

ARVOR



Profiling floats

Compact autonomous ARGO profiling float Salinity - Temperature - Pressure

ARVOR provides salinity, temperature and pressure profiles up to 2000 meters depth, using proven ARGO sensors. Data and positioning are achieved by ARGOS satellites.

Mission with two depth values alternated and grounding avoidance function are settable by user before mission.

With self-ballast and very light design, ARVOR can be deployed by one person.

Design has been performed by Ifremer, research by using an important know how in float activities and well qualified subassemblies. nke instrumentation has achieved the industrial design.

Main characteristics:

- Designed for the core Argo mission
- Light and easy to deploy (less than 20kg)
- "Sea-Bird" proven CTD metrology
- Theoretical autonomy with CTD pump in
 - Up to 220 cycles (CTD continuous pumping)
 - Up to 290 cycles (CTD pump in switched mode)
- Easy connectivity using RF bluetooth

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INSTRUMENTATION

www.nke-instrumentation.com



ARVOR

Data collection and positioning by ARGOS satellites



TECHNICAL SPECIFICATIONS TYPE ARVOR float

SBE 41 CP with pump Seabird Electronics

- Salinity
 - Range 0 to 42 PSU
 - Initial accuracy ± 0.005 PSU
 - Observed drift < 0.01 PSU / 5 years
- Temperature
 - Range -5° C to $+35^{\circ}$ C
 - Initial accuracy $\pm 0.002^{\circ}$ C
 - Observed drift $< 0.002^{\circ}$ C / 5 years
- Pressure
 - Range 0 dbars to 2100 dBars
 - Initial accuracy ± 2.4 dBar
 - Drift < 5 dBar / 5 years
 - Offset reset before dive at each surfacing

FLOAT DIMENSIONS

Overall Length 195 cm with antenna
 Hull Length 120 cm
 Hull Diameter 12 cm
 Damping and floating collar 25 x 25 cm
 Weight 19.5 kg

FLOAT CONSTRUCTION

Hard anodized aluminum casing

BUOYANCY CONTROL

Principle Oil ballast with pump & valve
 Positioning accuracy ± 30 m (98.4 ft.)

OPERATION FEATURES

Operation depth until 2000 dBar
 Number of profiles capabilities

- Up to 220 cycles to 2000 bars/CTD pump in continuous mode
- Up to 290 cycles to 2000 bars/CTD pump in switched mode

 Number of profiles programmable
 Operating temperature -2° C to $+35^{\circ}$ C

POWER SUPPLY

Lithium cells



USER INTERFACE

- A - Bluetooth User Interface
- Mission programming, float checking, etc.
 - Terminal : Personal Computer
- b- Fan tail ready
- Activation by magnetic switch
 - Remove magnet launches float and trig test Argos
 - Transmission

TELEMETRY ARGOS system

Duration on surface according to the quantity of data to transmit and latitude , typically between 8 to 10 hours.

Resolution of transmitted measurements :

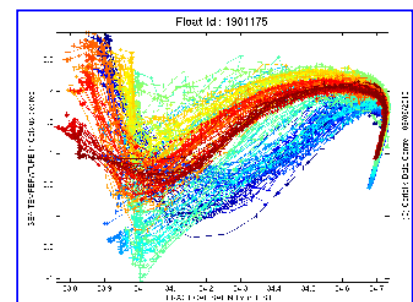
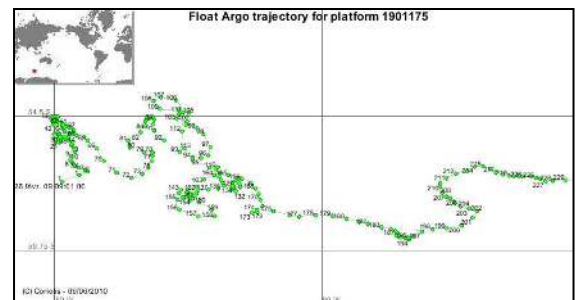
- Salinity 0.001 PSU
- Temperature 0.001 $^{\circ}$ C
- Pressure 0.1 dbar

STORAGE CONDITIONS

Temperature -20° C to $+70^{\circ}$ C (-4° F to $+158^{\circ}$ F)
 Maximum storage time before use: 1 year
 Real time clock saved by separate battery



> Pictures Ifremer



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