ARVOR-C is a subsurface profiling float designed to operate in coastal environment and perform oceanographic measurements as a pseudo-eulerian station.

Its design has been optimized to reduce its drift thanks to a seabed standby and anti-drift claws, an optimized profiling speed (~25 cm/s), and a short data transmission duration.

It can perform more than 300 profiles, and transmits its data in real time via the Iridium satellite system.

The ARVOR-C is fitted with "ARGO" used CTD.

The design of the ARVOR-C has used elements and know-how used in the ARVOR and PROVOR offshore profiling floats range.

**Main characteristics:**
- Virtual mooring
- Sampling over the entire water column
- Up to 300 cycles (lithium cells)
- Operation depth: 300 meters
- Up to one set of measure per meter
- Light and easy to deployd (22kg)
- “Sea-Bird” proven CTD metrology
- Two ways Iridium transmission & remote control
- Self ballasted
ARVOR C

Developed in industrial partnership with Ifremer

TECHNICAL SPECIFICATIONS
TYPE ARVOR-C (Coastal)

SBE 41 CP manufactured by 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°C
  Initial accuracy ± 0.002°C
  Observed drift < 0.002°C / 5 years
- Pressure
  Range 0 dbar to 2100 dBars
  Initial accuracy ± 2.4 dbar
  Drift < 5 dBar / 5 years

TELEMETRY
IRIDIUM transmission

DATA TRANSMITTED
One (T, S) averaged per meter

TRANSMITTED RESOLUTION
- Salinity 0.001 PSU
- Temperature 0.001°C
- Pressure offset 1 cbar (reseted when surfacing)

POSITIONNING
GPS receiver 12 channels

FLOAT DIMENSIONS
Overall Length 195 cm with antenna
Hull Length 140 cm
Hull Diameter 11 cm
Damping and floating collar 29 x 29 cm
Weight 22 kg

FLOAT CONSTRUCTION
Hull Anodized aluminum casing
High pressure synthetic foam for floatation

OPERATION FEATURES
Operation depth: 300 dBars
Number of profiles: up to 300 cycles
Operating temperature: -2°C to 35°C
Operating life 4-5 years at sea
Power supply: Lithium battery

STORAGE CONDITIONS
Temperature -20° C to +70° C (-4° F to +158° F)
Maximum storage time before use: 1 year
Real time clock saved by separate battery

BUOYANCY MANAGEMENT
Principle: Oil ballast with pump & valve

USER INTERFACE
A- Bluetooth User Interface
  Mission programming, float checking, etc.
  Terminal Personal Computer
B- Activation by magnetic switch
  Remove magnet launches the float
C- Remote control
  Modification of mission parameters via Iridium downlink

1/ Descent
2/ Seabed standby until pre-programmed pop up time
3/ Pop up and measurements
4/ At surface:
  • GPS fix acquisition
  • Reading for new set of parameters (remote control)
  • Data transmission (Iridium)

Pictures and drawing thanks to Ifremer and Olivier Dugourtay courtesy

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