Glider Mission Summary Report

CAMPAIGN 2017
SOCIB GLIDER FACILITY

SOCIB_CANALES_JAN2017 (GF-MR-0053)

SOCIB
Balearic Islands
Coastal Observing
and Forecasting
System

Mission Name	*SOCIB_CANALES_JAN2017 (GF-MR-0053)*	
Platform Model	*Slocum 1000 G2*	
Platform ID / Name / WMO Code	*U244 / SDEEP01 / 68967*	
Related Platforms / Missions	*Socib R/V canales winter 2017*	
Start Date	*2016-12-30*	
End Date	*2017-02-15*	
Total Days	*47.3*	**Total distance (Km / Nm)** *986/ 532*
Survey Area (NODC or SDN region)	*Mallorca and Eïvissa Channels (Western Mediterranean Sea)*	
Objective(s)	• *Establishing the variability of the N/S exchange of water masses that occur through the Ibiza Channel(IC). Sampling standard transects across the Ibiza Channel several times using physical and biogeochemical sensors. No greater than 1 month gap in between consecutive iterations. The Mallorca Channel is also sampled when operationally practical.*	
Scientific Sensors (name & model / serial_number / calibration date)	• *CTD -SBE- / sn 0107 / 15/mar/2016* • *FLNTU -WetLabs- / sn 4124 / 08/oct/2015* • *OPTODE -Aandera- / sn 994 / 21/11/2014* *(calibration sheets available upon request to glidertech@socib.es)*	
Number of Profiles	*1516 (CTD), 1191 (FLNTU), 1191 (OXY)*	
Significant Events	• *Premature recovery due bottom hitting (malfunction on altimeter)* • *Some hard currents during Eivissa channel* • *Glider extracted using the Socib R/V's auxiliary rib* • *First inter-calibration test with rossette*	
Mission Summary	*Preparation phases were executed between 26/12/2016 to 29/12/2016* *The first thought was to not open the glider, just download data threw RF, re-ballast, and deploy it. But a problem with RF modem, forced us to open it.* *Then a basic procedure was done. Data backup, final sealing, re-ballasting and pressure test. All other tests were avoided.*	

Launching operation

 (30/12/2016) was executed by 1 ETD and 1 GF facility members on board SOCIB I. Glider was released in N 39°29.6082' E 02°11.1111' at 11:06:25-utc. The deployment was an operative and tactical success (environmental conditions were very good). Pilot was onshore. Glider executed successful test dives prior to the first survey dive.

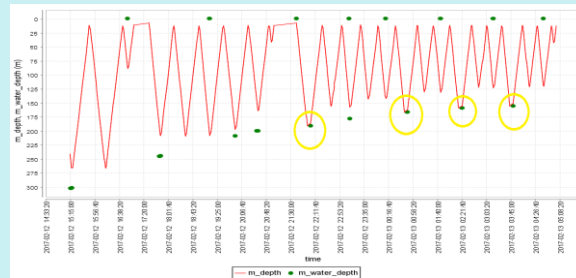*During Mission:* *The were some bottom hitting during this mission:*

Fig 1.1. Bottom hitting

Sampling: Science-payload was correctly turned-on and off accordingly to the behavior of the glider executed at all moments during the mission.

Recovery operation

(15/02/2017) was executed by 1 Socib R/V's crew and 1 GF facility members on board SOCIB R/V. Glider was recovered in N 38°53.8564' E 00°21.4804' at 17:09:50 -utc.

After recovery operation, an intercalibration test with rossette was performed.

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Institute	SOCIB in collaboration with IMEDEA
Project Affiliation (web-site)	http://www.socib.eu
Partnership / Participation	• SOCIB • IMEDEA (in-kind contribution of infrastructures)
Glider Software Version	Nav : v7.13 Acomms, Payload: 3.17
Data Retrieval (real-time [RT] / delayed-mode [DM])	• RT: sub-set via satellite link every 6 hours every day. • DM: direct download of full gathered data sets (flash-cards backup)
Compass Calibration (specify procedure)	Compass error was measured. Observed error suggests re-calibration is not needed. Deviation in Navigation is considered a consequence of strong currents though (See Figure 1.1)
Battery Type	Teledyne lithium batteries (702Ah-nominal capacity)
Battery Consumption (Ah)	268,092Ah (reading from 244,792 to 512,884Ah)
Data Available From	http://thredds.socib.es/thredds/catalog/auv/glider/sdeep01-scb_sldeep001/catalog.html
Further Details	glidertech@socib.es

