WOCE-SSS

WOCE-SSS

17 June 2015

cordo-mut-02-047

USER'S MANUAL

Version 1.0

WOCE-SSS

User's manual

Ref : cordo-die-02-047

Version : 0.3

Date : 17/06/2015

Authors : Loïc Petit de la Villéon, Thierry Carval / Ifremer

Table of contents

History

Version	Date	Comment
0.1	07/03/2002	Loïc Petit de la Villéon : original version
0.2	20/06/2002	Denis Croize-Fillon : general update
1.0	24/06/2002	Thierry Carval, Denis Croizé-Fillon : contrôle

1. Introduction

This document is the WOCE-SSS data user's manual.

It contains the description of the formats and netcdf files of the WOCE-SSS cd-rom.

2. WOCE V3 netCDF trajectory format

The current version of format is 1.0 .

This format is derived from the Argo Trajectory format (2.0).

A WOCE trajectory file contains locations and measurements of temperature and salinity. There is one trajectory file per voyage.

2.1. Dimensions and definitions

Name	Definition	Comment
DATE_TIME	DATE_TIME = 14 ;	This dimension is the length of an ascii date and time value. DATE_TIME convention is : YYYYMMDDHHMISS • YYYY : year • MM : month • DD : day • HH : hour of the day • MI : minutes • SS : seconds Date and time values are always in universal time coordinate (UTC). Examples : 20010105172834 : January 5th 2001 17 :28 :34 19971217000000 : December 17th 1997 00:00:00
WOCE_DATE	WOCE_DATE = 8	length of woce date (yyyymmdd UTC)
WOCE_TIME	WOCE_TIME = 10	length of woce time (hhmmss.ddd UTC)
STRING256 STRING64 STRING32 STRING16 STRING8 STRING4 STRING2	STRING256 = 256; STRING64 = 64; STRING32 = 32; STRING16 = 16; STRING8 = 8; STRING4 = 4; STRING2 = 2;	Null terminated string dimensions from 1 to 256.
N_PARAM	N_PARAM = 3	Maximum number of parameters. (depth, temperature, salinity) : N_PARAM = 3
N_MEASUREMENT	N_MEASUREMENT = unlimited;	This dimension is the number of recorded locations and measurements of the file.

2.2. Global attributs

Name	Definition	Comment
	:WOCE_Version = "3.0"	Version of Woce netCDF format
	:Conventions = "COARDS/WOCE"	Cooperative Ocean / Atmosphere Research Data Service
	:DAC_ID = "cruise_name"	DAC ID

2.3. General information on the trajectory file (Coriolis)

This section contains information about the whole file.

Name	Definition	Comment
data_type	char data_type (STRING16); data_type:comment = "Data type";	This field contains the type of data contained in the file. Example : WOCE trajectory
reference_date_time	char reference_date_time (DATE_TIME); reference_date_time:comment = "Date of reference for Julian days"; reference_date_time:conventions = "YYYYMMDDHHMISS";	Date of reference for julian days. The recommended reference date time is «19000101000000» : january 1st 1900 00:00:00

2.4. General information on the plateform (Coriolis)

This section contains general information on the platform

Name	Definition	Comment
platform_name	char platform_name (STRING64); platform_ name:long_name = "Platform name";	Name of the platform Example : L'ATALANTE
project_name	char project_name (STRING64); project_name:comment = "Name of the project";	Name of the project which operates the ship line. Example : Ovide
pi_name	char pi_name (STRING64); pi_name:comment = "Name of the principle investigator";	Name of the principle investigator in charge of the line. Example : Fabienne Gaillard
trajectory_parameters	char trajectory_parameters (N_PARAM,STRING8); trajectory_parameters:long_name = "List of available parameters for the station";	List of parameters contained in this trajectory file. Examples : sst, sss, depth sst : sea surface temperature in degrees celsius sss : sea surface salinity in psu
data_centre	char data_centre(STRING2); data_centre:long_name = "Data centre in charge of float data processing"; data_centre:conventions = "GTSPP table";	Code for the data center in charge of the data management. The data center codes are described in the reference tables section. Example : ME for MEDS
date_creation	char date_creation (DATE_TIME); date_creation:comment = "Date of file creation "; date_creation:conventions = "YYYYMMDDHHMISS";	Date and time (UTC) of creation of this file. Format : YYYYMMDDHHMISS Example : 20011229161700 : December 29th 2001 16 :17 :00
date_update	char date_update(DATE_TIME); date_update:long_name = "Date of update of this file"; date_update:conventions = "YYYYMMDDHHMISS";	Date and time (UTC) of update of this file. Format : YYYYMMDDHHMISS Example : 20011230090500 : December 30th 2001 09 :05 :00
data_state_indicator	char data_state_indicator (STRING4); data_state_indicator:long_name = "Degree of processing the data have passed through"; data_state_indicator:conventions = "OOPC table";	Degree of processing the data has passed through. The data state indicator is described in the reference tables.

