



ARVOR I

Autonomous ARGO profiling float with Iridium transmission Salinity - Temperature - Pressure

ARVOR I provides salinity, temperature and pressure profiles with position information thanks to an integrated GPS receiver. Data are transmitted via Iridium satellites network.

Bluetooth technology enables easy and fast configuration before mission. Iridium downlink enables parameters modification remotely as soon as the ARVOR I surfaces.

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

It capitalises on both the know-how of Ifremer in floats activities and designing qualified subassemblies and of nke on industrial product development.

Qualified technology for ARGO project

- Sea Bird electronics proven CTD metrology
- GPS positioning
- Iridium SBD transmission
- Up to 300cycles, 10 days
- High sampling rate capability up to 2000 pts
- Easy connectivity using RF Bluetooth
- Fully operational, light and easy to deploy float
- Weight 20 kg
- Self-ballasted float

Picture Ifremer

nke
INSTRUMENTATION

www.nke-instrumentation.com





ARVOR I

Developed in industrial partnership with Ifremer

Data collection with Iridium transmission

TECHNICAL SPECIFICATIONS TYPE ARVOR I float

SBE 41 CP with pump Seabird Electronics

- Salinity
 - Range 0 to 40 PSU
 - Initial accuracy ± 0.003 PSU
 - Observed drift < 0.01 PSU / 5 years
- Temperature
 - Range -5° C to $+35^{\circ}$ 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 225 cm with antenna
- Hull Length 170 cm
- Hull Diameter 17.3 cm
- Weight 20 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 300 cycles @ 110 pts 2000 bars/CTD
- High sampling capability: up to 2000 pts
- Number of profiles programmable
- Operating temperature -2° C to $+35^{\circ}$ C

POWER SUPPLY

- Lithium cells
- Operating life up to 4.5 years at sea

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 triggers Argos
 - Transmission test

TELEMETRY IIRIDIUM system

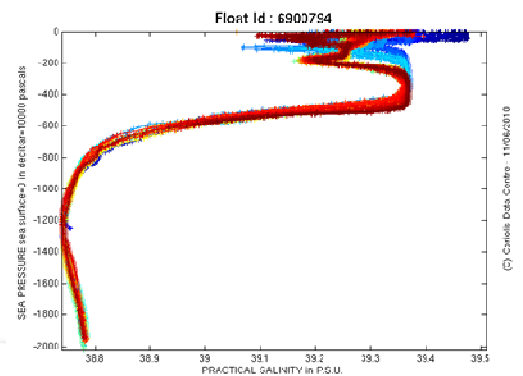
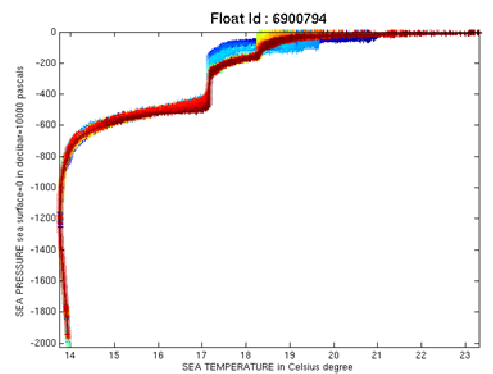
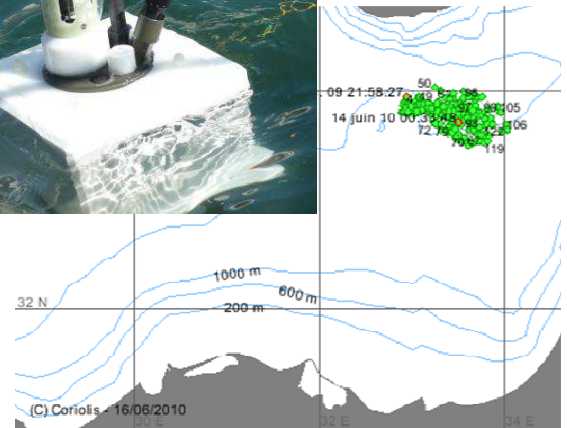
- Data transmission : Iridium « 9602 » transceiver, helicoidal antennae.
- Duration on surface approx. 10 mn
- Resolution :

Salinity	0.001 PSU
Temperature	0.001°C
Pressure	0.1 dbar

Position: acquired by GPS receiver, transmitted in Iridium messages

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



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