

STATE-OF-THE-ART PROCESSING

FOR IN SITU DATA COLLECTION SYSTEMS



DATA PROCESSING

CLS has operated satellite-based systems 24/7 for twenty years, developing and refining the services that have made it a leading partner of the largest international space agencies. Today, CLS's operating center in Toulouse, France, processes data from over 40 satellite-borne instruments. Our processing systems are backed up by CLS America, in Largo, MD.

AMONG THE SYSTEMS AND SERVICES OPERATED BY CLS :

- ➔ **ARGOS**, the worldwide data collection and localisation system
- ➔ **SATELLITE RADAR**, image processing for detecting marine vessels and oil spills
- ➔ **CATSAT**, a satellite-based system processing and delivering ocean remote sensing data to help fishing management
- ➔ **COSPAS/SARSAT**, an international search and rescue system, for the French Direction of Maritime Affairs
- ➔ **SSALTO** (Ground segment Altimetry Orbitography Precise Positioning) for JASON and ENVISAT, on behalf of CNES
- ➔ **NOVACOM**, geo-positioning services using Inmarsat, Vistar, Iridium, Spacechecker and GlobalStar, for Novacom Services, a subsidiary of CLS

Over 1 million Argos messages are processed by CLS every day.

LATEST DEVELOPMENTS

Argo float data distributed as observations via ArgosWeb.

Platform ID No.	WMO ID No.	Platform type	Obs. Date	Latitude	Longitude	Level	WT_SA	WT_T
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	0	34.481	26.658
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-5	34.481	26.658
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-10	34.482	26.05
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-10	34.486	27.971
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-20	34.49	27.98
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-30	34.486	27.942
21858	02900481	ARGO FLDAT	13/02/08 16:20:00	14° 23' 06"S	67° 08' 46"E	-49	34.712	27.997

Drifter data distributed as observations via ArgosWeb.

Platform ID No.	WMO ID No.	Platform type	Obs. Date	Latitude	Longitude	ATMPSR
69002	31737	DRIFTER	18/02/08 00:00:00	12° 48' 34"N	51° 03' 51"W	1015.7
69002	31737	DRIFTER	18/02/08 01:00:00	12° 48' 23"N	51° 01' 39"W	1016.2
69002	31737	DRIFTER	18/02/08 05:00:00	12° 49' 27"N	51° 03' 57"W	1015.5
69002	31737	DRIFTER	18/02/08 06:00:00	12° 48' 45"N	51° 06' 31"W	1015.1
69002	31737	DRIFTER	18/02/08 07:00:00	12° 48' 45"N	51° 06' 31"W	1014.8
69002	31737	DRIFTER	18/02/08 08:00:00	12° 48' 45"N	51° 06' 31"W	1014.8
69002	31737	DRIFTER	18/02/08 08:00:00	12° 48' 45"N	51° 06' 31"W	1015.6
69002	31737	DRIFTER	18/02/08 14:00:00	12° 48' 45"N	51° 06' 31"W	1017.6
69002	31737	DRIFTER	18/02/08 15:00:00	12° 48' 37"N	51° 12' 04"W	1017.4
69002	31737	DRIFTER	18/02/08 16:00:00	12° 48' 37"N	51° 12' 04"W	1016.5
69002	31737	DRIFTER	18/02/08 17:00:00	12° 48' 37"N	51° 12' 04"W	1015.5
69002	31737	DRIFTER	18/02/08 18:00:00	12° 48' 37"N	51° 12' 04"W	1014.8
69002	31737	DRIFTER	18/02/08 18:00:00	12° 48' 37"N	51° 12' 04"W	1017.6
69002	31737	DRIFTER	18/02/08 19:00:00	12° 53' 01"N	51° 17' 04"W	1015.9
69002	31737	DRIFTER	18/02/08 19:00:00	12° 53' 01"N	51° 17' 04"W	1017.0



DISTRIBUTING OBSERVATIONS

CLS's new processing system distributes user data as quality-controlled observations. It assembles all data collected from multiple satellite passes, erases the duplicates, extracts the observations and time stamps them. The resulting quality-controlled datasets (i.e. temperature, pressure, salinity, currents, wind speed) are then distributed with the best associated geo-location (latitude, longitude, depth or level).

In addition, users can still receive raw data displayed by messages and satellite passes, ensuring compatibility with their current processing software.



GTS SUBSYSTEM

CLS will integrate their newly upgraded GTS processing subsystem into the new Argos processing system in Spring 2008, thus benefiting from technical improvements and all future enhancements to the system.

CLS is proud to have participated in this international meteorological network for more than 20 years.



IRIDIUM AT CLS

CLS is developing its Iridium processing capabilities to satisfy the data collection requirements of the global ocean/met research and operational communities. As with Argos processing, data delivery options are planned as well as value-added services such as data quality control, GTS processing and dissemination, etc. First quarter 2008 is the schedule for Iridium data services to be available from CLS. Drifter data from the DBCP Iridium pilot project, as well as from Argo floats, are being inserted in the Argos processing system to validate the concept and demonstrate the capabilities.

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ZZYY DBCP1 19097 1400/ 187132 138545 6113/
11119 0//// 30147 40147
22219 01024
444 20130 19097 1411/ 500// 80014 =

ZZYY DBCP2 19097 1400/ 144600 032139 6113/
11119 0//// 30147 40147
22219 00214
444 20130 19097 1401/ 500// 80012 =
    
```

The first test Iridium GTS bulletin, processed by CLS.