Figure 1

(Map providing general overview of Survey Area)
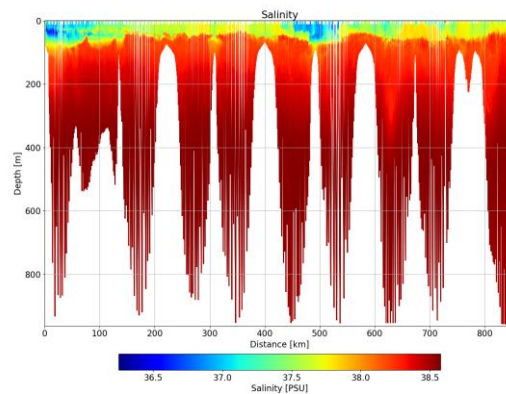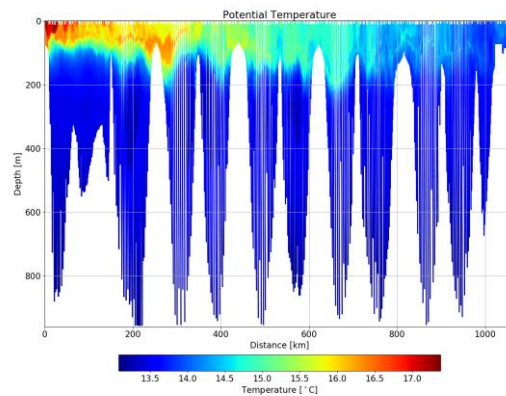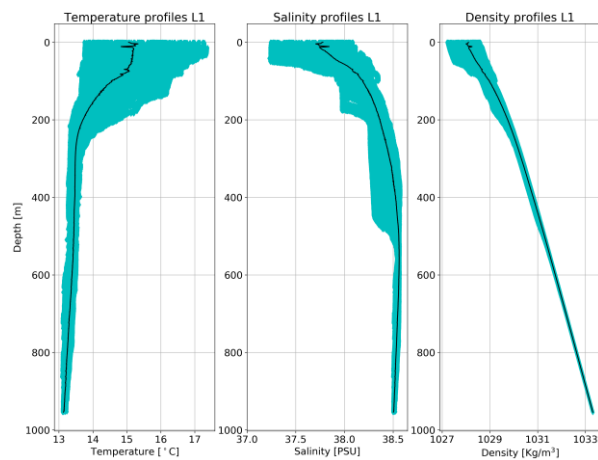
On-line Track

