

Processing application environment, Data Processing RV_ADCP process Configuration

SOCIB-Data Center Facility

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Índice de contenido

INTRODUCTION:	4
RELATED DOCUMENTS	4
REQUIRED FEATURES	4
PROCEDURE DEVELOPMENT	4
PROCESSING APPLICATION	5
Parsing functions for SCB-RDi001	6
SOCIBRVOceanSurveyorADCP	6
SOCIBRVOceanSurveyorADCPFactory	7
NewDataManager	7
INSTRUMENTATION APPLICATION	8
Parsing Function Catalog	8
Variable	9
Sensor	11
Instrument	12
SOCIB RV Platform	12
RV_ADCP Process	13
Process Platform RV_ADCP	20

1. INTRODUCTION:

The aim of this document is to describe a standardized procedure to configure the parsing functions that control the netCDF files generation from the ADCP profiles data acquired during the R/V SOCIB cruises.

This procedure is applicable to the following SOCIB instruments:

- SCB-RDi001. sn 1878

2. RELATED DOCUMENTS

- [Processing configuration](#)
- [SOP_RV_F_VMADCP-winadcp-software-execution](#)

3. REQUIRED FEATURES

- Desktop or laptop.
- Internet connection.
- Access to */home/vessel*.
- java processing-library.
- IDE Eclipse.
- Instrumentation Application access.

4. PROCEDURE DEVELOPMENT

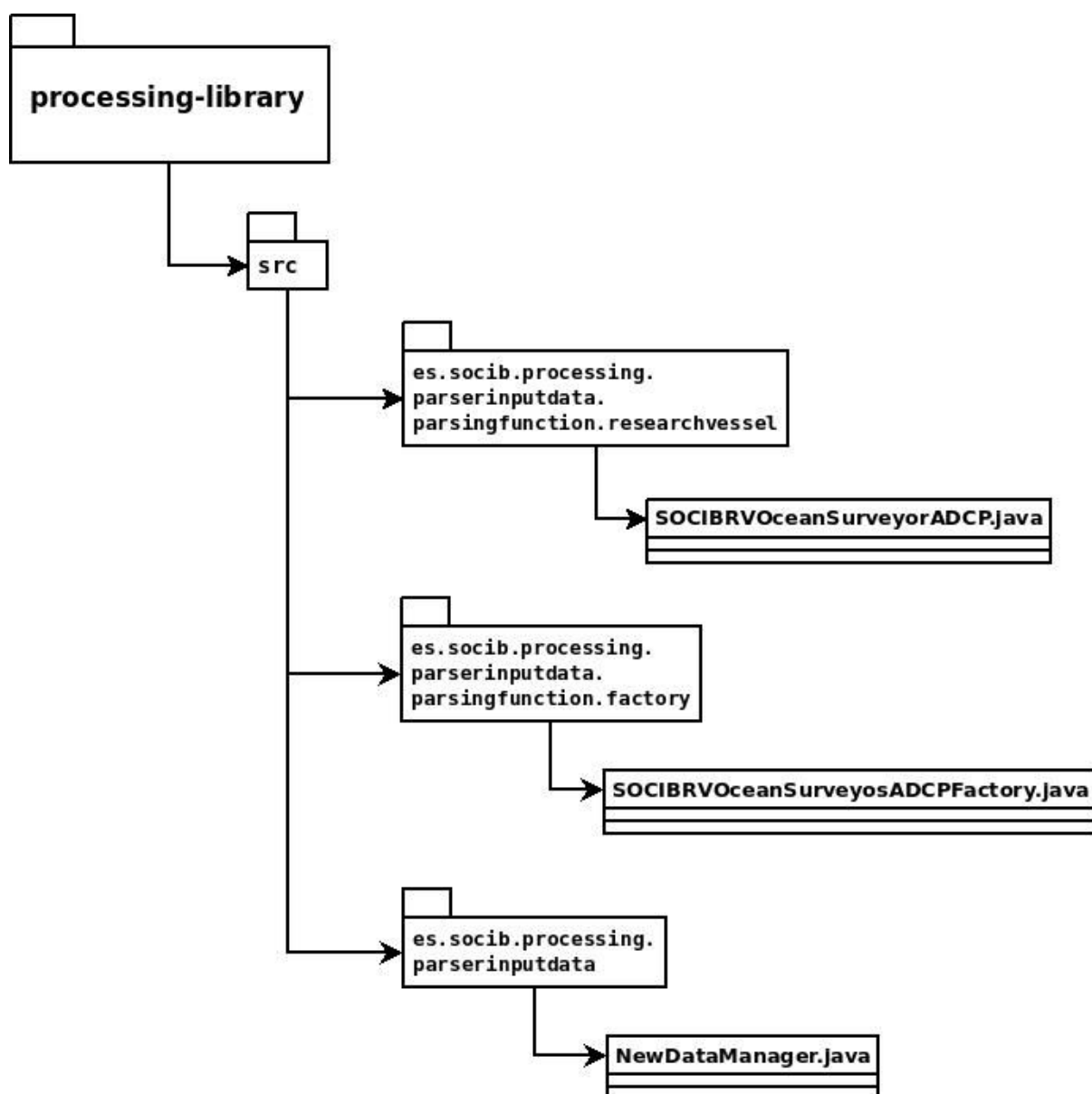
The following sections show how to properly configure the RV_ADCP process through the following applications:

- Processing Application
- Instrumentation Application
- postgresSQL Instrumentation database

4.1. PROCESSING APPLICATION

There are three different classes that need to be edited in order to generate new parsing functions to read different pre-processed .txt files. This section shows the current parsing functions for the SCB-RDi001 instrument.

