

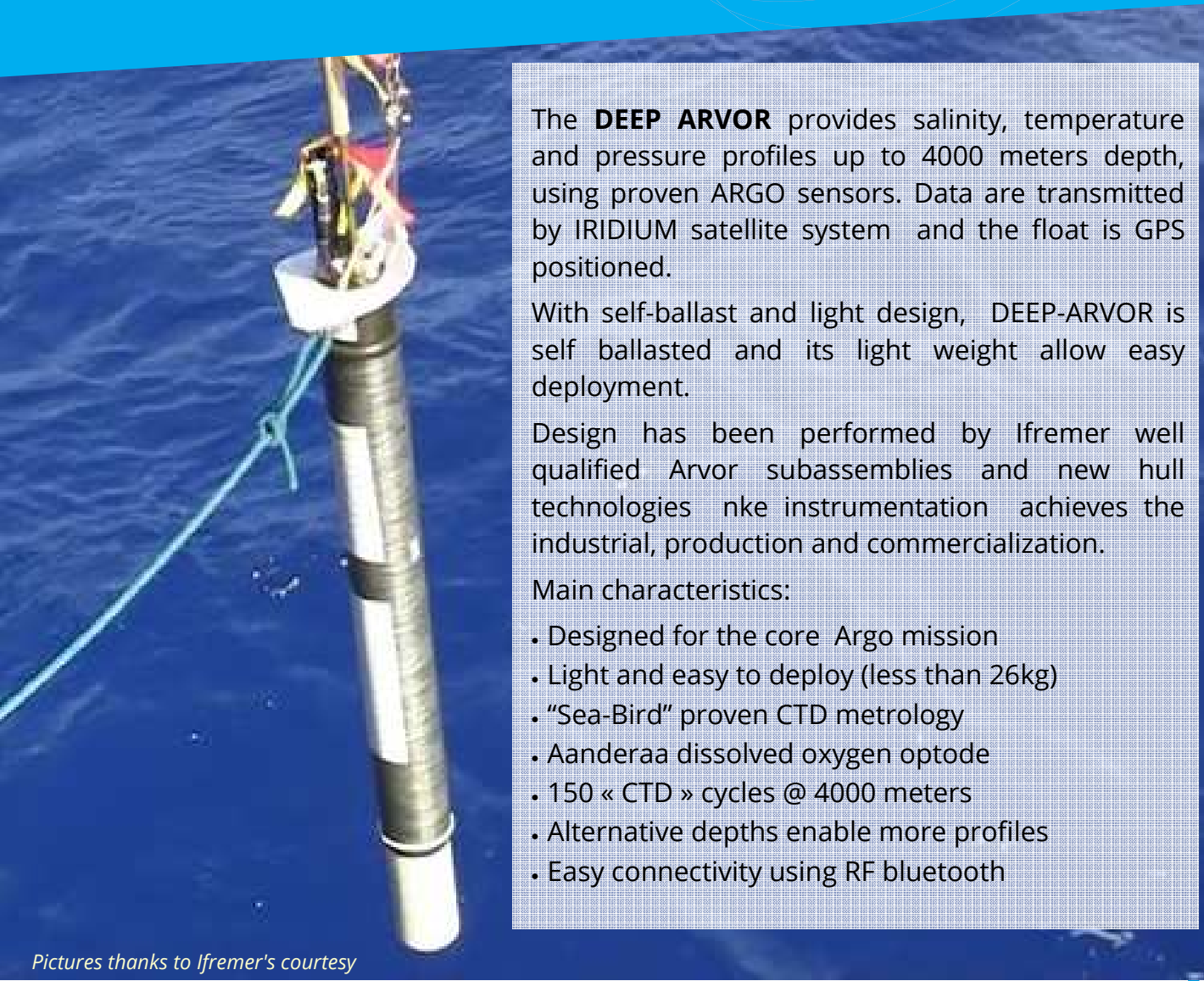
DEEP ARVOR

Ifremer



*Compact autonomous ARGO profiling float
for use at 4000 meters depth, 150 cycles
Salinity - Temperature - Pressure - DO*

Profiling floats



The **DEEP ARVOR** provides salinity, temperature and pressure profiles up to 4000 meters depth, using proven ARGO sensors. Data are transmitted by IRIDIUM satellite system and the float is GPS positioned.

