITHEADER	Originator's Cruise ->Xaver's Cruise Investigator ->NN, Xaver
2013-08-28T11:58:07	rschlitz@GSYSM234-1	EDITDATA	Temperature [°C] @ Depth [m] = {75:14.02} -> 14.02007
2013-08-28T11:58:34	rschlitz@GSYSM234-1	EDITFLAGS	Temperature [°C] @ Depth [m] = {75:0} -> 1

Below the table is a plot showing data points connected by lines. The plot area is partially obscured by a large blacked-out region on the left side of the interface.

On the right side of the interface, there is a panel for 'Station ID: 4437' with various metadata fields:

- Number: 2353
- WOD09\_US: WOD09\_US
- 6627056 (B)
- 52°W / 65.03°S
- Date: 17 March 1964
- Depth Range [m]: [0 - 250]
- Bot. Depth [m]: 1000
- OCL Cruise Number: 11216
- Originator's Cruise: Xaver's Cruise
- Originator's Station: NN, Xaver
- Investigator: NN, Xaver

Below this is a 'Sample: 6 / 10' table:

Sample	Parameter	Value
1:	Depth [m]	75
2:	Temperature [°C]	14.02
3:	Salinity [psu]	35.080
4:	Oxygen [ml/l]	
5:	Phosphate [µmol/l]	
6:	Silicate [µmol/l]	
7:	Nitrate [µmol/l]	
8:	Nitrite [µmol/l]	
9:	pH	
10:	Chlorophyll [µg/l]	
11:	Plankton/Biomass	
12:	Alkalinity [meq/l]	
13:	NO2+NO3 [µmol/l]	
14:	pCO2 [µatm]	
15:	tCO2 [mmol/l]	
16:	Tritium [TU]	
17:	Helium [nM]	
18:	δ3He [‰]	

At the bottom right, there is an 'Isosurface Values' table:

Parameter	Value
Longitude	-52.000
Latitude	-65.030
Time [yr]	1964.208
Day of Year	77

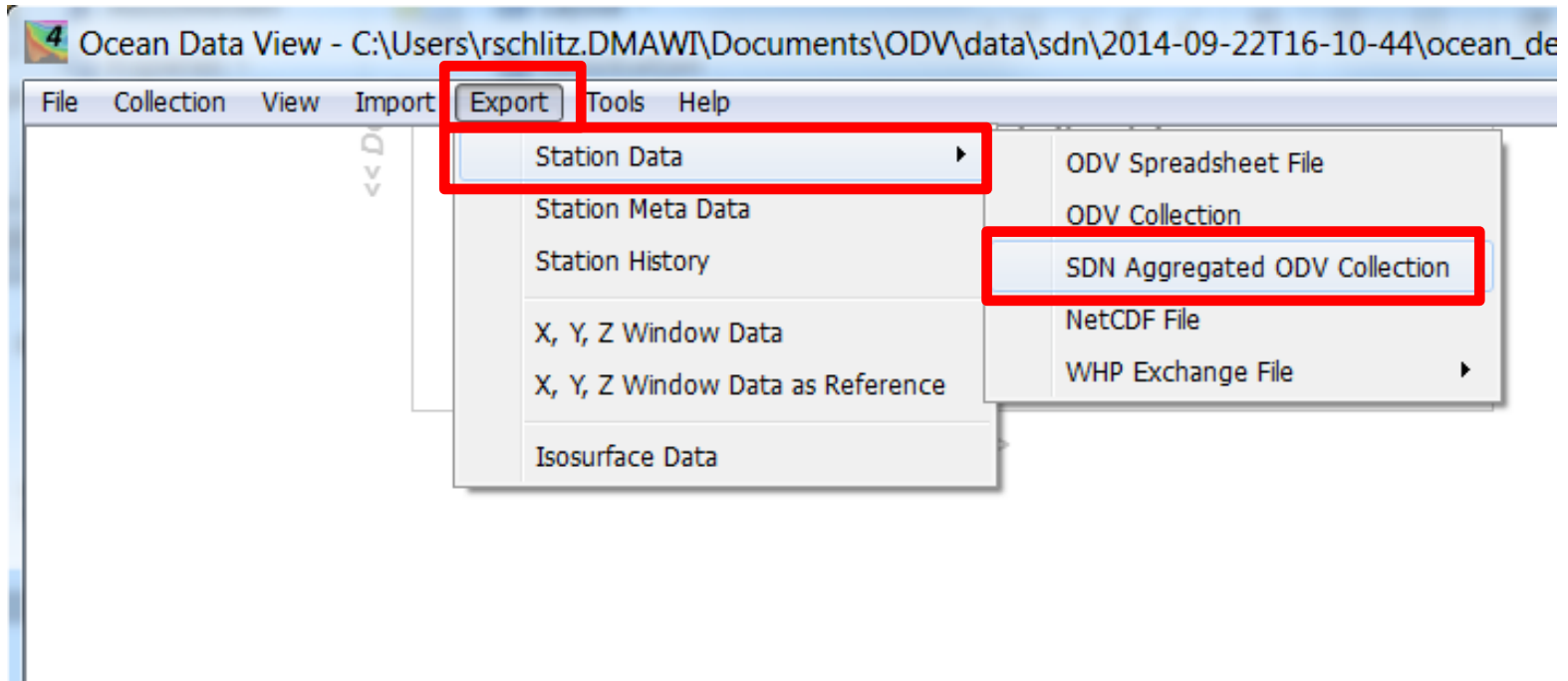
A status bar at the bottom shows 'Ready', 'RW', and '- 5221 / 5221: DefaultView \*'.