The following figure shows where are the java classes that define the parsing functions stored.



4.1.1. Parsing functions for SCB-RDi001

The following java classes hold the parsing process for the **SCB-RDi001**.

4.1.1.1. SOCIBRVOceanSurveyorADCP

This class reads the .txt files that have been pre-processed using the WinADCP Software by using a regular expression.

```
//Declare regular expressions to match data lines
private final static String SEP = "\\t";
private final static String INT = "[+-]?\\d+)?\\t";
private final static String INTend = "[+-]?\\d+)?";
private final static String INT_BT = "[+-]?\\d+)?\\s+";
private final static String DEC = "[+-]?\\d+\\.\\d+)?\\t";
private final static String DECend = "[+-]?\\d+\\.\\d+)?\\t\\s+";
private final static String INTrepeated50 = StringUtils.repeat(INT, 50);
private final static String DECrepeated50 = StringUtils.repeat(DEC, 50);

private final static String REG_EXP_50 = "^"
+ INT
+ INT + INT + INT
+ INT + INT + INT + INT + SEP
+ DEC + DEC + DEC
+ DEC + DEC
+ INTrepeated50 + INTrepeated50 + INTrepeated50 + INTrepeated50
+ INTrepeated50 + INTrepeated50 + INTrepeated50 + INTrepeated50
+ INTrepeated50 + INTrepeated50 + INTrepeated50 + INTrepeated50
+ INTrepeated50 + DECrepeated50
+ INTrepeated50 + INTrepeated50 + INTrepeated50 + INTrepeated50
+ INT + INT + INT + INT + INT + DEC
+ INT + INT + INT + DEC
+ DEC + DEC + DEC + DECend
+ INT_BT + INT_BT + INT_BT + INTend
+ "$";

//Takes into account 50 cells
// ensemble
// year month day
// hour minute sec centsec
// pitch, roll, heading
// temp, plat depth
// EA1,EA2,EA3,EA4
// C1,C2,C3,C4
// Eas, Nor, Ver, Err
// Mag, Dir
// PG1,PG2,PG3,PG4
// BTE, BTN, BTv, BTe, BTM, BTD
// NVE,NVN,NVM,NVD
// FLat,FLon,LLat,LLon
// BD1, BD2, BD3, BD4
```

4.1.1.2. SOCIBRVOceanSurveyorADCPFactory

```
package es.socib.processing.parserinputdata.parsingfunction.factory;

import es.socib.processing.parserinputdata.ModelParser;
import es.socib.processing.parserinputdata.AbstractModelParserFactory;
import es.socib.processing.parserinputdata.parsingfunction.researchvessel.SOCIBRVOceanSurveyorADCP;

/**
 * @author cmunoz
 */
public class SOCIBRVOceanSurveyorADCPFactory extends AbstractModelParserFactory {

    /**
     * socibRVOceanSurveyorADCP the {@link SOCIBRVOceanSurveyorADCP} instance
     */
    private SOCIBRVOceanSurveyorADCP socibRVOceanSurveyorADCP;

    /**
     * Construct a new {@link SOCIBRVOceanSurveyorADCPFactory}
     */
    public SOCIBRVOceanSurveyorADCPFactory() {
        this.socibRVOceanSurveyorADCP = new SOCIBRVOceanSurveyorADCP();
    }

    @Override
    public ModelParser getModelParserIntance() {
        return socibRVOceanSurveyorADCP;
    }
}
```

4.1.2. NewDataManager

The following lines are added to this class.

```
67 import es.socib.processing.parserinputdata.parsingfunction.factory.SOCIBRVOceanSurveyorADCPFactory;

271         else if ("SocibRVOceanSurveyorADCP".equals(parsingFunctionName))
272             modelParserFactory = new SOCIBRVOceanSurveyorADCPFactory();
```


4.2. INSTRUMENTATION APPLICATION

Several steps must be taken to properly configure the RV_ADCP process.

4.2.1. Parsing Function Catalog

- Go to Processing > Parsing function catalog and generate a **new parsing function catalog element** SocibRVOceanSurveyorADCP.

NOTE: Remember that the name of the new element must coincide with the parsing function name generated in the processing application.

The screenshot shows the SOCIB Management interface with the 'Parsing function catalog' tab selected. A modal window titled '*New parsing function catalog element' is open, allowing the user to create a new element. The modal contains the following fields:

- *Name:** SocibRVOceanSurveyorADCP
- *Description:** A text area containing a large block of data, likely a sample output or configuration for the parsing function.

