

# Introduction to the Rosetta tool for converting ASCII data to NetCDF

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# What Rosetta does

- Converts textfiles to netCDF files
  - Can add user defined metadata
  - With or without the use of a template
- Creates a templatefile for future conversions.
  - Contains all the inputs made to create the netCDF file, except the input file
  - Can also be made as ‘quick saves’ during each step of the process



# How to use Rosetta

- The steps in the process are:
  - Choose to start with a template or not
  - Select type of observation platform
  - Specify which lines in the datafile are headerlines
  - Specify delimiter and decimal separator
  - Specify variables
  - Specify variable attribute details
  - Specify site specific information
  - Specify general information
  - Download the resulting netCDF file (and a new templatefile)





# Rosetta

<https://tomcat.nersc.no/rosetta>

*This specific version of Rosetta has been tailored for NMDC, NorDataNet and SIOS.*



Welcome to Rosetta, a data transformation tool. Rosetta is a web-based service that provides an easy, wizard-based interface for data collectors to transform their datalogger generated ASCII output into Climate and Forecast (CF) compliant netCDF files. These files will contain the metadata describing what data is contained in the file, the instruments used to collect the data, and other critical information that otherwise may be lost in one of many dreaded README files.



In addition, with the understanding that the observational community does appreciate the ease of use of ASCII files, methods for transforming the netCDF back into a user defined CSV or spreadsheet formats is planned to be incorporated into Rosetta.

We hope that Rosetta will be of value to the science community users who have needs for transforming the data they have collected or stored in non-standard formats.



Rosetta is currently under continued further development, and ready for beta testing.

## What would you like to do?

Convert a file to the netCDF format and create a new template

Upload, modify, and use an existing template

[Rosetta User Manual](#)



# How to use Rosetta

- Select to start without a template:

## What would you like to do?

Convert a file to the netCDF format and create a new template

Upload, modify, and use an existing template

Click on the button “Convert a file to the netCDF format and create a new template”



# Select type of observation system

browse and upload a template file,  
and on the next screen the data file.

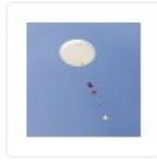
## Select Observation Platform



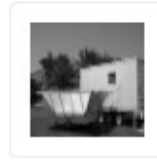
Single Station or  
Tower (timeSeries)



Moored Buoy  
(profile)



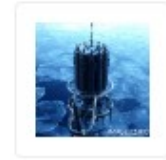
Radiosonde  
(trajectory)



Wind Profiler  
(profile)



Aircraft  
(trajectory)



Single CTD/XBT  
cast (profile)

Four coordinate axes: time, lat(itude), lon(gitude), alt(itude/depth)

## Profiles

Fixed: time, lat, lon  
Vary: alt

## Time series

Fixed: lat, lon, alt  
Vary: time

## Trajectories

Fixed: alt  
Vary: time, lat, lon



# Upload input file

## Rosetta

- ▶ Select Observation Platform
- ▶ **Upload File**
- ▶ Specify Header Lines
- ▶ Specify Delimiters
- ▶ Specify Variable Attributes
- ▶ Specify Site Specific Information
- ▶ Specify General Information
- ▶ Download Converted File

### Upload File

Upload an ASCII file, or an MS Excel 97 (.xls) file. Max file size is 10 MB.

WE\_STA00...veraged.cnv



# Specify header-lines

## Rosetta

- ▶ Upload Template
- ▶ Upload File
- ▶ **Specify Header Lines**
- ▶ Specify Delimiters
- ▶ Specify Variable Attributes
- ▶ Specify Site Specific Information
- ▶ Specify General Information
- ▶ Download Converted File
- ▶ Publish

Previous

Next

### Specify Header Lines

Indicate which lines are header (i.e. not data) lines, or select 'No Header Lines' if there are none.

