

SOCCOM Float Deployment Log and Instructions

Date of form: June 22, 2016

Number of SOCCOM floats:	2
Cruise Name or Nickname:	Kerguelen Axis (K-Axis) V3
Ship:	RV Aurora Australis (Australian Antarctic Division, Australia)
Cruise number:	Voyage V3
Expocode:	09AR20160111
Chief Scientist or Cruise POC:	Andrew Constable andrew.constable@aad.gov.au
Departure Port:	Hobart, Tasmania
Departure Date:	January 11, 2016
SOCCOM float responsibility onboard:	Stuart Corney stuart.corney@utas.edu.au
SOCCOM UW Engineering port set-up:	A. Rick Rupan rupan@ocean.washington.edu

Float locations, as of Jan. 4, 2015.

- 3000 m isobath just north of Antarctic continental shelf (Station wp0207, formerly 3)
- West of Kerguelen Plateau (Station wp0906, formerly 31)

(Backup locations in event of bad weather or problems:

Station wp0208 in place of wp0207

Station wp0604 in place of wp0906)

Desc ription	Nominal location (°S, °E)	Float UW ID	Sen- sors*	CTD Sta. #	Deploy- ment Date	Deploy- ment Time	Lat.	Lon.	Name (deployer)
1	64.00S, 93.56E	0506 Navis	IONpF	wp0207	21/1/1 6	1700	62°59.9' S	93° 36. 3' E	Stuart Corn
		Comments:							
2	61.83S, 74.10E	0507 Navis	IONpF	wp0906	14/2/2 016		62°49.7 S	74° 67. 2 E	Stuart Corn
		Comments: gentle seas							

*I = ice enabled

O = oxygen sensor

N = nitrate sensor

F = FLbb

p = pH

Nav = Navis (Seabird)

Aurora Australis float inventory

No.	FLOAT NUMBER	TYPE ⁽¹⁾	MAX. DEPTH	O ₂ ⁽²⁾	NO ₃ ⁽³⁾	pH	OPTICS ⁽⁴⁾	ICE ⁽⁵⁾	COMMENTS
1	0506	Navis	2000	✓	✓	✓	✓	✓	
2	0507	Navis	2000	✓	✓	✓	✓	✓	

Notes:

(1) APEX denotes floats built at UW from components purchased from Teledyne/Webb; Navis denotes floats purchased by UW in ready-to-deploy condition from SBE.

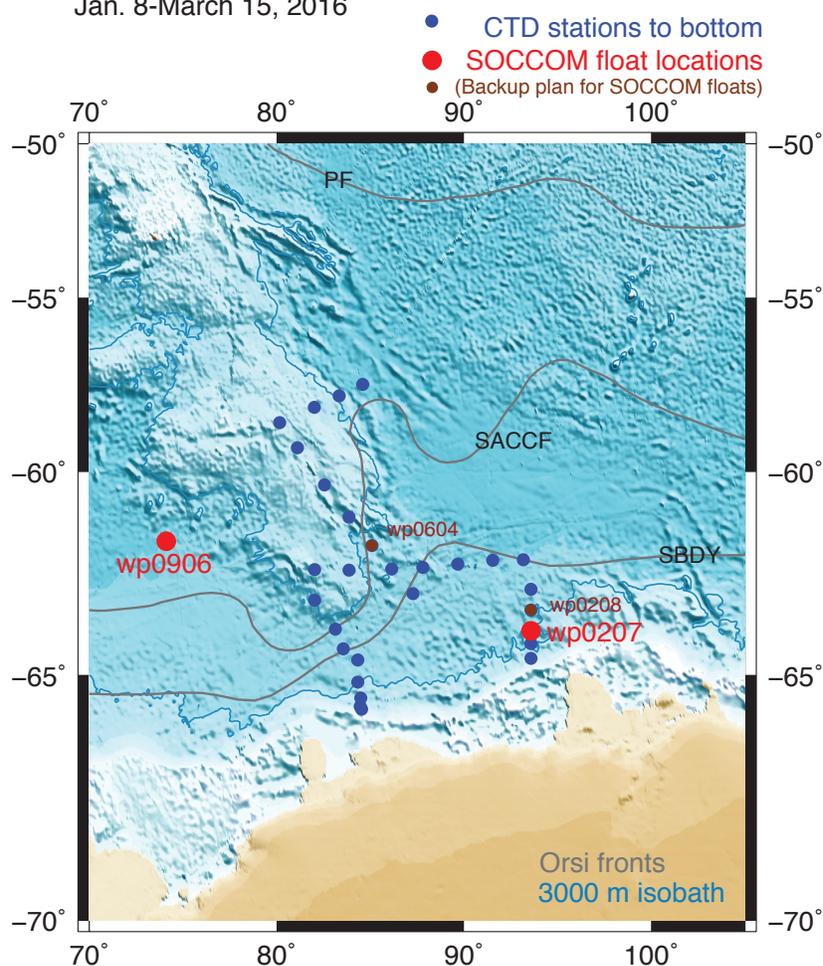
(2) O₂ sensor on APEX floats is Aanderaa 4330; on Navis floats it is SBE-63.

