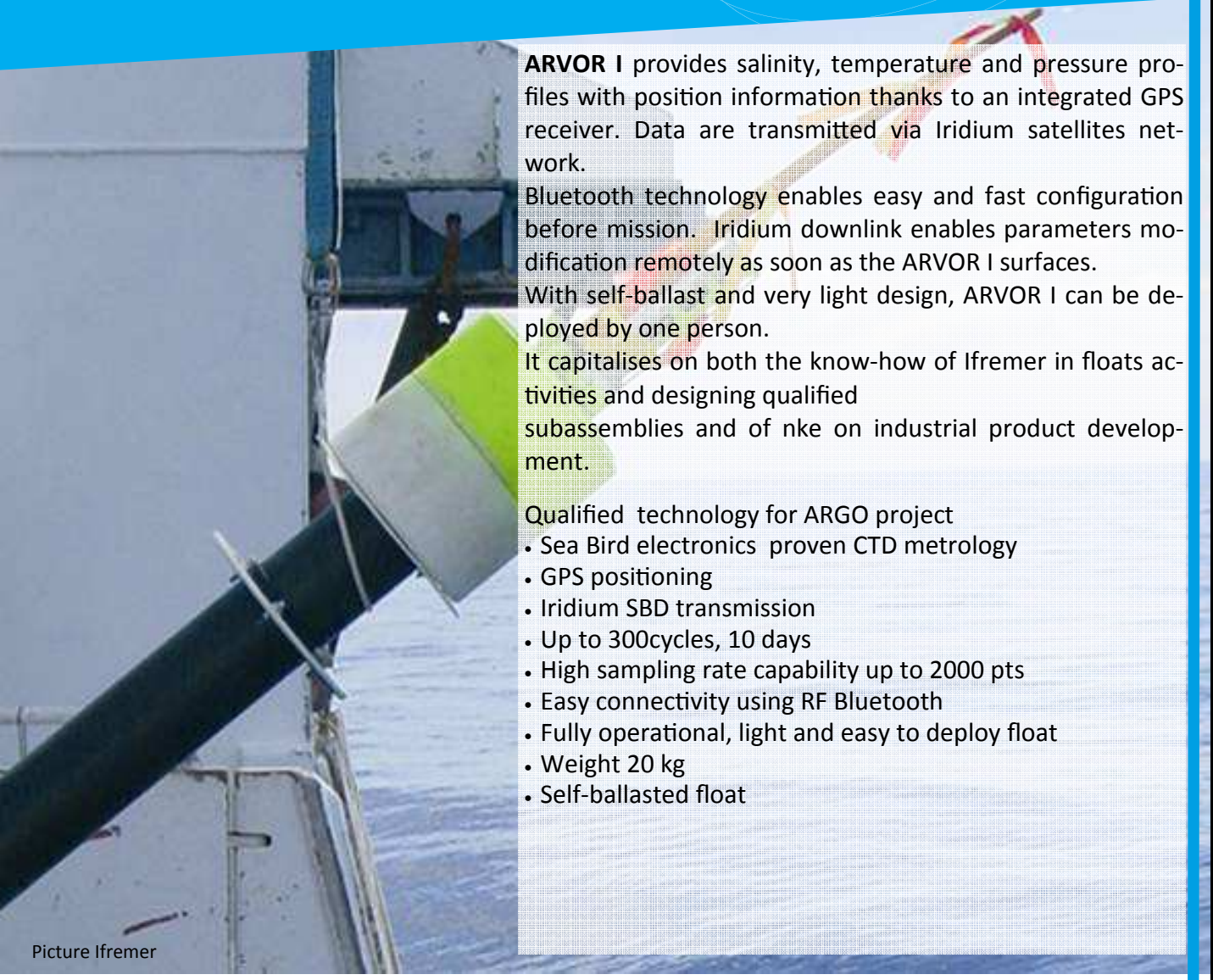
ARVOR I

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

Profiling floats



Picture Ifremer

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

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Profiling floats

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° C
- Initial accuracy ± 0.002° C
- Observed drift < 0.002° 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 ± 30m (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 capabilty: up to 2000 pts
Number of profiles programmable
Operating temperature -2°C to +35°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 IRIDIUM system

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

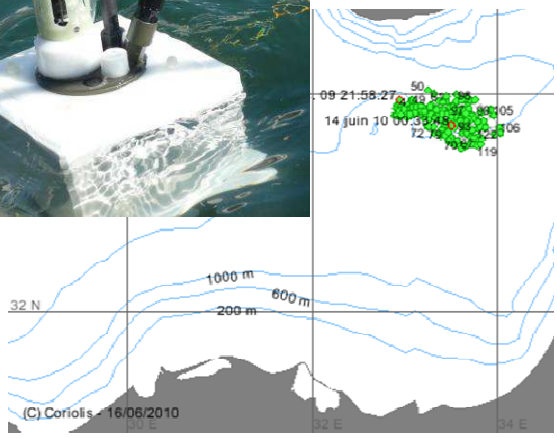
Resolution :

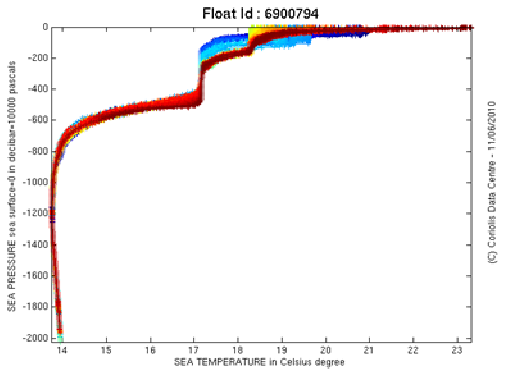
Salinity	0.001 PSU
Temperature	0.001°C
Pressure	0.1 dbar

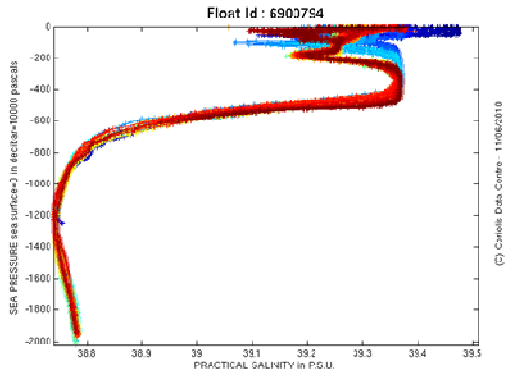
Position: acquired by GPS receiver, transmitted in Iridium messages

STORAGE CONDITIONS

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







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