The background interface shows a list of existing parsing function catalog elements, including:

- CtdSbe90Type1
- CtdSbe90Type2
- CtdSbe90Type3
- CtdSbe90Type4
- CtdSbe90Type5
- CtdSbe90Type6
- CTRecorderSeaBird
- DrifterIridiumCODE_SBD127
- DrifterIridiumCODE_SBD152
- DrifterIridiumSVPB_SBD
- DrifterMD03
- DrifterMLI
- DrifterODi
- DrifterSPOT
- DriftersST
- Ebro
- IridiumSVP
- MeteoFrance
- Puertos
- RosseteCTDSBE25
- SeagliderLog
- SeaLevelBarometerPib
- SeaLevelH500XLBarometerS
- SeaturtleTracking
- SlocumLog
- SocibRVMeteo
- SocibRVOceanSurveyorADCP
- SocibRVPosition
- SocibRVThermal

4.2.2. Variable

In case you need to import any new variable required that is not already in the variables list, you can do it through pgAdmin.

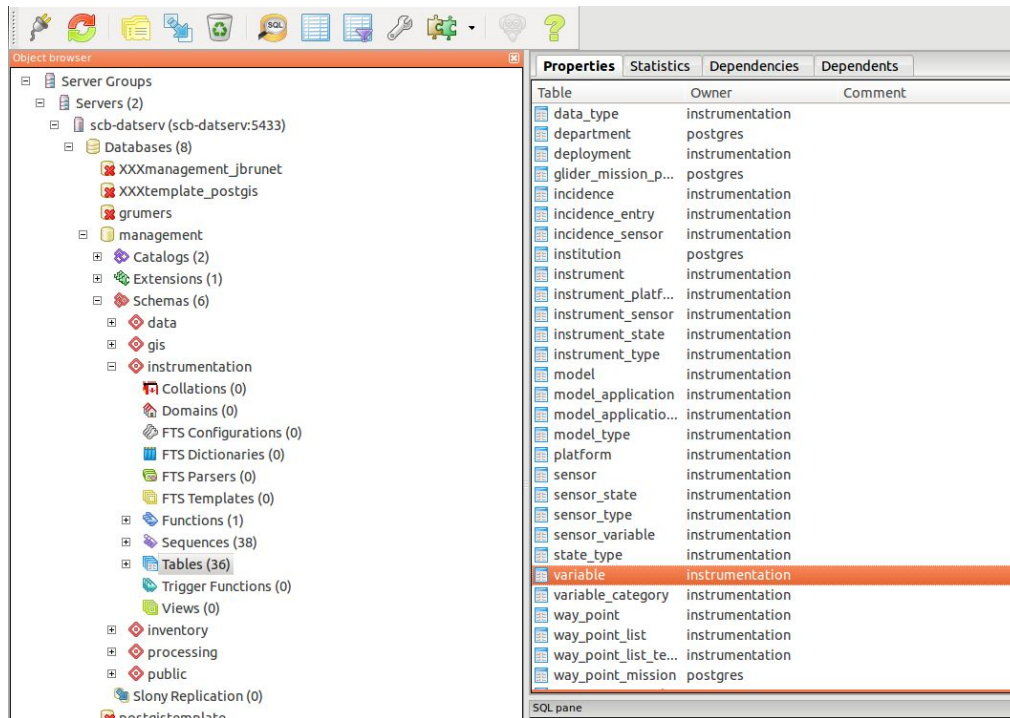
- Open pgAdmin and configure a new connection to scb-datserv:
 - **Name: scb-datserv**
 - **Host Name: scb-datserv**
 - **Port: 5433**
 - **Username: datanucleus**
 - **Password: “datserv password”**
- Note: Ask IT manager for the password.**

The screenshot shows the 'New Server Registration' dialog box with the following configuration:

- Name:** scb-datserv
- Host:** scb-datserv
- Port:** 5433
- Service:** (empty)
- Maintenance DB:** postgres
- Username:** datanucleus
- Password:** (masked with asterisks)
- Store password:** ☒
- Colour:** (empty)
- Group:** Servers

Buttons at the bottom: Ayuda, Aceptar, Cancelar.

- Connect to scb-datserv.
- Select Management database.
- Select Instrumentation Schemas.
- Select variable table.



- Select the variable required.
- Set **variable_favourite** boolean to TRUE.

	old	modification bigint	modification bigint	variable_id [PK] bigint	variable_n text	variable_c text	variable_d text	variable_g text	variable_a text	variable_favourite boolean	variable_v bigint	variable_c bigint	variable_deprecated boolean	variab chara
14	37982	1305117077		19	air temper	K	Air temper	11 E130	ta	TRUE	3	1	FALSE	
15	37897			20	air temper	K	"anomaly"	25	' '	FALSE		1	FALSE	
16	37961			21	air temper	K	cloud top	' '	' '	FALSE	10	1	FALSE	

4.2.3. Sensor

- Select the different sensors belonging to the instrument used for the CTD data through the menu Equipment > Sensor.