No header lines available in this file

	#	Line Data
<input checked="" type="checkbox"/>	0	Seaguard CTD DW
<input checked="" type="checkbox"/>	1	Product number: 4421
<input checked="" type="checkbox"/>	2	Serial number: 508
<input checked="" type="checkbox"/>	3	System Parameters(0) Optode Sensor 4835#140(140) DCS #374(374)
<input checked="" type="checkbox"/>	4	Record Time tag (Gmt) Battery Voltage(V) Memory Used(Bytes) Las
<input type="checkbox"/>	5	0 17.03.22 11:08:50 8.508 8503296 299827 0.000 371.208 97.062 €
<input type="checkbox"/>	6	1 17.03.22 11:13:50 8.514 8515584 299993 0.000 372.766 97.597 €
<input type="checkbox"/>	7	2 17.03.22 11:18:50 8.514 8523776 299994 0.000 371.399 97.253 €
<input type="checkbox"/>	8	3 17.03.22 11:23:50 8.519 8523776 299994 0.000 371.326 97.249 €
<input type="checkbox"/>	9	4 17.03.22 11:28:50 8.514 8523776 299994 0.000 371.325 97.249 €
<input type="checkbox"/>	10	5 17.03.22 11:33:50 8.519 8523776 299993 0.000 371.682 97.333 €
<input type="checkbox"/>	11	6 17.03.22 11:38:50 8.519 8523776 299994 0.000 371.840 97.367 €

Quick Save





# Specify delimiters

## Rosetta

▶ Select Observation Platform

▶ Upload File

▶ Specify Header Lines

▶ **Specify Delimiters**

▶ Specify Variable Attributes

▶ Specify Site Specific Information

▶ Specify General Information

▶ Download Converted File

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### Specify Delimiters

**Please specify delimiter(s) used.**

<input type="checkbox"/> Tab	<input type="checkbox"/> Comma	<input type="checkbox"/> Whitespace	<input type="checkbox"/> Colon
<input type="checkbox"/> Semicolon	<input type="checkbox"/> Single Quote	<input type="checkbox"/> Double Quote	<input type="checkbox"/> Other

**Please specify decimal separator used.**

Point

Comma

Specify delimiter between data columns,  
and decimal separator



# Specify variable attributes

## Specify Variable Attributes

Click on each column and specify the information asked for. Specify 'Do not use this column of data' for all columns that are not to. All columns must have a green tickmark before you can continue.

#	Do Not Use	time	Do Not Use	
0	Seaguar			
5	17.03.22 11..	8.508		
6	17.03.22 11..	8.514		
7	17.03.22 11..	8.514		
8	17.03.22 11..	8.519		
9	17.03.22 11..	8.514		
10	17.03.22 11..	8.519		
11	17.03.22 11..	8.519		
12	17.03.22 11..	8.519		
13	17.03.22 11..	8.519		
14	17.03.22 11..	8.519		

### Enter Variable Attributes

What would you like to do with this column of data?

Assign a variable name  Do not use this column of data

time

use metadata from another column?

Is this variable a coordinate variable? (examples: latitude, longitude, time)

Yes  No

What type of coordinate variable?

Full date and time string

Specify variable data type:

Integer  Float (decimal)  Text

Required Metadata:

Variable Description

Units

show unit builder

Recommended Metadata:

CF Name

Additional Metadata:

Calendar Type

### Enter Variable Attributes

What would you like to do with this column of data?

Assign a variable name  Do not use this column of data

mole\_concentration\_of\_dissol

use metadata from another column?

Is this variable a coordinate variable? (examples: latitude, longitude, time)

Yes  No

Specify variable data type:

Integer  Float (decimal)  Text

Required Metadata:

Instrument Description

Missing Value

Variable Description

Units

show unit builder

Recommended Metadata:

Instrument Height (negative for depths)

Instrument Height Unit

Maximum Value (Calibrated)

Minimum Value (Calibrated)

CF Name

Additional Metadata:

Calibration Range

Tip:  
If you have time as coordinate variable. Check with Appendix D and E in the user manual to set the correct unit string.



# Specify site specific information

The variables on this page are “Station or platform name” and the fixed variables for the selected observation platform type.

Can use regular expressions to simplify making many netCDF files based on a template.

