

PROVOR SPI

Argo profiling float for polar regions

PROVOR SPI is designed to operate under ice. It slides along a tightened cable hanged under an Ice Tether Platform (ITP)

The base of the PROVOR SPI is the PROVOR CTS3 designed for the ARGO project. The firm-ware has been upgraded to optimize the diving mission The ITP is an amphibious buoy which can operate as well on the ice than as floating offshore.

The communication with buoy is achieved by means of an inductive link, communication with the buoy uses the bidirectional iridium communication system. The PROVOR SPI is divided in several easily transportable elements to enable transport by small aircrafts until deployment area.

PROVOR SPI has been successfully deployed during Barneo campaign in the frame of the laos project.

Main features

- Qualified ARGO technology
- CTD and DO sensors
- Iridium telemetry providing increased



PROVOR SPI has been successfully deployed during Barneo campaign for the laos project.

nke
INSTRUMENTATION

www.nke-instrumentation.com



Profiling floats

PROVOR SPI



Sliding Profiling float with Inductive communications

TECHNICAL SPECIFICATIONS TYPE PROVOR CTS4

Seabird Electronics SBE 41 CP

- ▶ Salinity
Range 0 to 40 PSU
Initial accuracy ± 0.003 PSU
Observed drift < 0.01 PSU / 5 years
- ▶ Temperature
Range -5°C to $+35^{\circ}\text{C}$
Initial accuracy $\pm 0.002^{\circ}\text{C}$
Observed drift $< 0.002^{\circ}\text{C}$ / 5 years
- ▶ Pressure
Range 0 dbar to 2100 dbar
Initial accuracy ± 2.4 dbar
Drift < 5 dbar / 5 years

AANDERAA Dissolved oxygen Optode 4330

- Range 0 $\mu\text{M/l}$ to 500 $\mu\text{M/l}$
- Accuracy 8 $\mu\text{M/l}$ or $\pm 5\%$

FLOAT CONSTRUCTION

Hull Length 170 cm, Hull \varnothing 17 cm, Weight 35 kg
Hull anodized aluminum casing, low friction sliding system

BUOY CONSTRUCTION

Aluminium and watertight housing, antenna protected against polar bear

BUOYANCY MANAGEMENT

- Principle Oil ballast with pump
- Positioning accuracy $\pm 30\text{m}$ (98.4 ft.)

NUMBER OF PROFILES CAPABILITIES

- Up to 600 profiles @800 meters
- Up to 2 profiles per day
- Depends on the current strength in the area

FLOAT ENVIRONMENTAL OPERATING CONDITIONS

- Max operating depth 1000 dbar
- Operating temperature -2°C to $+35^{\circ}\text{C}$
- Power supply Lithium cells

USER INTERFACE

- a - Using Bluetooth
Mission programming, float checking...
Terminal Personal Computer
- b- Fan tail ready
Activation by magnetic switch
Remove magnet launches float
Audible informations for selftest results

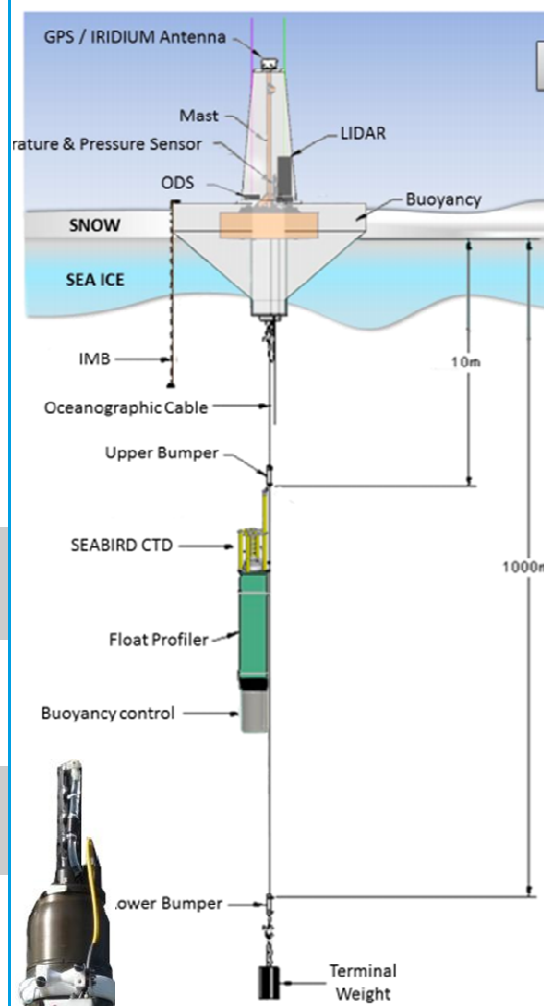
TELEMETRY

- Between float and buoy inductive modem.
- Between buoy and user Iridium Positioning GPS

STORAGE CONDITIONS

- Temperature -20°C to $+50^{\circ}\text{C}$ (-4°F to $+122^{\circ}\text{F}$)
- Maximum storage time before use: 1 year

IAOOS equipex project



nke
INSTRUMENTATION



Sales Department
(0)2 97 85 64 18 - Fax : +33 (0)2 97 36 55 17
info.instrumentation@nke.fr
www.nke-instrumentation.com