Name	Model	Serial	Manufacturer	Purchase date	Sensor type	Instrument
ADCP-SCB-RDI001	150kHz		Teledyne RD Instrum...	2014-09-19 12:00:00	Current meter	SCB-RDI001
ADP-PIB-RDI001	300, 600 or 1200 kHz		Teledyne RDI	2014-11-19 12:00:00	Current meter	PIB-RDI001
WAV-PIB-RDI001	600kHz		Teledyne RDI	2014-11-19 12:00:00	Current meter	PIB-RDI001
WPRE-PIB-RDI001			Teledyne RDI	2014-11-19 12:00:00	Water pressure	PIB-RDI001
WTEM-PIB-RDI001			Teledyne	2014-11-19 12:00:00	Water temperature	PIB-RDI001
WTEM-SCB-RDI001			Teledyne RD Instrum...	2014-11-19 12:00:00	Water temperature	SCB-RDI001
WTT-PIB-RDI001			Teledyne	2014-11-19 12:00:00	Attitude	PIB-RDI001

Name	Units	Variable category
WAV_DIR_DIS	degree	Surface
WAV_FRO_DIR	degree	Surface
WAV_HEI_10	m	Surface
WAV_HEI_3	0.01	Surface
WAV_HEI_MAX	m	Surface
WAV_HEI_MEA	m	Surface
WAV_HEI_SIG	m	Surface
WAV_PER_MAX	s	Surface
WAV_PER_MEA	s	Surface
WAV_PER_MEA_10	s	Surface
WAV_PER_MEA_3	s	Surface
WAV_PER_MEA_Z	s	Surface
WAV_PER_PEA	s	Surface

- Set the **associated variables** for each sensor and change the Name according to the NetCDF variable name.

For example **sea_water_speed** will be **CUR_SPE**.

CUR_SPE sensor-variable relation form

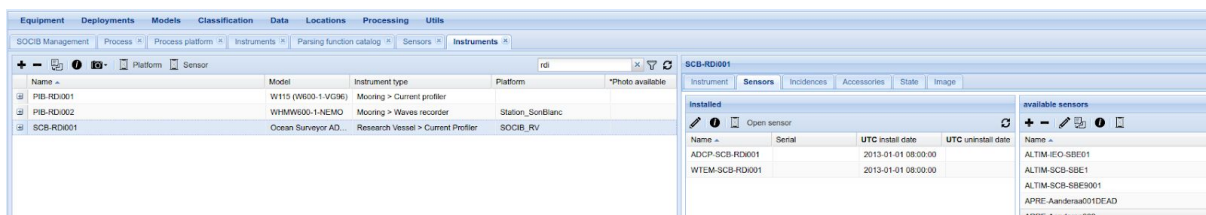
Name:

Units: *Precision: *Level:

Variable category: Variable:

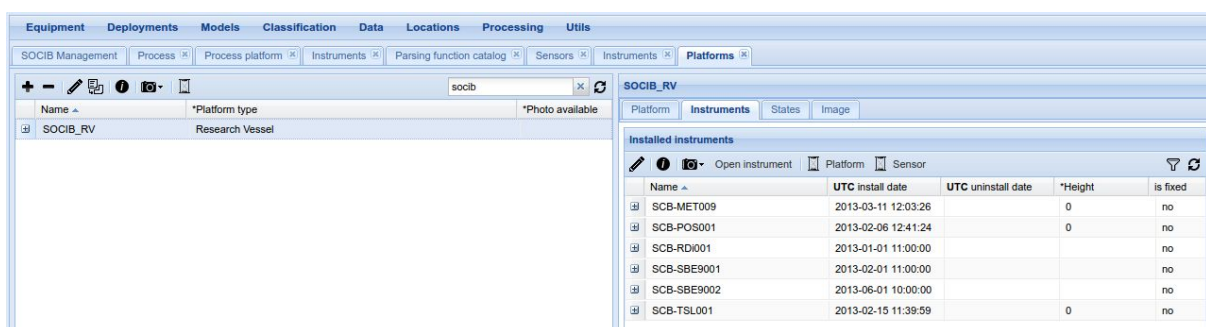
4.2.4. Instrument

- Select the **instrument** used for the ADCP data acquisition through the menu Equipment > Instrument.
- Add the different **sensors Installed** window moving them from **available sensors** window.



4.2.5. SOCIB RV Platform

- Select the **platform SOCIB_RV** through the menu Processing > Platform.
- Add an **Installed instrument** from the **available instruments** window.



- Go to **States** and be sure that the instrument ticks Deployed, Registered and Working are enabled.

Equipment										Deployments										Models										Classification										Data										Locations										Processing										Utils																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														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4.2.6. RV_ADCP Process

- Go to Processing > Process and search **RV_ADCP** process.

