



CLS

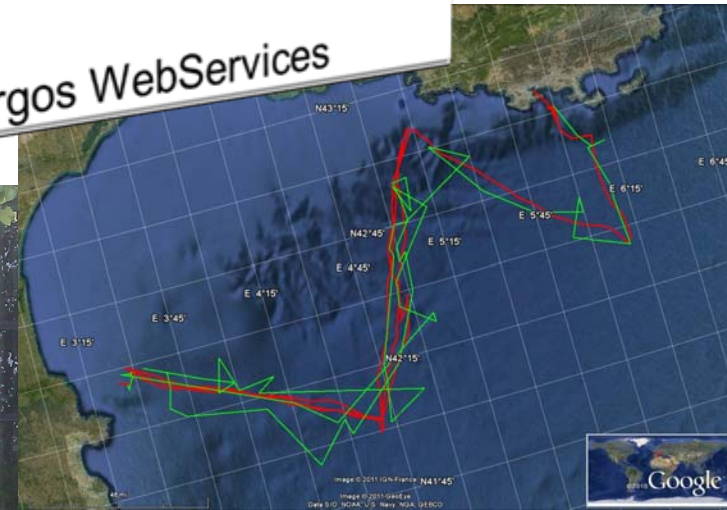
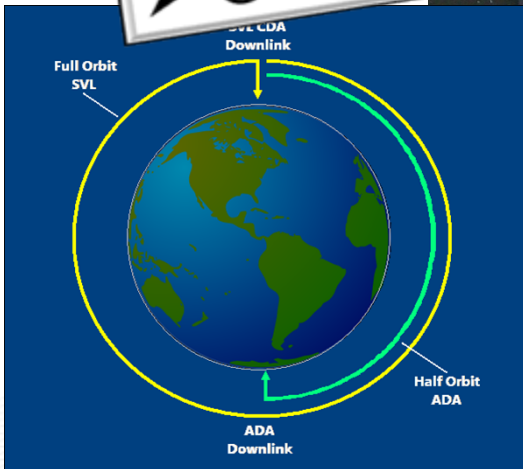
COLLECTE LOCALISATION SATELLITES