## Rosetta

▶ Upload Template  
▶ Upload File  
▶ Specify Header Lines  
▶ Specify Delimiters  
▶ Specify Variable Attributes  
▶ **Specify Site Specific Information**  
▶ Specify General Information  
▶ Download Converted File  
▶ Publish

### Specify Site Specific Information

\* denotes required field

*Station or Platform Name? <input type="checkbox"/> is a regex Seaguard CTD DW	*Altitude? <input type="checkbox"/> is a regex -5 meters
*Latitude? <input type="checkbox"/> is a regex 59.773983 degrees_north	*Longitude? <input type="checkbox"/> is a regex 5.330516 degrees_east

\*Station or Platform Name?

is a regex

KV\_SVALBARD

\*Station or Platform Date and Time?

is a regex

\\* System UTC = (\d{4})-\d{2}

\*Station Latitude?

is a regex

\\* NMEA Latitude = (\d+\.\d+) degrees\_north

\*Station Longitude?

is a regex

\\* NMEA Longitude = (\d+\.\d+) degrees\_east



# Specify General information

**Specify General Information**

\* denotes required field

<p>* Title ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="SFI Smart Ocean: Oceanographic and acoustic data collec"/>	<p>* License ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="https://creativecommons.org/licenses/by/4.0/. Users must i"/>	<input type="button" value="Add custom attribute"/>
<p>* Naming Authority ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="no.nersc.sfishmartocean"/>	<p>* ID ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="Bomlo2022_instrument1"/>	
<p>* ISO Topic Category ⓘ</p> <p>oceans ▼</p>	<p>* Keywords Vocabulary ⓘ</p> <p>GCMD Science Keywords ▼</p>	
<p>* Keywords ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="EARTH SCIENCE, OCEANS, OCEAN TEMPERATURE"/>	<p>* Data Assembly Center ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="NERSC"/>	
<p>* Summary ⓘ</p> <input type="text" value="Oceanographic data collected with a mooring"/>	<p>* Processing Level ⓘ</p> <input type="text" value="Converted to text."/>	
<p>* Publisher Name ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="Nansen Environmental and Remote Sensing Center"/>	<p>Publisher Email ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="datamanager@nersc.no"/>	
<p>Publisher Url ⓘ</p> <p><input type="checkbox"/> is a regex</p> <input type="text" value="https://www.nersc.no/"/>	<p>Publisher Type ⓘ</p> <p>person ▼</p>	

Publisher Institution  
Project  
Project ID  
Funding Agency  
Project Lead  
Project Lead Email  
Prinsipal Investigator  
Prinsipal Investigator Email  
Investigator  
Investigator Email  
Cruise ID  
Cruise Responsible  
Cruise Responsible Email  
Contributor Name  
Contributor Email  
Contributor Role  
Related Url  
Data Set Language  
Platform  
Source  
History  
Data Set Progress  
References  
Comment  
Citation  
Acknowledgement  
Area  
Geospatial Lat Resolution  
Geospatial Lon Resolution  
Geospatial Vertical Positive  
Geospatial Vertical Resolution  
Time Coverage Resolution  
Update Interval



# Download result



On this page you can download the resulting netCDF file, and a template file, with all of your input from all the pages.

Unless there is one or more errors...

## Rosetta

- ▶ Upload Template
- ▶ Upload File
- ▶ Specify Header Lines
- ▶ Specify Delimiters
- ▶ Specify Variable Attributes
- ▶ Specify Site Specific Information
- ▶ Specify General Information
- ▶ **Download Converted File**
- ▶ Publish

### Download Converted File

-  [netCDF Data File](#)
-  [AADI\\_RCM-Rosetta\\_2022-12-07\\_164012.template](#)

### Download Converted File

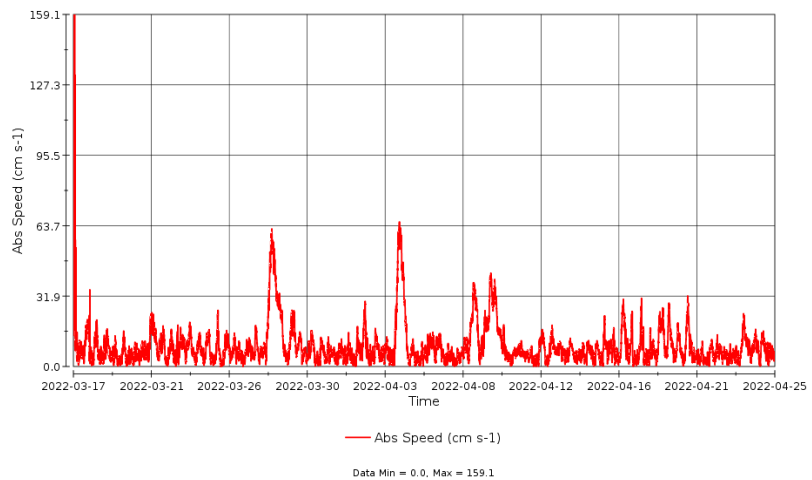
[For input string: "34 5.330516"](#)