With self-ballast and light design, DEEP-ARVOR is self ballasted and its light weight allow easy deployment.

Design has been performed by Ifremer well qualified Arvor subassemblies and new hull technologies nke instrumentation achieves the industrial, production and commercialization.

Main characteristics:

- Designed for the core Argo mission
- Light and easy to deploy (less than 26kg)
- "Sea-Bird" proven CTD metrology
- Aanderaa dissolved oxygen optode
- 150 « CTD » cycles @ 4000 meters
- Alternative depths enable more profiles
- Easy connectivity using RF bluetooth

Pictures thanks to Ifremer's courtesy

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INSTRUMENTATION

www.nke-instrumentation.com





DEEP ARVOR

Data collection and positioning by IRIDIUM and GPS

Ifremer



TECHNICAL SPECIFICATIONS TYPE DEEP ARVOR float

4000 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 4100 dBars
 - Initial accuracy ± 2.4 dBar
 - Drift < 5 dBar / 5 years
 - Offset reset before dive at each surfacing

4330 Aanderaa optode for DO

- Range 0 μ M/l to 500 μ M/l
- Accuracy 8 μ M/l $\pm 5\%$

FLOAT DIMENSIONS

Overall Length 216 cm with antenna
 Hull Length 120 cm
 Hull Diameter 14 cm
 Damping collar 25 x 25 cm
 Weight 26 kg

FLOAT CONSTRUCTION

Carbon epoxy housing

BUOYANCY CONTROL

Principle Oil ballast with pump & valve
 Positioning accuracy ± 50 m

OPERATION FEATURES

Operation depth until 4000 dBars
 Sampling and transmission up to 2000 points
 Computed number of profiles
 More than 150 cycles to 4000 bars/CTD
 More than 225 1/5 4000/2000 CTD / DO
 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 - Remote control by IRIDIUM



TELEMETRY IRIDIUM system

Iridium SBD

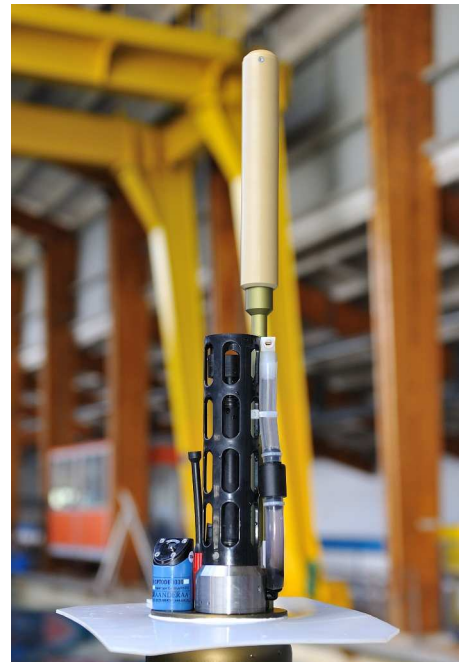
GPS

Resolution of transmitted measurements:

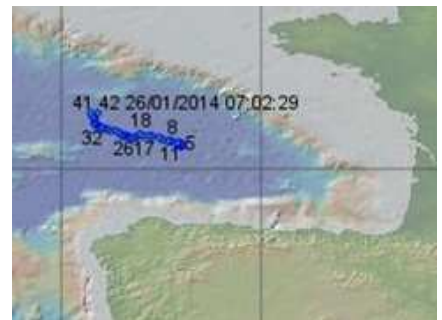
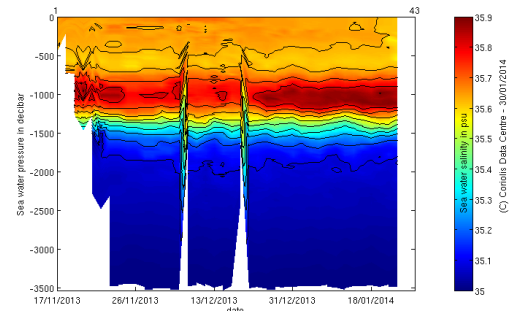
- Salinity 0.001 PSU
- Temperature 0.001 $^{\circ}$ C
- Pressure 0.1 dbar
- DO 0.,002 $^{\circ}$

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



Float Id : 6901597
Cycle number



Pictures thanks to ifremer's courtesy

nke INSTRUMENTATION



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