ARGOS OPERATIONS

DBCP 29 – Paris, France Sept. 23-27, 2013

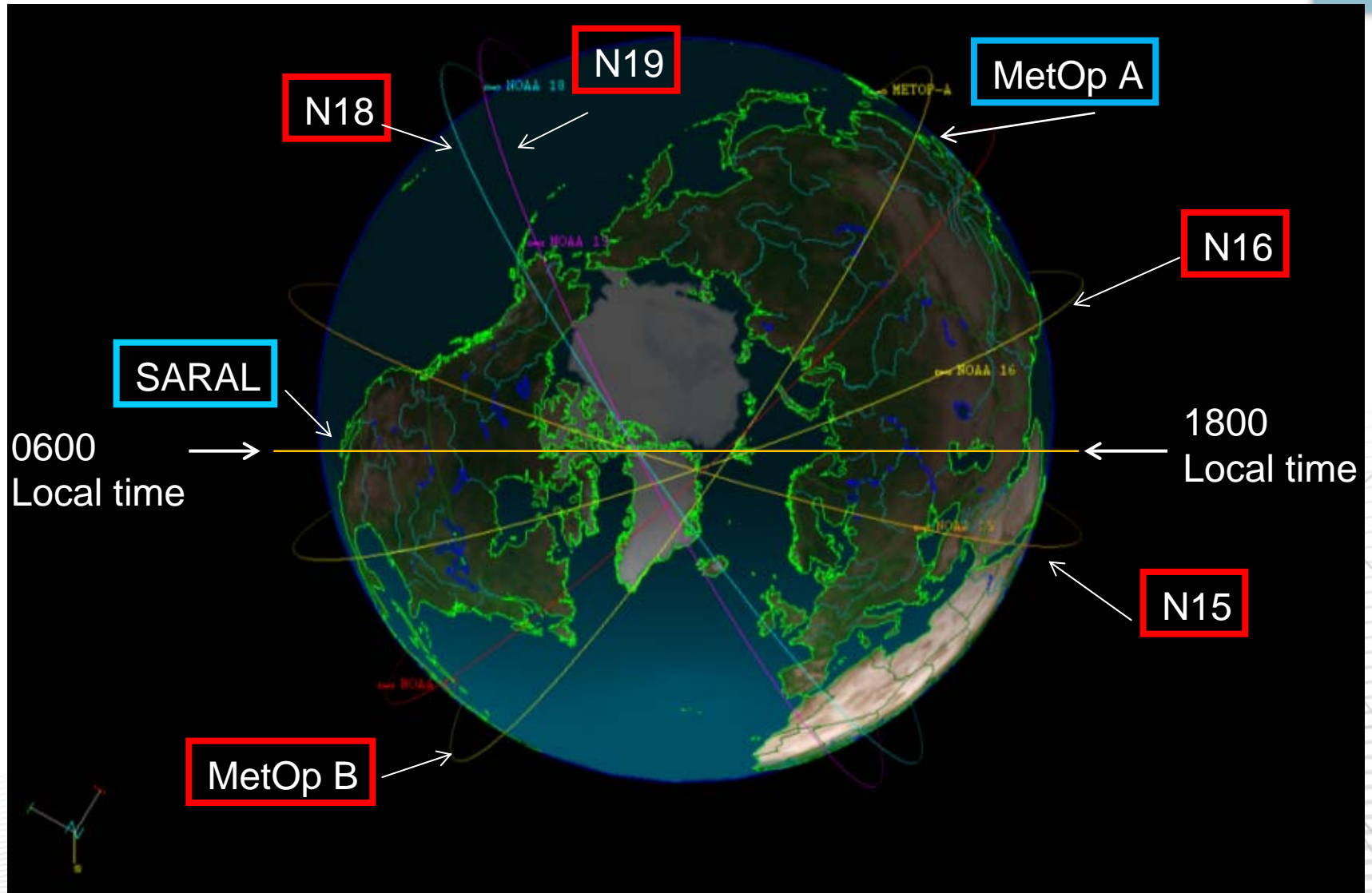


- Violent Storms in DC area; impact on CLS America Services 2 days in June 2012
- Major BUFR format upgrade from V3 to V4 on Sept. 9, 2012
- Metop-B Launched September 17th, 2012
- CLS Toulouse Processing Center Move: October 20, 2012
- SARAL Launched: February 25, 2-13
- Observations now available via the Argos WebServices



2011/06/23 18:50

ARGOS SPACE SEGMENT



➤ On-Board Anomalies

➤ METOP-A

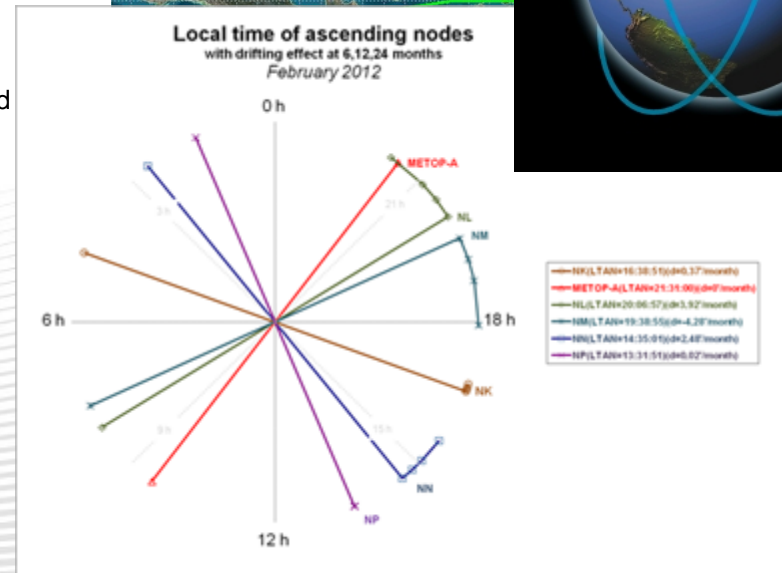
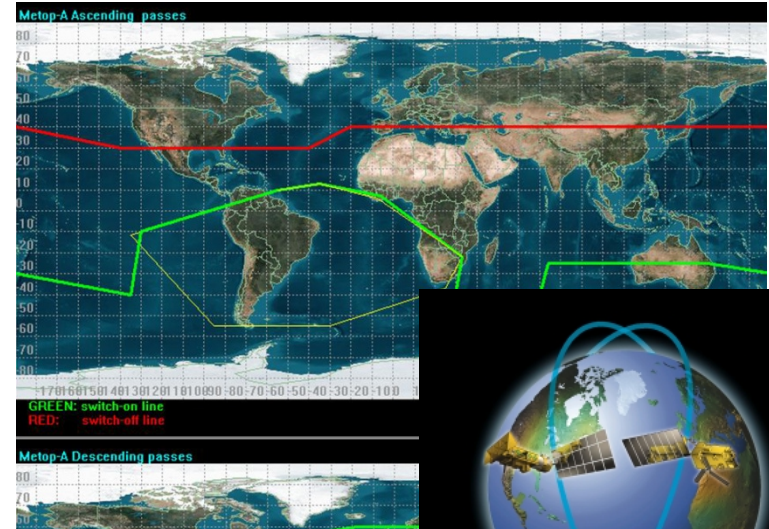
- 21/03/12: Processor failure. No data during 4 minutes.
- 08/04/12: Processor failure. No data during 4 minutes.
- 02/06/12: Processor failure. No data during 4 minutes.
- 04/07/12: Processor failure. No data during 2 minutes.
- 04/11/12: Increase of memory software failure. No impact. As the value of the counter of simple error was at its max value (65535), so sending of the directive to reset the counter (05/11/2012 09h42).