**History information stays with station data when exporting to ODV spreadsheet or ODV collection.**

# P35 Parameter Aggregation

```
- <skos:member>
  - <skos:Concept rdf:about="http://vocab.nerc.ac.uk/collection/P35/current/EPC00002/">
    <dc:identifier>SDN:P35::EPC00002</dc:identifier>
    <dce:identifier>SDN:P35::EPC00002</dce:identifier>
    <skos:notation>SDN:P35::EPC00002</skos:notation>
    <skos:prefLabel xml:lang="en">Water body dissolved oxygen concentration</skos:prefLabel>
    <skos:altLabel>Oxygen</skos:altLabel>
    <skos:definition xml:lang="en">Dissolved oxygen per unit volume of a river, estuary, sea or ocean by any method.</skos:definition>
    <owl:versionInfo>1</owl:versionInfo>
    <dc:date>2014-03-12 08:23:35.0</dc:date>
    <skos:note xml:lang="en">accepted</skos:note>
    <owl:deprecated>false</owl:deprecated>
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYSE02/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYZZXX/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYSE01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXMZZXX/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYAAOP/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYPR01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYCZ01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYOP01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYPE01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYPR02/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYSC01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYSU01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYSU02/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYUZ01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYWITX/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYZZ01/" />
    <skos:narrower rdf:resource="http://vocab.nerc.ac.uk/collection/P01/current/DOXYUZ02/" />
    <skos:related rdf:resource="http://vocab.nerc.ac.uk/collection/P06/current/UPOX/" />
    <skos:broader rdf:resource="http://vocab.nerc.ac.uk/collection/P36/current/DISGAS/" />
    <void:inDataset rdf:resource="http://vocab.nerc.ac.uk/.well-known/void"/>
  </skos:Concept>
</skos:member>
- <skos:member>
  - <skos:Concept rdf:about="http://vocab.nerc.ac.uk/collection/P35/current/EPC00003/">
    <dc:identifier>SDN:P35::EPC00003</dc:identifier>
    <dce:identifier>SDN:P35::EPC00003</dce:identifier>
    <skos:notation>SDN:P35::EPC00003</skos:notation>
    <skos:prefLabel xml:lang="en">Water body dissolved oxygen saturation</skos:prefLabel>
```

