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SVP-B drifter

built by METOCEAN

Use and deployment instructions

Version 2

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I. DESCRIPTION (cf. figures 1 and 2)

The SVP-B buoy is a lagrangian drifter based on the specifications of the Barometer Drifter Construction Manual issued by the Data Buoy Cooperation Panel. Built by METOCEAN Data Systems, it is designed for a minimum 12 months continuous unattended collection of meteorological and oceanographic data. Data consisting of platform position, sea surface temperature, barometric pressure, and battery voltage are relayed through the Argos system.

I.1 Surface float

The surface unit consists in a 40 cm diameter plastic grey sphere, 14 kg in weight. The electronics, transmitter, antenna, barometer and battery packs are located inside. The drifter is topped with a barometer port (25 cm high cylindrical white mast) which allows the atmospheric pressure to reach the sensor. The barometer port is designed to let only the air in a pipe linked to the barometer. Water stays outside, even when the float is submerged.

Four other appendix appear at the surface of the float:

- two submergence sensor screws. Fated to detect the submergence of the float**, they must not be unscrewed** ;
- the thermistor (sea surface temperature sensor) ;
- the **magnetic on/off pin** which **must be removed to activate the buoy**.

I.2 Drogue

The drifter is fitted with a holey sock drogue made from nylon cloth (6.5 m long, 60 cm diameter). The drogue is centred at 15 m depth when extended a few hours after deployment. It constrains the buoy to follow the water mass at this depth. The **total weight** of the float and its drogue is **about 25 kg**.

II PREPARATION before DEPLOYMENT

Each drifter is individually packaged in a **plastic shrink-wraps which must be removed prior to the deployment** (see photo 1). The drifter+drogue could travel secured on the ship deck, ready for deployment but a special attention must be paid to avoid any shocks when the ship plies.

Photo 1. Drifter as generally delivered

II.1 Activation

On request, the buoy may be switched on, under the responsibility of the deployment centre, some days before deployment in order to control measurements and data transmission. The drifter must be put in an open area - on the ship deck if the buoy is already aboard - to allow a good transmission. The drifter has an externally operable magnetic on/off pin. The magnetic pin is located on the underside of the surface unit and a string is attached to it. To activate the buoy, remove the pin. **This operation must be done 15 minutes before a round hour**.

II.2 On the way

A message could be sent to the ship to request the cancellation of the deployment in case of buoy failure or absence of data of reception. Unless otherwise directed, the deployment could be done.

III. DEPLOYMENT

III.1 Fragile parts

A particular attention must be paid to the barometer port. Nothing must be attached to it. The thermistor, located on the lower hemisphere of the surface unit is fragile too.

III.2 Deployment technique

The manufacturer recommends not to drop the buoy into the water from a height greater than 10 metres. However as low the height of the launch is, better it is. It is recommended to avoid the middle of the stern to drop the buoy because of the prop wash turbulence and hull entrainment.

One person may deploy the buoy hanging the drifter over the side, supporting the surface float and the on his arms (see photo 2), throwing the whole, trying to move the float away from the ship hull at the last moment.