Figure 2

(Map providing detailed overview of Survey Area and traced Flight Path with surface points if possible)
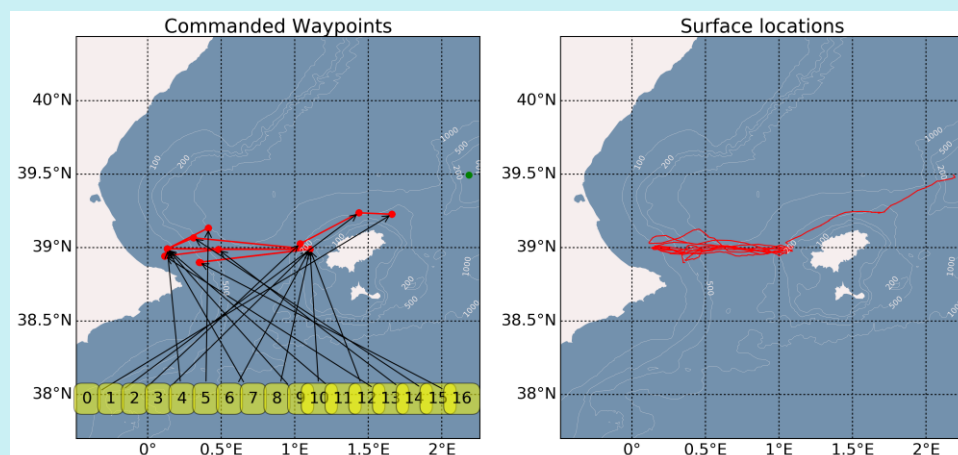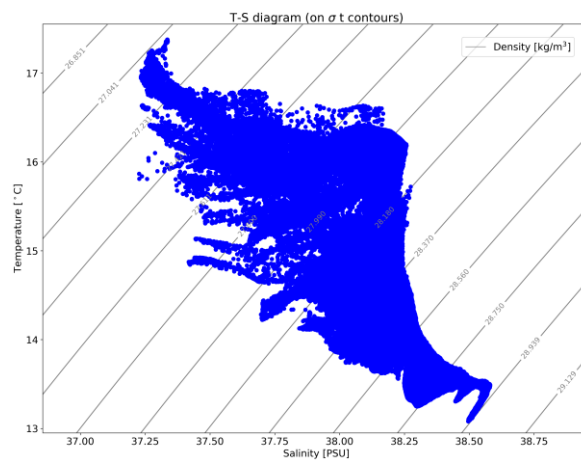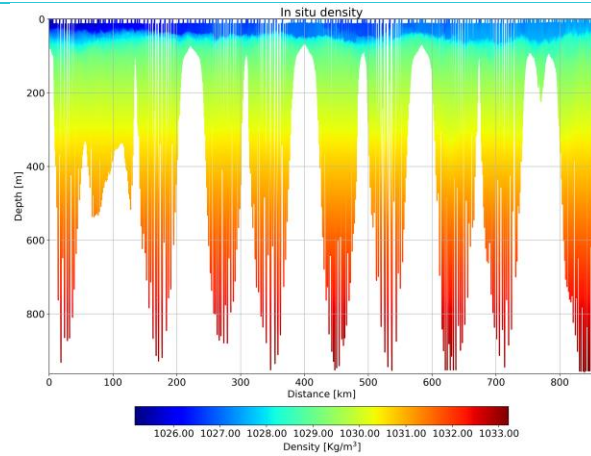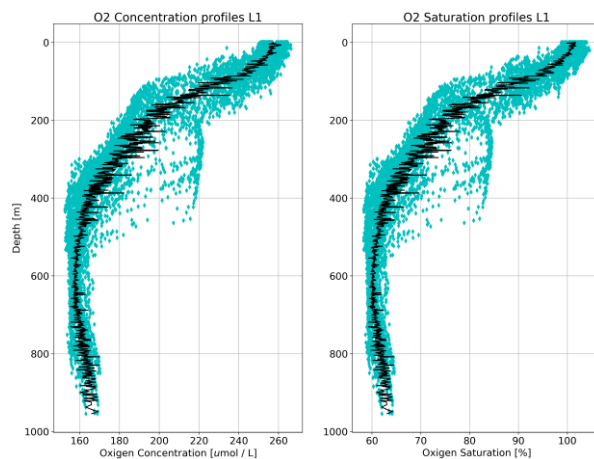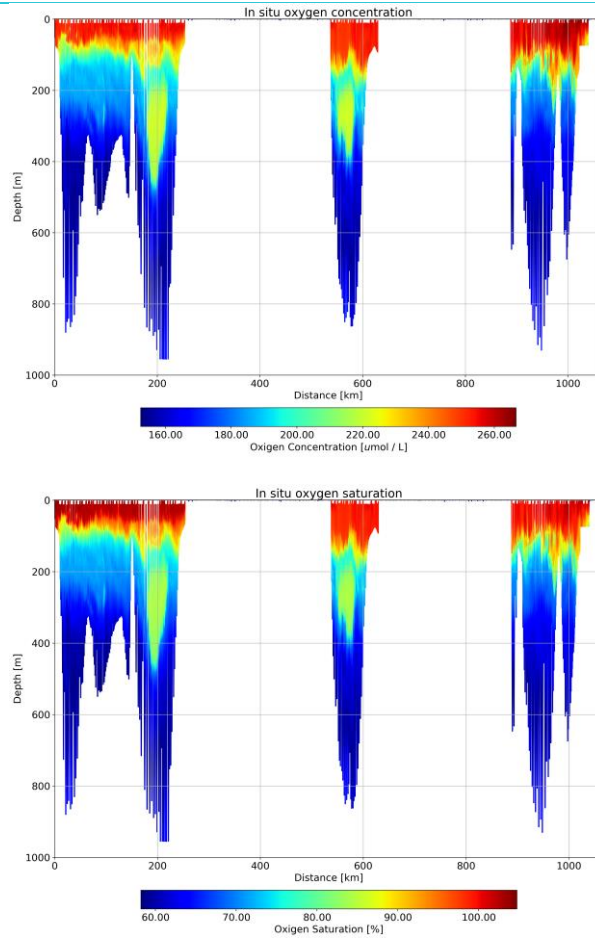
Scientific Preliminary Review

CTD

(Compilation of preliminary post-processing plots provided by SOCIB's data-center glider-toolbox and processing services. Contact data.center@socib.es for further info. Plots available through DAPP)
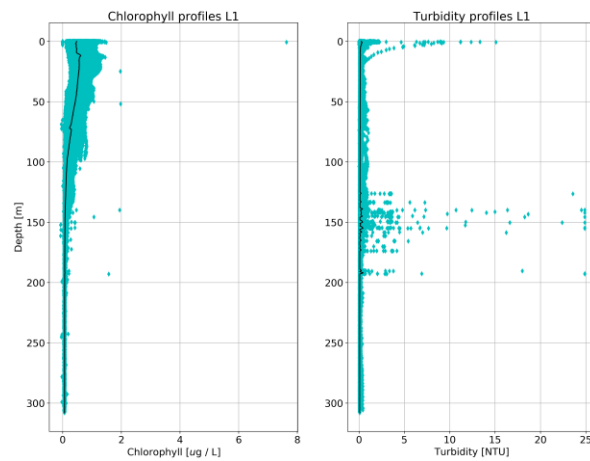
In situ density

T-S diagram (on σ t contours)

OXYGEN

O2 Concentration profiles L1 — O2 Saturation profiles L1

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In situ oxygen concentration

In situ oxygen saturation

TURBIDITY & CHLOROPHYLL

Chlorophyll profiles L1

Turbidity profiles L1

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In situ chloropyll

In situ turbidity

CURRENTS

Surface Currents (pre-post-fix)