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Iridium SVP-B drifter
built by METOCEAN
Use and deployment instructions

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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 Iridium satellite communication 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.

Three 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

The buoy must be switched on before its launch. 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.** See its location on the figure page 4.

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 on his arms (see photo 2), throwing the whole, trying to move the float away from the ship hull at the last moment.

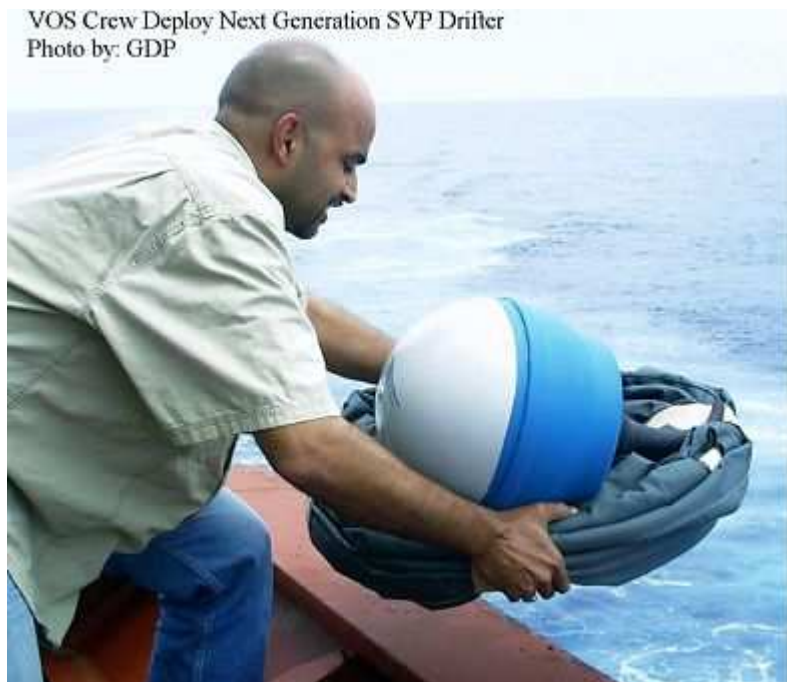
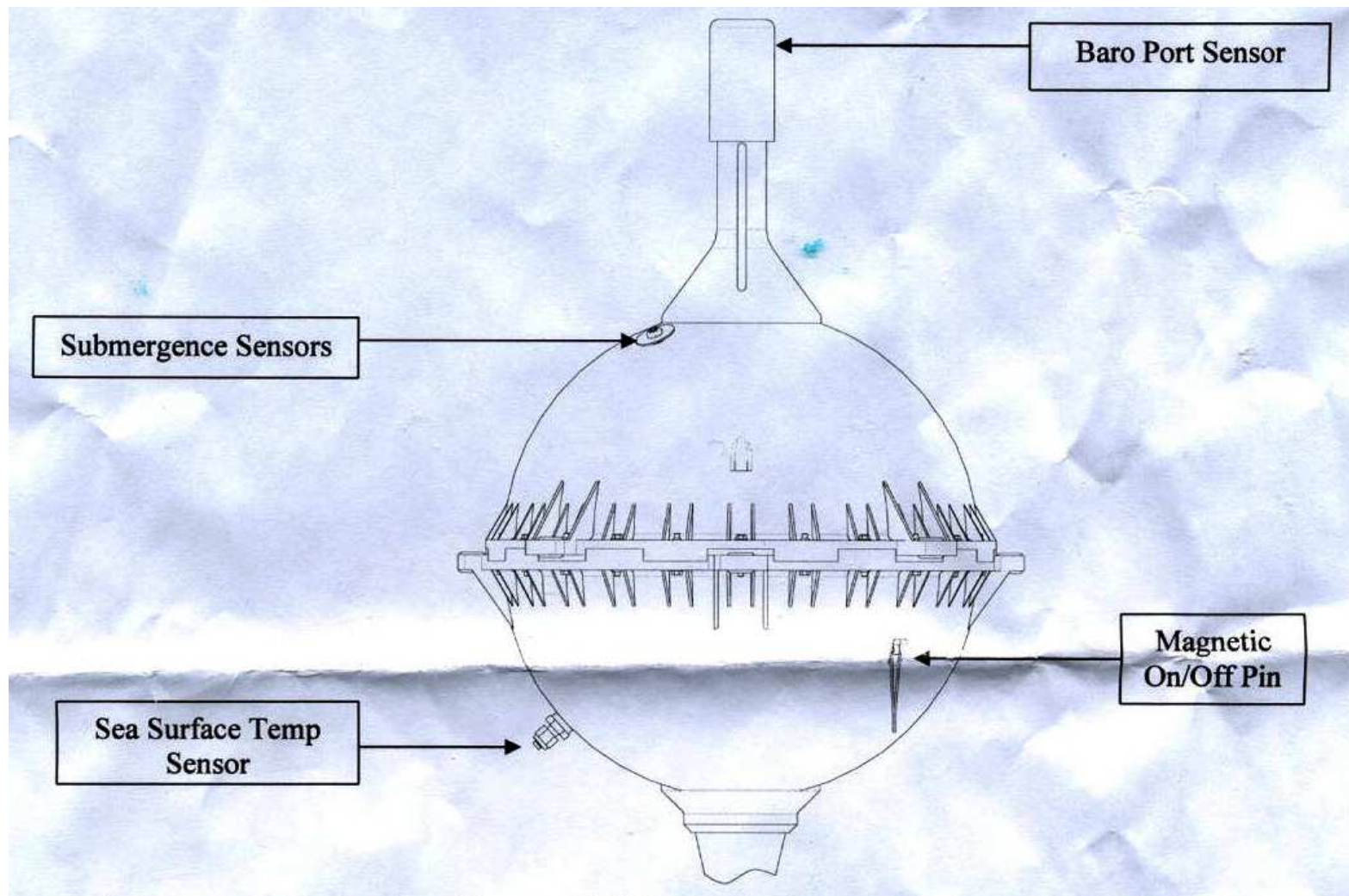


Photo 2. Drifter at deployment

Remark: This buoy looks like a SVP-B drifter although it is not exactly of that type (no mast).