Equipment

Deployments

Models

Classification

Data

Locations

Processing

Utils

SOCIB Management

Process

Process platform

Instruments

Parsing function catalog

Sensors

Instruments

Platforms

+

-

🔍

🔔

Search

RV_ADCP

Processing variables

Deriving functions

QC Variables

Name

Variable

Type

AMP_BEAM1

sea_water_noise_amplitude_beam

Mandatory

AMP_BEAM2

sea_water_noise_amplitude_beam

Mandatory

AMP_BEAM3

sea_water_noise_amplitude_beam

Mandatory

AMP_BEAM4

sea_water_noise_amplitude_beam

Mandatory

BT_CUR_DIR

direction_of_sea_water_velocity_on

Mandatory

BT_CUR_SPE

sea_water_speed_on_sea_floor

Mandatory

BT_DEPTH_BEAM1

sea_floor_depth_below_sea_surface

Mandatory

BT_DEPTH_BEAM2

sea_floor_depth_below_sea_surface

Mandatory

BT_DEPTH_BEAM3

sea_floor_depth_below_sea_surface

Mandatory

BT_DEPTH_BEAM4

sea_floor_depth_below_sea_surface

Mandatory

BT_VEL_FAS

eastward_sea_water_velocity_on_sea

Mandatory

BT_VEL_EHR

error_sea_water_velocity_on_sea_fo

Mandatory

BT_VEL_NOR

northward_sea_water_velocity_on_s

Mandatory

BT_VEL_LWR

southward_sea_water_velocity_on_sea

Mandatory

CORR_BEAM1

sea_water_particle_distribution_come

Mandatory

CORR_BEAM2

sea_water_particle_distribution_come

Mandatory

CORR_BEAM3

sea_water_particle_distribution_come

Mandatory

CORR_BEAM4

sea_water_particle_distribution_come

Mandatory

CUR_DIR

direction_of_sea_water_velocity

Mandatory

CUR_SPE

sea_water_speed

Mandatory

LAT

latitude

Mandatory

LONG

longitude

Mandatory

PERG1

sea_water_percent_good_pings_1

Mandatory

PERG2

sea_water_percent_good_pings_2

Mandatory

+

-

🔍

🔔

Search

Associated dimensions

Dimension

time

depth_adcp4

+

-

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Search

Dimension catalog

Name

Description

depth_adcp4

Depth for DSG-01 sensor of IME-BUOY101

depth_03

Depth for W103 sensor of IME-BUOY101

depth_05

Depth for W105 sensor of IME-BUOY101

depth_07

Depth for W107 sensor of IME-BUOY101

depth_09

Depth for DSG-09 sensor of IME-BUOY101

depth_10

Depth for TURSI and COND sensor of IME-BUOY101

depth_12

Depth for CLO sensor of IME-BUOY101

depth_13

Depth for W113 sensor of IME-BUOY101

depth_15

Depth for W103 sensor of IME-BUOY101

depth_17

Depth for W111 sensor of IME-BUOY101

depth_19

Depth for DSG-19 sensor of IME-BUOY101

depth_adcp

depth levels for AXXIS current instruments in tow

depth_adcp2

depth levels of adcp installed in Station La Motte

depth_adcp3

depth levels of Mobius adcp

depth_adcp4

depth levels of adcp installed in RV SOCIB

depth_adcp4

Depth for DSG sensors of IME-BUOY101

depth_berm

Depth for terminator chain in Buoy Canal de Boca de

depth_berm

Depth for terminator chain in Buoy Canal de Boca de

depth_berm_term_buoy001

Depth for sea water temperatures of the IME-BUO

height_sl

Height dimension set with 0 to represent the sea l

lat

lat dimension

CTDProfile_SBE25

CTDRecoorder_SIR37

CTD_SBE30

CTD_SBE90_ek6

Drifters_CODE

Drifters_HAD

Drifters_MD03

Drifters_MLI

Drifters_OOI

Drifters_SPOT

Drifters_ST

Ek6 flow process

Grid_Andersea

Insard_SVP_XML

MeteoInterface_posa

MeteoStation_Andersea

MeteoStation_Vasasa

MeteoStation_Vasasa_Air_Mhr

MeteoStation_Visvesen/terangaP02

Provalob_profile_difter

Puertas del Estado process

Rosette_CTD_SBE25

RV_ADCP

RV_Metro

RV_Pasibon

RV_Trasimeno

- Generate the **Processing variables** that might be missing. You may copy an existing one and edit it according to the new variable settings.

The following fields are required:

- Name: NetCDF variable name (for example *AMP_BEAM1*)
- Display name: Short name (for example *Beam attenuation*)
- Coordinates: time LAT LONG DEPTH_ADCP4
- Is mandatory: TRUE
- Precision: 0.0001
- Long value: Long name (for example *Sea water noise amplitude beam 1*)
- Input units: Units used in raw data (for example *counts*)
- Variable: Select variable from menu (for example *sea_water_noise_amplitude_beam*)

- click update button

***New Derived Variable Form**

*Name: AMP_BEAM1 *Display name: Water noise amplitude B1 *Is mandatory: ☒

Coordinates: time LAT LON DEPTH_ADCP4

*Minimum Value: *Maximum Value:

*Ancillary variables:

*References:

*Uncertainty: *Offset: *Accuracy:

*Original name:

*History:

*Scale factor: *Precision: 0.0002 *Resolution: *DM Indicator:

*Comment:

