

# ARVOR L



## Autonomous ARGO profiling float with Argos transmission Salinity - Temperature - Pressure



Profiling floats

**ARVOR L** provides salinity, temperature and pressure profiles up to 2000 meters depth. Data and positioning are achieved 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 L** 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.

Bluetooth technology enables easy configuration before mission.

Qualified technology for ARGO project :

- Sea Bird electronics proven CTD metrology
- Self-ballasted float
- One cycle is @2000 m, 10 days , 112 points
  - Up to 190 cycles in average CTD acquisition
  - Up to 250 cycles in ECO Ifremer MODE
- Argos Doppler positioning
- Easy connectivity using RF Bluetooth
- Fully operational, light and easy to deploy float
- Weight less than 20 kg



Picture Ifremer

**nke**  
**INSTRUMENTATION**

[www.nke-instrumentation.com](http://www.nke-instrumentation.com)





# ARVOR L

Developed in industrial partnership with Ifremer

Data collection with ARGOS transmission and positioning

## TECHNICAL SPECIFICATIONS TYPE ARVOR L float

### SBE 41 CP with pump Seabird Electronics

- ▶ Salinity
  - Range 0 to 40 PSU
  - Initial accuracy  $\pm 0.003$  PSU
  - Observed drift  $< 0.01$  PSU / 5 years
- ▶ Temperature
  - Range  $-5^{\circ}\text{C}$  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 dbars to 2100 dBars
  - Initial accuracy  $\pm 2.4$  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 11.4 cm  
 Weight 20 kg

### FLOAT CONSTRUCTION

Hard anodized aluminum casing

### BUOYANCY CONTROL

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

### OPERATION FEATURES

Operation depth until 2000 dBar  
 Number of profiles capabilities  
 Up to 190 cycles to 2000 bars/CTD pump in switched mode  
 Number of profiles programmable  
 Operating temperature  $-2^{\circ}\text{C}$  to  $+35^{\circ}\text{C}$

### 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



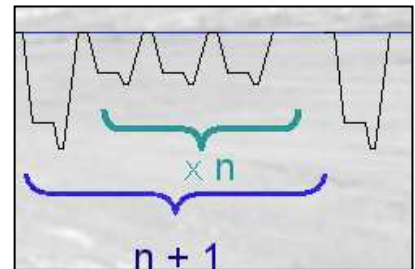
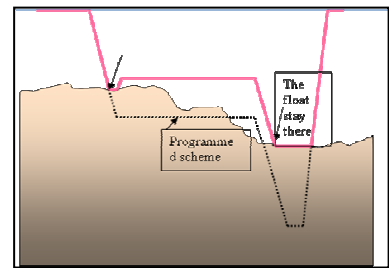
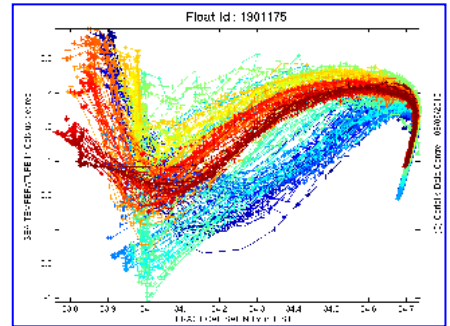
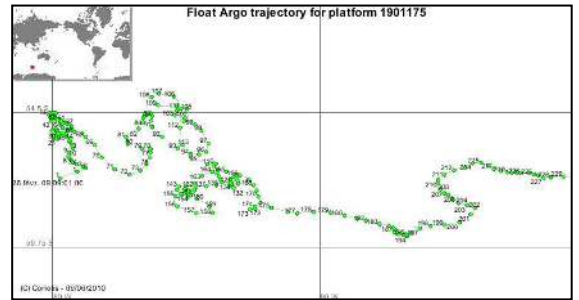
### TELEMETRY ARGOS satellites

Argos PTT certified by CNES and manufactured by nke  
 With antenna overmolded  
 Duration on surface according latitude between 6 to 8 hours  
 Resolution of transmitted measurements:

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

### STORAGE CONDITIONS

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



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