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.



1. Remove the plastic wrap from buoy / drogue assembly
2. Remove magnetic On/Off pin.
3. Drop buoy into the water drogue side down. The SVP drifter (complete with automatic deployment packaging) is designed for a maximum free fall deployment height of 10 metres.

Figure 1 - Summary of the deployment Instructions (from Metocean)

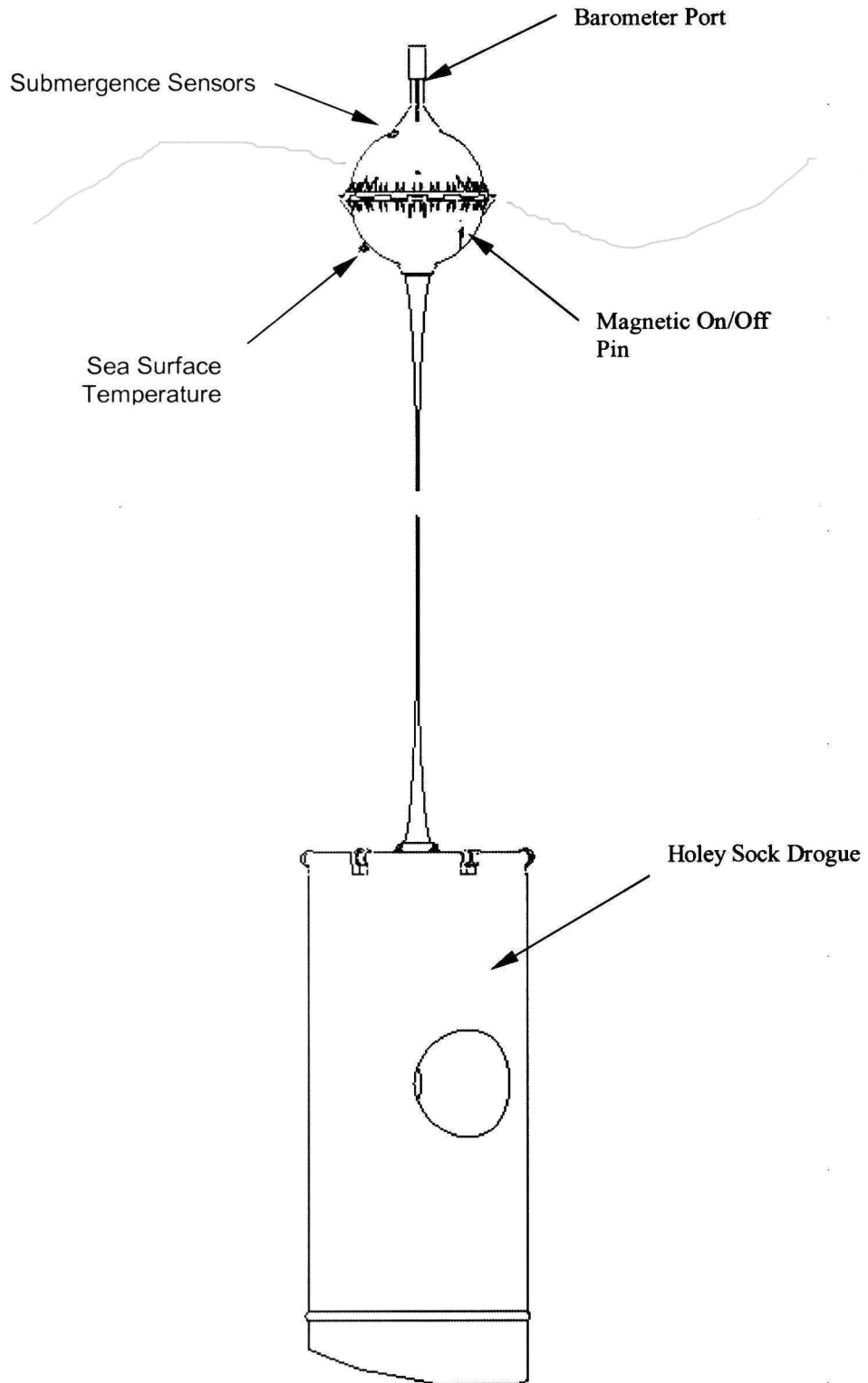


Figure 2 - Metocean SVP-B drifter
(when deployed)

DEPLOYMENT REPORT

SHIP NAME :

Buoy Id. Number :

Deployment time and location

Date and Time (UTC) :

Latitude :

Longitude :

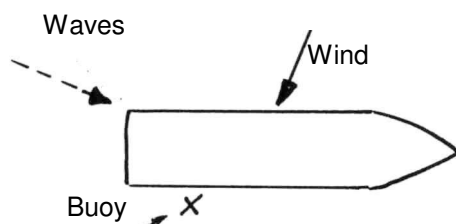
Conditions

Sea height : metres or sea state :

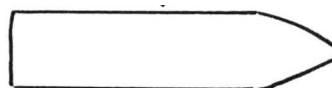
Wind speed : knots

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)