*Long value: Sea water noise amplitude beam 1 *Input units: counts

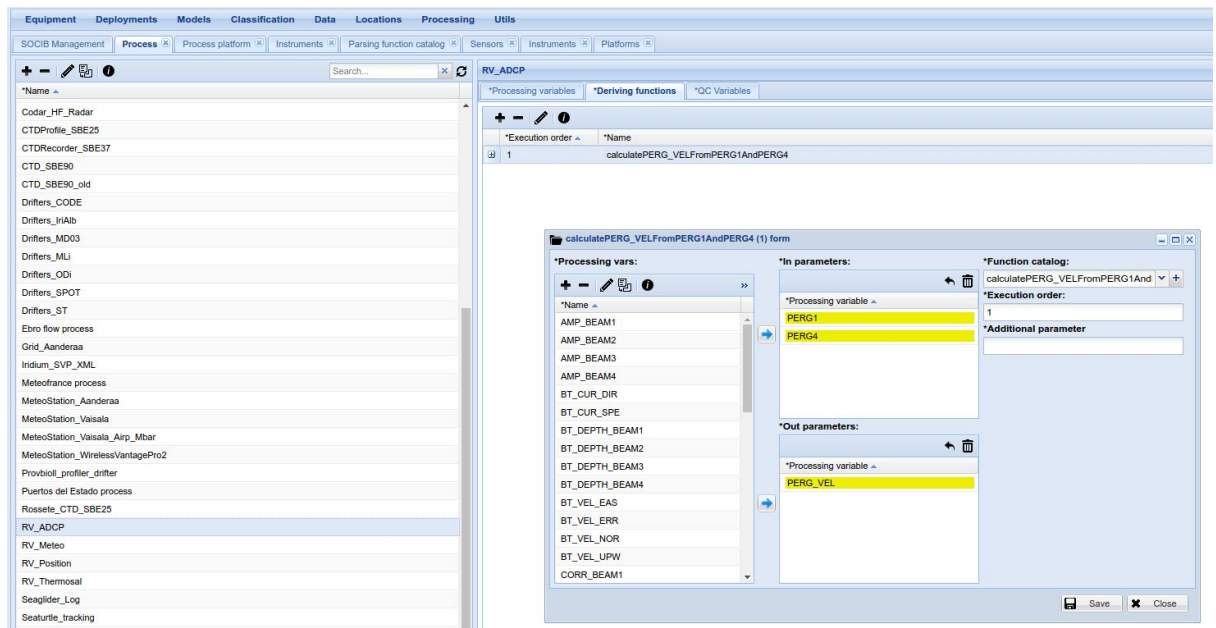
Variable: sea_water_noise_amplitude_beam

*Process: RV_ADCP

Buttons: Delete, Update, Close

- Set the **Associated dimension** as follows:
 - LAT and LONG: time
 - Other variables: time and depth_adcp4

- Set the **Deriving functions** as follows:
 - PERG_VEL:
 - In parameters: PERG1 and PERG4
 - Out parameters: PERG_VEL
 - Function catalog: calculatePERG_VELFromPERG1AndPERG4
 - Execution order: 1



- BT_DEPTH_MIN:
 - In parameters: BT_DEPTH_BEAM1, BT_DEPTH_BEAM2, BT_DEPTH_BEAM3 and BT_DEPTH_BEAM4.
 - Out parameters: BT_DEPTH_MIN:
 - Function catalog: calculateBT_DEPTH_MIN:
 - Execution order: 2

calculateBT_DEPTH_MIN (2) form

***Processing vars:**

+ - [icon] [icon] [icon]

*Name ▲

- AMP_BEAM1
- AMP_BEAM2
- AMP_BEAM3
- AMP_BEAM4
- AMP_BEAM_AVG
- BT_CUR_DIR
- BT_CUR_SPE
- BT_CUR_SPE_raw
- BT_DEPTH_BEAM1
- BT_DEPTH_BEAM1_raw
- BT_DEPTH_BEAM2
- BT_DEPTH_BEAM2_raw
- BT_DEPTH_BEAM3
- BT_DEPTH_BEAM3_raw
- BT_DEPTH_BEAM4

***In parameters:**

*Processing variable ▲

- BT_DEPTH_BEAM1
- BT_DEPTH_BEAM2
- BT_DEPTH_BEAM3
- BT_DEPTH_BEAM4

***Out parameters:**

*Processing variable ▲

- BT_DEPTH_MIN

***Function catalog:**

calculateBT_DEPTH_MIN ▼ +

***Execution order:**

2

***Additional parameter**

Save Close

- BT_CUR_SPE:
 - In parameters: BT_CUR_SPE_raw.
 - Out parameters: BT_CUR_SPE:
 - Function catalog: unitConversion
 - Execution order: 4

unitConversion (4) form

***Processing vars:**

- AMP_BEAM1
- AMP_BEAM2
- AMP_BEAM3
- AMP_BEAM4
- AMP_BEAM_AVG
- BT_CUR_DIR
- BT_CUR_SPE
- BT_CUR_SPE_raw
- BT_DEPTH_BEAM1
- BT_DEPTH_BEAM1_raw
- BT_DEPTH_BEAM2
- BT_DEPTH_BEAM2_raw
- BT_DEPTH_BEAM3
- BT_DEPTH_BEAM3_raw
- BT_DEPTH_BEAM4