2.5. WOCE NetCDF V3 variables

Name	Definition	Comment
time	double (N_MEASUREMENT) ; time:long_name = "time" ; time:units = "minutes since 1900-1-1 0:0:0" ; time:data_min ; time:data_max ; time:_FillValue = -99999 ;	Minutes since 1900-1-1 data_min is the minimum value data_max is the maximum value
woce_date	char woce_date (N_MEASUREMENT, WOCE_DATE) ; woce_date:long_name = "WOCE date" ; woce_date:units = "yyyymmdd UTC" ; woce_date:data_min ; woce_date:data_max ; woce_date:_FillValue = " ";	date as 20021102 for 2002/11/02 data_min is the minimum value data_max is the maximum value
woce_time	char woce_time (N_MEASUREMENT, WOCE_TIME) ; woce_time:long_name = "WOCE time of day" ; woce_time:units = "hhmmss.ddd UTC" ; woce_time:data_min ; woce_time:data_max ; woce_time:_FillValue = " ";	time as 132132.963 for 13 h 21' 32".963 data_min is the minimum value data_max is the maximum value
latitude	double latitude (N_MEASUREMENT); latitude:long_name = "latitude"; latitude:units = "degrees_N"; latitude:data_min ; latitude:data_max ; latitude:valid_min = -90.; latitude:valid_max = 90.; latitude:_FillValue = -99999.;	Latitude of the location (or measurement). Unit : degree north Example : 44.4991 for 44° 29' 56.76" N data_min is the minimum value data_max is the maximum value
longitude	double longitude (N_MEASUREMENT); longitude:long_name = "longitude"; longitude:units = "degrees_E"; longitude:data_min ; longitude:data_max ; longitude:valid_min = -180.; longitude:valid_max = 180.; longitude:_FillValue = -99999.;	Longitude of the location (or measurement). Unit : degree east Example : -16.7222 for 16° 43' 19.92" E data_min is the minimum value data_max is the maximum value
depth	float depth (N_MEASUREMENT); depth:long_name = "depth"; depth:units = "meters" ; depth:positive="down" ; depth:data_min ; depth:data_max ; depth:_FillValue = 99999. ; depth:c_format = "%5.1f" ; depth:FORTRAN_format = "F5.1" ;	depth of the measurements data_min is the minimum value data_max is the maximum value

2.6. WOCE DAC variables

sst	float sst (N_MEASUREMENT); sst:long_name = "sea surface temperature"; sst:units = "degree_C"; sst:data_min ; sst:data_max ;	sst contains a measured temperature at surface. Unit : degree celsius Example : 18.790

	sst:_FillValue = 99999.f; sst:C_format = "%9.3f"; sst:FORTRAN_format="F9.3";	data_min is the minimum value data_max is the maximum value
sss	float sss (N_ MEASUREMENT); sss:long_name = "sea surface salinity"; sss:units = "psu"; sss:data_min ; sss:data_max ; sss:_FillValue = 99999.f; sss:C_format = "%9.3f"; sss:FORTRAN_format="F9.3";	sst contains a practical salinity at surface. Unit : psu Example : 34.530 data_min is the minimum value data_max is the maximum value

2.7. Quality variables (Coriolis)

position_qc	char position_qc (N_MEASUREMENT); position_qc:long_name = "Quality on position"; position_qc:conventions = "Q where Q =[0-9]"; position_qc:_FillValue = "0"; position_qc:data_min ; position_qc:data_max ; position_qc:units = "" ;	Quality flag on position. The flag on position is set according to (LATITUDE, LONGITUDE, JULD_LOCATION) quality. The flag scale is described in the reference tables section. Example : 1 : position seems correct. data_min is the minimum value data_max is the maximum value
sst_qc	char sst_qc (N_ MEASUREMENT); sst_qc:long_name = "quality on temperature"; sst_qc:conventions = "Q where Q =[0-9]"; sst_qc:_FillValue = "0"; sst_qc:data_min ; sst_qc:data_max ; sst_qc:units = "" ;	Quality flag on temperature. The flag scale is described in the reference tables section. data_min is the minimum value data_max is the maximum value
sss_qc	char sss_qc (N_ MEASUREMENT); sss_qc:long_name = "quality on salinity"; sss_qc:conventions = "Q where Q =[0-9]"; sss_qc:_FillValue = "0"; sss_qc:data_min ; sss_qc:data_max ; sss_qc:units = "" ;	Quality flag on salinity. The flag scale is described in the reference tables section. data_min is the minimum value data_max is the maximum value

3. Reference tables

Quality flags	
Value	Description
0	Unqualified
1	Correct value (all ckecks passed)
2	Probably good but value inconsistent with statistics (differ from climatology)
3	Probably bad (spike, gradient, … if other tests passed)
4	Bad value, Impossible value (out of scale, vertical instability, constant profile, …)
5	Value modified during quality control
6-7	Not used (available)
8	Interpolated value
9	Missing value