(3) NO₃ sensor on APEX floats is MBARI/ISUS; on Navis floats it is Satlantic/SUNA.

(4) OPTICS denotes WetLabs FLBB fluorometer and backscatter capability on APEX floats; on Navis floats, fluorometer and backscatter are from the SBE BGC package.

(5) Ice capability is from field-tested software developed at UW on APEX floats; on Navis floats it is from contributed software developed at UW with only minimal field tests by SBE.

Aurora Australis Voyage V3 Kerguelen-Axis (K-Axis)
Jan. 8-March 15, 2016



SOCOM Float deployment procedures

The floats do not need to be 'started' as they are in pressure activation mode. This means that once it is lowered into the water it will sink (not right away but about 3-5 mins after deployment, no need to wait) it will then feel the pressure on the sensor and begin its mission. The ship should slow down to between .5 & 1 knot over water, if the ship is doing a station at the location where the float will be deployed, you should wait until the end of the station to deploy the float and have ship under-way (between .5 - 1 knot) before you deploy. This way there are no worries about the ship running into the float as it will head to the surface shortly after deployment. Please note all deployment should occur in at least 2500m of water. Please deploy floats before you reach the shallows as necessary.

Step 1 - Remove the float from the crate (please be sure to lift from the pressure case only as the antenna and CTD are not to be used as handles), there are 2 thick foam supports on either end crate. Remove those supports and have someone carry those to the fantail (near where you will be deploying). Put the supports on the deck and lay the float into the supports (tie down if necessary).

Step 2 - you will need line that is twice the length of free-board plus 10' to tie off to a cleat (so you don't lose your line). Tie one end of line to a cleat near the fantail on the leeward side, then pass the other end through the hole on the deployment disk (white disk with round hole in center of pressure case). Pass enough line through the hole so that you are a little more than the length of your free-board.

Step 3 - pick up the float & line being sure to keep your line untangled. Lean over the railing and begin to lower the float over the railing in a hand over hand technique (do not move the lines relative to each other as it will saw through the disk and the float will fall precipitously). You will have two pieces of line in your hand, the bitter end and the tied off end. Once the float has been successfully lowered to the water hold the bitter end in one hand and the tied off end in the other and be sure the line is not twisted or tangled before you release the bitter end (you should be able to form a "V" shape with the line between your hands and the deployment ring, the float will drag behind the boat that is not a problem it will be let go shortly). Once all twists have been removed release the bitter end and slowly pull the line through being sure the line does not get tangled on itself. It is important that you don't get them twisted or tangled as you pull the line through the hole. If the line is twisted or tangled you must pull the float back up and untangle it and repeat the procedure.

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Cleaning SOCCOM float optical and nitrate sensors prior to float deployment with optical cleaning pads and lens paper

Float type	Optical sensor Clean using protocol	Nitrate sensor Clean using protocol	Oxygen sensor DO NOT CLEAN
SOCCOM Apex float	Wetlabs FLBB	MBARI ISUS	Aanderaa optode 4330
SOCCOM Navis float	Seabird MCOMS	Satlantic SUNA	Seabird SBE-63

1. Wash your hands with soap and water to remove oils & grease. Have a squirt bottle with deionized water (as freshly dispensed as possible) and the lens wipes and the pre-moistened lens cleaning wipes readily available. Do 1 instrument at a time and do not reuse the pre-moistened cleaning wipes or lens paper. Once open, the pre-moistened lens cleaning wipes dry out fairly quickly so open just before use.

2. Rinse lenses by squirting with deionized water.

3. Open pre-moistened lens cleaning wipe packet and, if necessary, wrap it around the top of a Q-tip. Gently tap the lens surface with the wipe. Use a new lens cleaning wipe for each instrument.

4. Rinse by squirting with deionized water.

5. Tap dry with the lens wipe.

For the ISUS, absolute alcohol is the preferred cleaning solution but it can be difficult to ship. If absolute alcohol is available, then wetting lens paper with absolute alcohol and wrapping around a Q-tip is preferred over a pre-moistened lens cleaning wipe.

If pre-moistened lens cleaning wipes are not available, isopropyl alcohol (available at pharmacies) put on a lens wipe will suffice.

Materials needed:

Pre-Moistened Lens Cleaning Wipes packets

Squirt bottle with best quality deionized water possible

Lens cleaning wipes

Q-tips

QUESTIONS?

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