***In parameters:**

*Processing variable ▲
BT_CUR_SPE_raw

***Out parameters:**

*Processing variable ▲
BT_CUR_SPE

***Function catalog:**

unitConversion ▼ +

***Execution order:**
4

***Additional parameter**

Save Close

- Repeat the same process for the rest of processing variables that contain the suffix _raw:

RV_ADCP		
<div> <div>*Processing variables</div> <div>*Deriving functions</div> <div>*QC Variables</div> </div>		
<div> <div>+</div> <div>-</div> <div></div> <div></div> </div>		
	*Execution order ▲	*Name
	1	calculatePERG_VELFromPERG1AndPERG4
	2	calculateBT_DEPTH_MIN
	4	unitConversion
	5	unitConversion
	6	unitConversion
	7	unitConversion
	8	unitConversion
	9	unitConversion
	10	unitConversion
	11	unitConversion
	12	unitConversion
	13	unitConversion
	14	unitConversion
	15	unitConversion
	16	unitConversion
	17	unitConversion
	18	unitConversion
	19	unitConversion

- Set the **QC Variables** as follows:

RV_ADCP			
*Processing variables		*Deriving functions	*QC Variables
<div> <div>+</div> <div>-</div> <div></div> <div></div> </div> <div>↺</div>			
*Name	*Priority ▲	*Processing variable	
QC_BT_CUR_DIR	0	BT_CUR_DIR	
QC_BT_CUR_SPE	0	BT_CUR_SPE	
QC_BT_VEL_ERR	0	BT_VEL_ERR	
QC_BT_DEPTH_BEAM1	0	BT_DEPTH_BEAM1	
QC_PLAT_DEPTH	0	PLAT_DEPTH	
QC_BT_VEL_EAS	0	BT_VEL_EAS	
QC_BT_VEL_NOR	0	BT_VEL_NOR	
QC_BT_VEL_UPW	0	BT_VEL_UPW	
QC_BT_DEPTH_BEAM2	0	BT_DEPTH_BEAM2	
QC_BT_DEPTH_BEAM3	0	BT_DEPTH_BEAM3	
QC_PERG_VEL	0	PERG_VEL	
QC_BT_DEPTH_BEAM4	0	BT_DEPTH_BEAM4	
QC_BT_DEPTH_MIN	0	BT_DEPTH_MIN	
QC_VEL_EAS	0	VEL_EAS	
QC_AMP_BEAM2	1	AMP_BEAM2	
QC_AMP_BEAM1	1	AMP_BEAM1	
QC_AMP_BEAM3	2	AMP_BEAM3	
QC_AMP_BEAM4	3	AMP_BEAM4	
QC_VEL_NOR	5	VEL_NOR	
QC_VEL_UPW	6	VEL_UPW	
QC_CORR_BEAM1	7	CORR_BEAM1	
QC_CORR_BEAM2	8	CORR_BEAM2	
QC_CORR_BEAM3	9	CORR_BEAM3	
QC_CORR_BEAM4	10	CORR_BEAM4	
QC_VEL_ERR	11	VEL_ERR	
QC_PLAT_FLAT	12	PLAT_FLAT	
QC_PLAT_FLON	13	PLAT_FLON	
QC_LAT	14	LAT	
QC_LON	15	LON	
QC_WTR_TEM	16	WTR_TEM	
QC_PLAT_PITCH	17	PLAT_PITCH	
QC_PLAT_ROLL	18	PLAT_ROLL	

QC_PLAT_ORI	19	PLAT_ORI
QC_PLAT_DIR	20	PLAT_DIR
QC_PLAT_SPE	21	PLAT_SPE
QC_PLAT_VEL_EAS	22	PLAT_VEL_EAS
QC_PLAT_VEL_NOR	23	PLAT_VEL_NOR
QC_CUR_DIR	24	CUR_DIR
QC_CUR_SPE	25	CUR_SPE
QC_PERG1	26	PERG1
QC_PERG2	27	PERG2
QC_PERG3	28	PERG3
QC_PERG4	29	PERG4

4.2.7. Process Platform RV_ADCP

- The configuration for the **RV_ADCP** process for the **SCB-RDi001** instrument must be set up as follows:

The screenshot shows the 'New process platform' configuration window. The fields are organized as follows:

- *Initial Date (UTC):** 2013-01-01
- *Time (UTC):** 08:00:00
- *Execution order:** 5
- *End Date (UTC):** (empty)
- *End Time (UTC):** (empty)
- *Split by criteria:** no
- Code:** (empty)
- Source:** (empty)
- Comment:** (empty)
- Update interval:** 0
- CDM data type:** TrajectoryProfile
- Title:** (empty)
- Keywords vocabulary:** (empty)
- Sampling interval:** 0
- CF feature type:** trajectoryProfile
- References:** (empty)
- QC Manual:** (empty)
- Processing level:** 0:1
- Platform identifier:** (empty)
- *Process:** RV_ADCP
- Platform:** SOCIB_RV
- Instrument:** SCB-RDi001
- *Path criteria:** year = yyyy
- *File criteria:** month = yyyy/MM
- *Parsing function:** SocibRVOceanSurveyorADCP

At the bottom, there are buttons for 'Delete', 'Update', and 'Close'.