➤ NOAA-15

- 24/01/12: NOAA-15 was placed into the Gyroless Mode for a baseline on-orbit test. No dataset from NOAA during this period so the loss of data is around 50%.

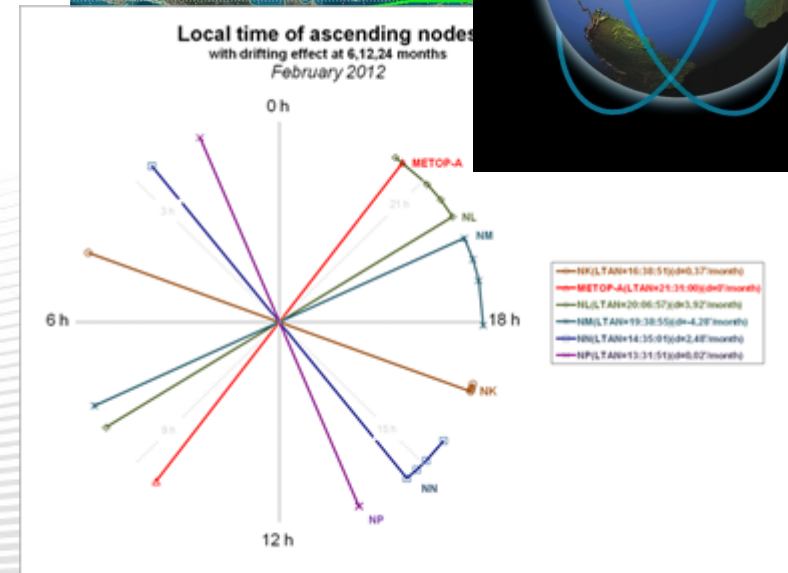
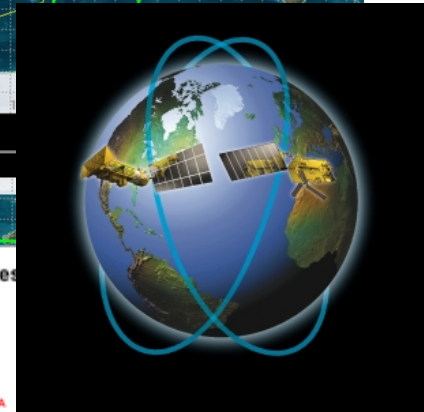
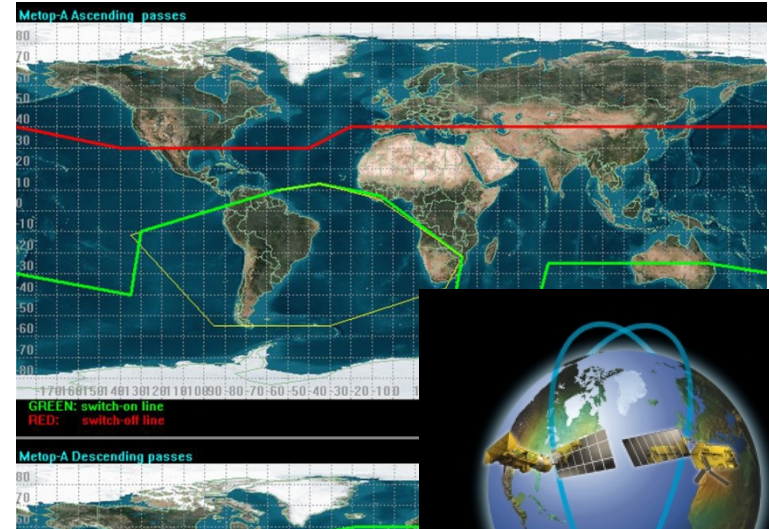
➤ NOAA-19

- 11/07/12: Increase of memory software failure (max=65535) and WATCH_DOG. No Data during 10 hours. Dataset Processing switch on.
- 02/09/12: Processor failure. No data during 4 minutes.
- 30/09/12: Processor failure. No data during 4 minutes.