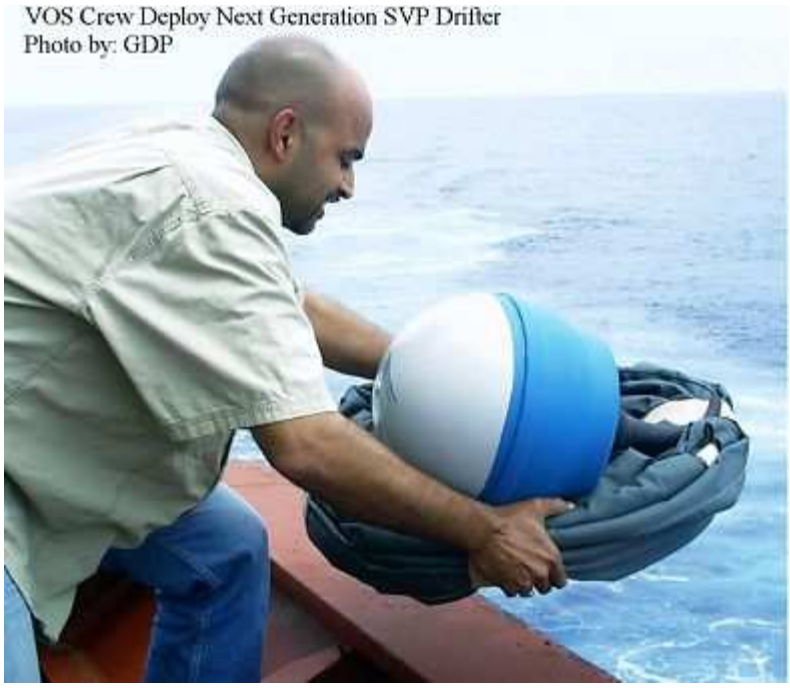
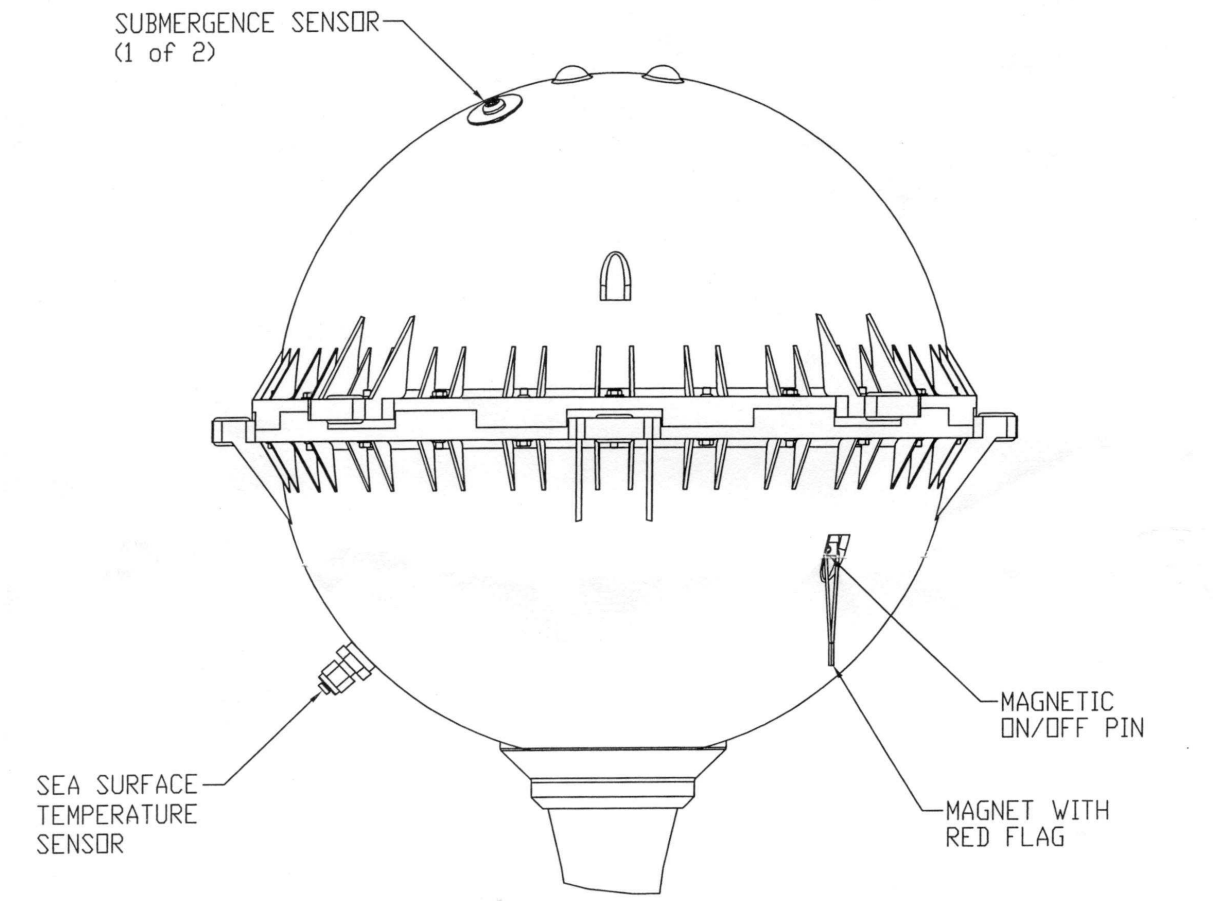


Photo 2. Drifter at deployment

A report on the operation and on the possible problems encountered during the launch is desirable (see form attached). This report is important to do stronger recommendations for next deployments thanks to the experience get with the first ones.

Pre-Deployment Test Instructions:

- Remove magnet pin to activate buoy.
- Replace magnet pin when testing is complete.



Deployment Instructions:

Remove Plastic from Buoy and Drogue.

Remove magnet pin at xx:45:00, prior to deployment.

The buoy *MUST* be turned on at 45 minutes past the hour in order for the data acquisition to occur at the top of the hour. Failure to do this *WILL* result in non-synoptic data acquisition and wrong hourly history indication. All timings are referenced to the buoy's internal clock, which is set to XX:45:00 upon turning on the buoy.

