

ARGOS-3 • GREATER VOLUME OF DATA TRANSMITTED DURING EACH SATELLITE PASS: UP TO 10 TIMES THE DATA COLLECTION CAPACITY OF ARGOS-2 !



MAIN FEATURES



HIGH DATA RATE CHANNEL

- Data are collected via a 4.8 kbit/s high data rate channel
- 4.5 kbit messages sent in short bursts (less than 1 second)



INTERACTIVE DATA COLLECTION MODE

- Message reception acknowledged by the satellite
- Very few redundant messages



BETTER TRANSMISSION MANAGEMENT

- Rendez-vous with satellite
- Transmission only during satellite passes (main advantages: low power consumption, increased lifetime, less time at the surface for Argo floats)



TWO-WAY COMMUNICATION

- Sending commands to platforms
- Broadcast messages to manage PMT transmissions
- Updating pass prediction parameters

LAUNCHING ARGOS-3

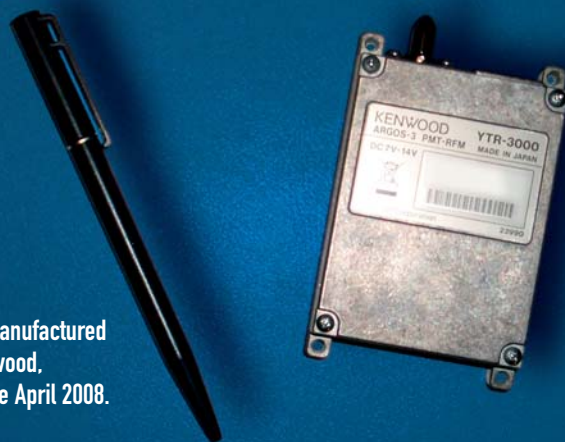
The Argos-3 program will be developed over the next years, with instruments launched aboard 5 satellites:

- MetOp-A (2006)
- NOAA N' (2009)
- Saral (2010)
- MetOp-B (2011)
- MetOp-C (2014)

Program lifetime is expected until 2025.



ARGOS-3 • COMPACT, LIGHT-WEIGHT, SMART AND EASY, ARGOS-3 TECHNOLOGY IS HERE !



PMTs manufactured
by Kenwood,
available April 2008.

➔ ARGOS-3 PMT: A SMART MODEM

The Argos-3 PMTs (Platform Messaging Transceivers) built by Kenwood and Elta capitalize on reliable Argos technology, but function as a modem. With this new equipment, users and manufacturers no longer need to think about bits, bytes, messages or satellite passes. The PMT's internal modem takes care of it all. Instead of relaying data to the transmitter sensor by sensor, the acquisition part of the platform relays observation data sets, up to 8 kbytes, to the PMT. The PMT then takes care of the transmission process – including cutting the data set into Argos messages, attributing headers and checksum, and ensuring secured transmission via the Argos satellite constellation.

➔ PROCESSING THE PMT MESSAGES

With the launch of the Argos-3 instrument on MetOp, CLS has invested in a new processing system. This new processing system capitalizes on state-of-the-art technology available today to offer users more flexibility (multiple message format processing: raw data and physical values) and better data (checksum processing, non-successive compression index). In addition, CLS's processing system is prepared to receive and concatenate the messages sent by PMTs, reformatting them as quality-controlled observations. Argos-3 observations will be distributed as raw and physical values via ArgosWeb, ArgosDirect and ArgosServer.



PMTs manufactured by Elta,
available end-2008.

➔ PILOT PROGRAMS

Argos-3 technology brings significant changes to the way Argos is used. To explore the possibilities of this new system and define the specific transmission strategies and functions for each type of ocean platform, CLS is currently working with the following:

- Clearwater Instrumentation, Pacific Gyre (drifters)
- Bathysystems (APEX float)
- Ifremer & Kannad (PROVOR float)
- WHOI (moored buoys)

➔ HOW TO GET A PMT AND ENJOY ARGOS-3 CAPABILITIES

In April 2008, 500 PMTs will be available for integration in ocean platforms.

CLS is looking for interested partners to integrate the PMTs in their oceanographic platforms. We will provide interested manufacturers and integrators with a PMT, technical assistance and free air-time in 2008. For further information about integrating PMTs and joining our pilot program, please contact Bill Woodward (bwoodward@clsamerica.com) or Christian Ortega (cortega@cls.fr).