- The INPUT configuration must be as follows:

RV_ADCP for SOCIB_RV input configuration (instrument process)		
*Sensor Variable	Selected PV group	*Order ▲
PLAT_PITCH	PLAT_PITCH (platform_pitch_angle)	9
PLAT_ROLL	PLAT_ROLL (platform_roll_angle)	10
PLAT_ORI	PLAT_ORI (platform_orientation)	11
WTR_TEM	WTR_TEM (sea_water_temperature)	12
PLAT_DEPTH	PLAT_DEPTH (transducer_depth)	13
WTR_AMP_BEAM1	AMP_BEAM1 (sea_water_noise_amplitude_beam)	14
WTR_AMP_BEAM2	AMP_BEAM2 (sea_water_noise_amplitude_beam)	64
WTR_AMP_BEAM3	AMP_BEAM3 (sea_water_noise_amplitude_beam)	114
WTR_AMP_BEAM4	AMP_BEAM4 (sea_water_noise_amplitude_beam)	164
CORR_BEAM1	CORR_BEAM1 (sea_water_particle_distribution_correlation_...	214
CORR_BEAM2	CORR_BEAM2 (sea_water_particle_distribution_correlation_...	264
CORR_BEAM3	CORR_BEAM3 (sea_water_particle_distribution_correlation_...	314
CORR_BEAM4	CORR_BEAM4 (sea_water_particle_distribution_correlation_...	364
VEL_EAS	VEL_EAS (eastward_sea_water_velocity)	414
VEL_NOR	VEL_NOR (northward_sea_water_velocity)	464
VEL_UPW	VEL_UPW (upward_sea_water_velocity)	514
VEL_ERR	VEL_ERR (error_sea_water_velocity)	564
CUR_SPE	CUR_SPE (sea_water_speed)	614
CUR_DIR	CUR_DIR (direction_of_sea_water_velocity)	664
PERG1	PERG1 (sea_water_percent_good_pings_1)	714
PERG2	PERG2 (sea_water_percent_good_pings_2)	764
PERG3	PERG3 (sea_water_percent_good_pings_3)	814
PERG4	PERG4 (sea_water_percent_good_pings_4)	864
BT_VEL_EAS	BT_VEL_EAS (eastward_sea_water_velocity_on_sea_floor)	914
BT_VEL_NOR	BT_VEL_NOR (northward_sea_water_velocity_on_sea_floor)	915
BT_VEL_UPW	BT_VEL_UPW (upward_sea_water_velocity_on_sea_floor)	916
BT_VEL_ERR	BT_VEL_ERR (error_sea_water_velocity_on_sea_floor)	917
BT_CUR_SPE	BT_CUR_SPE (sea_water_speed_on_sea_floor)	918
BT_CUR_DIR	BT_CUR_DIR (direction_of_sea_water_velocity_on_sea_floor)	919
PLAT_VEL_EAS	PLAT_VEL_EAS (platform_eastward_velocity_wrt_sea_water)	920
PLAT_VEL_NOR	PLAT_VEL_NOR (platform_northward_velocity_wrt_sea_water)	921
PLAT_SPE	PLAT_SPE (platform_speed_wrt_sea_water)	922
PLAT_DIR	PLAT_DIR (platform_course)	923
LAT	LAT (latitude)	926
LON	LON (longitude)	927
BT_DEPTH_BEAM1	BT_DEPTH_BEAM1 (sea_floor_depth_below_sea_surface_b...	928
BT_DEPTH_BEAM2	BT_DEPTH_BEAM2 (sea_floor_depth_below_sea_surface_b...	929
BT_DEPTH_BEAM3	BT_DEPTH_BEAM3 (sea_floor_depth_below_sea_surface_b...	930
BT_DEPTH_BEAM4	BT_DEPTH_BEAM4 (sea_floor_depth_below_sea_surface_b...	931

- The **OUTPUT configuration** must be as follows:

* RV_ADCP for SOCIB_RV OUTPUT configuration

*Available processing variables:

*Processing variable	*Order ▲
VEL_NOR	6
VEL_EAS	7
VEL_UPW	8
VEL_ERR	9
CUR_SPE	10
CUR_DIR	11
AMP_BEAM1	12
AMP_BEAM2	13
AMP_BEAM3	14
AMP_BEAM4	15
WTR_TEM	16
CORR_BEAM1	17
CORR_BEAM2	18
CORR_BEAM3	19
CORR_BEAM4	20
PERG1	21
PERG2	22
PERG3	23
PERG4	24
PLAT_PITCH	25
PLAT_ROLL	26
PLAT_ORI	27
PLAT_SPE	28
PLAT_DIR	29
PLAT_VEL_NOR	30
PLAT_VEL_EAS	31
PERG_VEL	32
BT_VEL_EAS	33
BT_VEL_NOR	34
BT_VEL_UPW	35
BT_VEL_ERR	36
BT_CUR_SPE	37
BT_CUR_DIR	38
BT_DEPTH_BEAM1	39
BT_DEPTH_BEAM2	40
BT_DEPTH_BEAM3	41
BT_DEPTH_BEAM4	42