# ***P35 Parameter Aggregation***

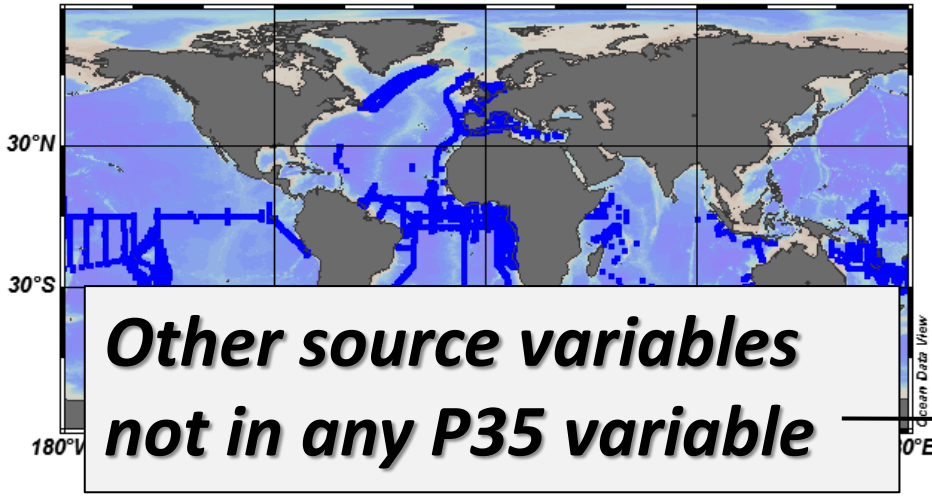


***Source ODV collection must have been produced via***

- ***option Import > SDN Formats***
- ***using ODV 4.6.3 or later***

Water body silicate [ $\mu\text{mol/l}$ ] >>

***P35 aggregated variables***



***Other source variables not in any P35 variable***

**Station ID: 4304**

Accession Number	4304
Cruise	CIVA 1 - MD 74
Station	00390 (B)
Position	30.005°E / 49.333°S

**Sample: 1 / 24**

1: Depth [m]	11.10	1
2: Water body urea [ $\mu\text{mol/l}$ ]		9
3: Water body silicate [ $\mu\text{mol/l}$ ]	3.47	1
4: Water body salinity [per mille]	33.85	1
5: Water body phosphate [ $\mu\text{mol/l}$ ]	1.37	1
6: Water body phaeopigments [ $\text{mg/m}^3$ ]		9
7: Water body nitrite [ $\mu\text{mol/l}$ ]		9
8: Water body nitrate plus nitrite [ $\mu\text{mol/l}$ ]		9
9: Water body nitrate [ $\mu\text{mol/l}$ ]	21.41	1
10: Water body dissolved+particulate copper [n...]		9
11: Water body dissolved oxygen concentration...	316.32	1
12: Water body dissolved nickel [nmol/l]		9
13: Water body chlorophyll-c [ $\text{mg/m}^3$ ]		9
14: Water body chlorophyll-b [ $\text{mg/m}^3$ ]		9
15: Water body chlorophyll-a [ $\text{mg/m}^3$ ]		9
16: Water body ammonium [ $\mu\text{mol/l}$ ]		9
17: ITS-90 water temperature [degrees C]	5.39	1
18: Pressure [dBar]	11.20	1
19: ALKW [ $\mu\text{mol/kg}$ ]		9
20: TOCW [ $\mu\text{mol/l}$ ]		9
21: CPH4 [ $\text{mg/m}^3$ ]		9
22: TSMP [ $\text{mg/l}$ ]		9
23: OSMP [ $\text{mg/l}$ ]		9
24: ISMP [ $\text{mg/l}$ ]		9

**Isosurface Values**

Longitude	30.005
Latitude	-49.333
Time [yr]	1993.175
Day of Year	64



# ***P35 Aggregation Rules***

- **P35 aggregated variables use SDN quality flags**

**If a given file only contains data for one contributing variable (e.g., DOXZZ01):**

- **data value and quality flag are used as given (covers >95% of cases)**




**If a given file contains data for more than one contributing variable:**

- **median of contributing data values is used**
- **quality flag inheritance (poorest quality contributor rule)**

# ***ODV API***

- **released Sep 2013**
- **used by IFREMER OCEANOTRON to serve data in ODV collections over the Internet**

## Data Errors, Quality Flags and Data Infos

59: Ag_D_CONC_BOTTLE [pmol/kg]		9	
60: Al_D_CONC_BOTTLE [nmol/kg]	24.28 ± 0.22	1	
61: Al_TD_CONC_BOTTLE [nmol/kg]		9	
62: Ba_D_CONC_BOTTLE [nmol/kg]		9	
63: Cd_D_CONC_BOTTLE [nmol/kg]	0.30	1	
64: Cu_D_CONC_BOTTLE [nmol/kg]		9	
65: Fe_D_CONC_BOTTLE [nmol/kg]	0.63	1	
66: Fe_D_CONC_BOTTLE_FIA [nm...]	0.64 ± 0.03	1	
67: Fe_II_D_CONC_BOTTLE [nmol/...]		9	