### Download Converted File

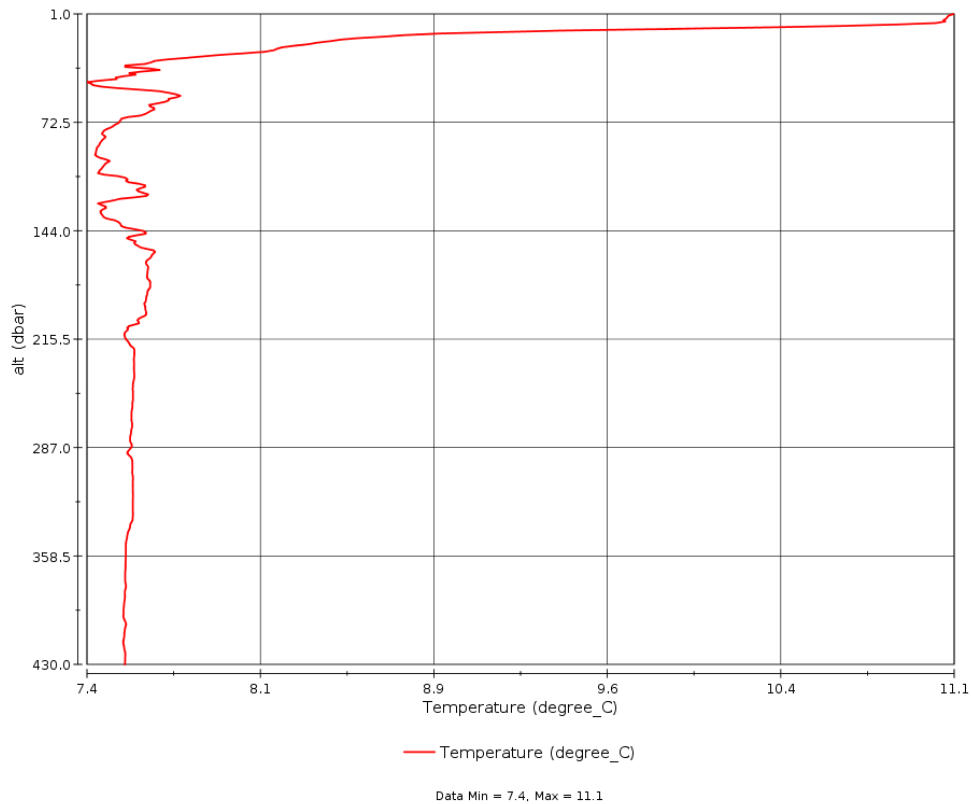
[multiple points](#)



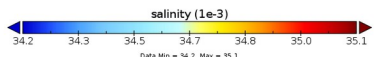
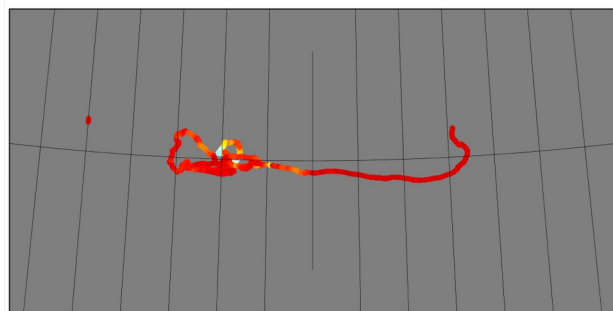
### Abs Speed



### Temperature



### salinity



# Thank you!

<http://tomcat.nersc.no/rosetta/>