Note: The buoy must not be dropped from a height greater than 10 meters. (33 feet)

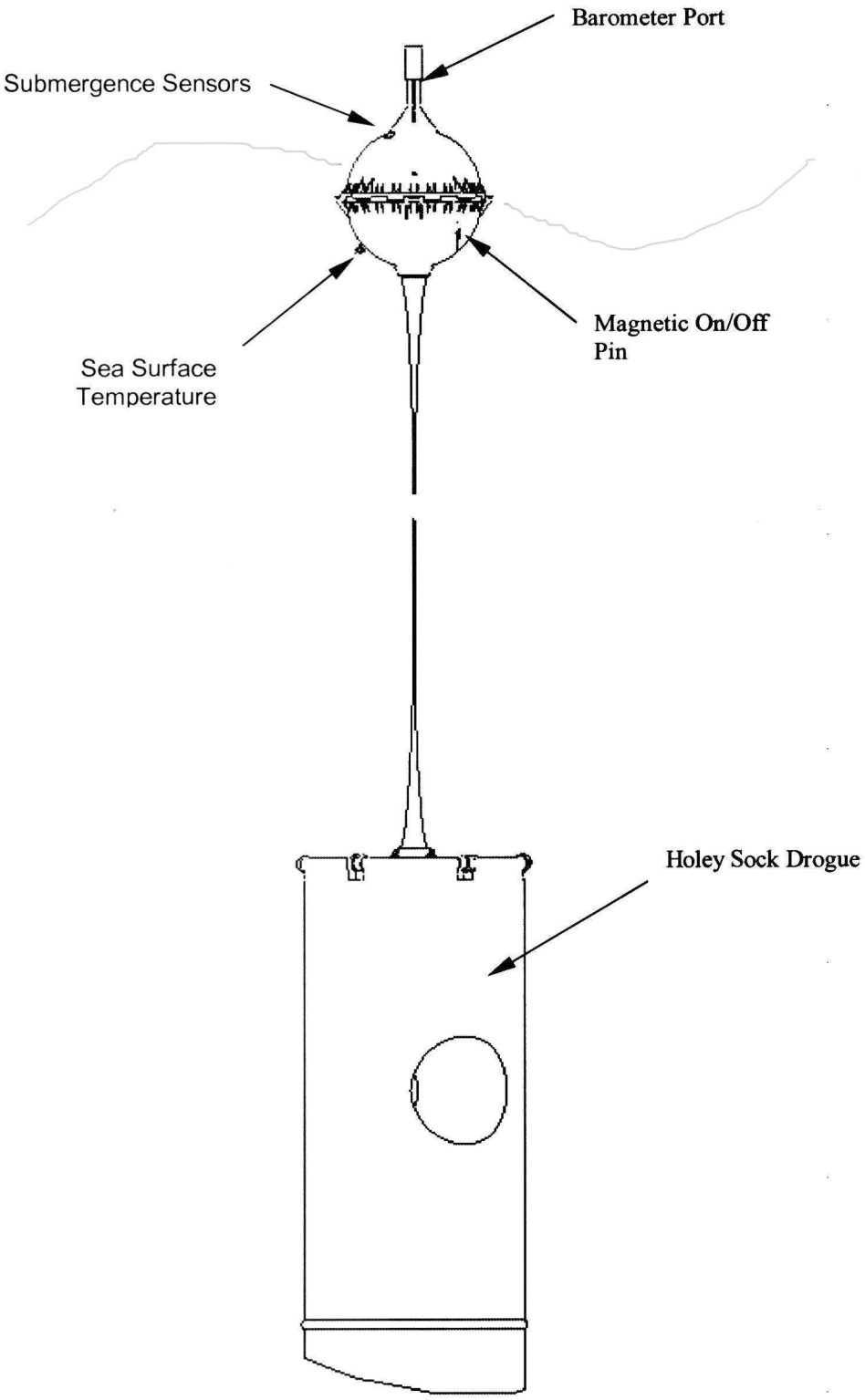


Figure 2 - Metocean SVP-B drifter
(when deployed)

DEPLOYMENT REPORT

SHIP NAME :

Buoy Id. Number :

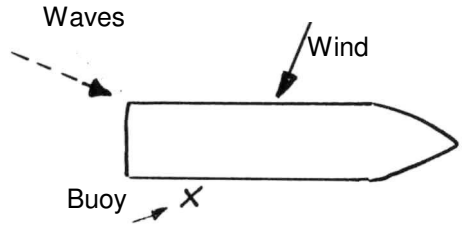
Deployment time and location

Date and Time (UTC) :
Latitude :
Longitude :

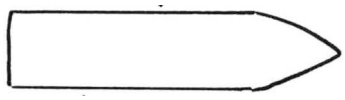
Conditions

Sea height :	metres or sea state :
Wind speed :	knots
Ship speed :	knots

Wind and waves direction with regard to the ship direction (draw 2 arrows on the graph here below).



Example



Your configuration

Technique used

❑ By hand ❑ By crane

Draw a cross on the graph here above where the buoy was dropped.

Heights : of the deck from which the buoy was handled :
of the drop above mean sea level :

Apparent status after deployment

❑ OK ❑ Probably damaged ❑ Damaged

Comments :

Please, return the form (or the information it contains) to the Centre de Meteorologie Marine of Meteo-France, by fax (+33 2 98 22 18 49) or by email (Pierre.Blouch@meteo.fr)