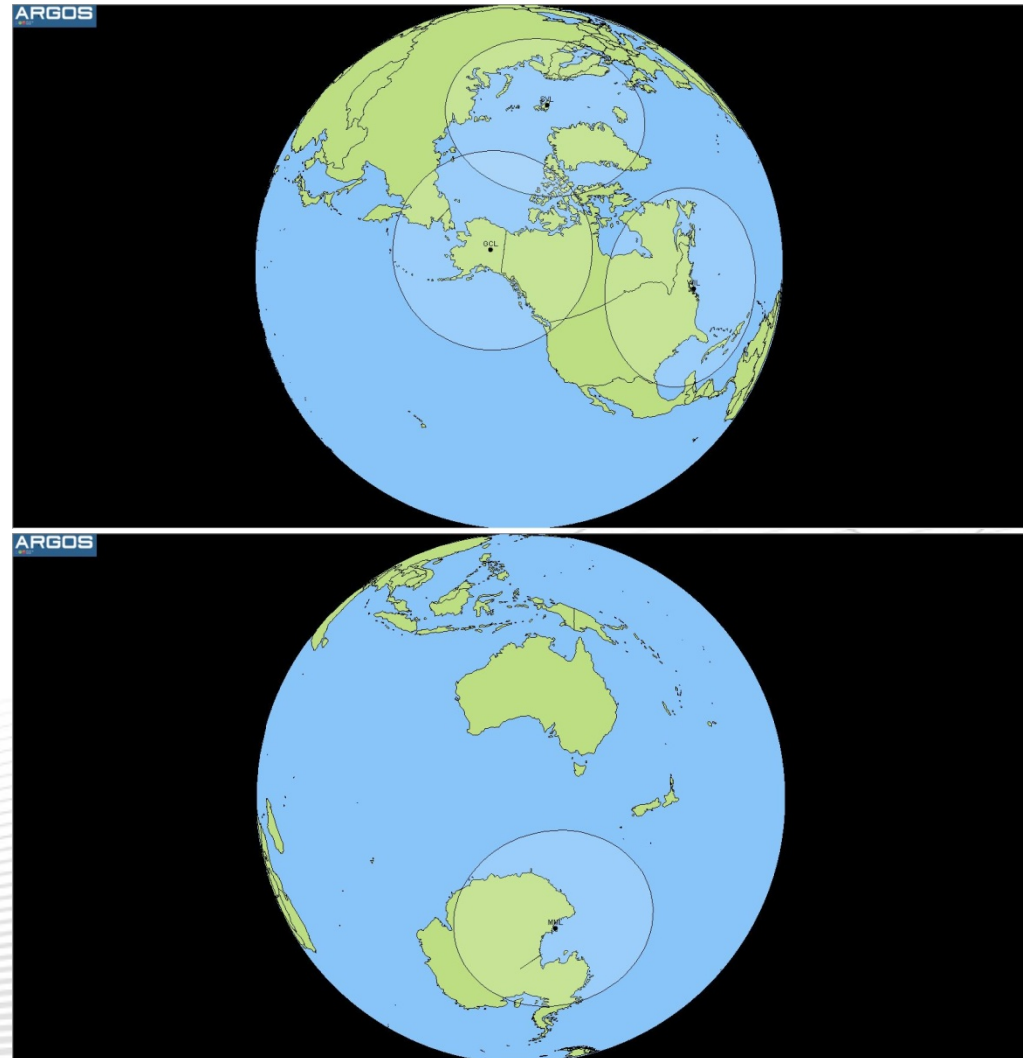
➤ Manoeuvres

- **METOP-A**
- 02/03/12: Emergency In-Plane Manoeuvre. 1 burst of 3s (high risk of conjunction). ARGOS Location service closed for 5 days and 19 hours.
- 14/04/12: Emergency In-Plane Manoeuvre. 1 burst of 6.25s (high risk of conjunction). ARGOS Location service closed for 2 days and 20 hours.
- 18/07/12: In Plane Manoeuvre. 1 burst of 7 seconds. Degradation of the ARGOS locations quality for 24 hours.
- 21/11/12: In Plane Manoeuvre. 1 burst of 7.5s Degradation of the ARGOS locations quality for 24 hours.

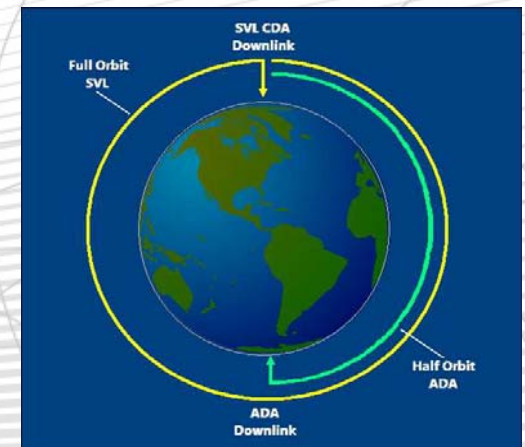


➤ Global Ground Stations (6)

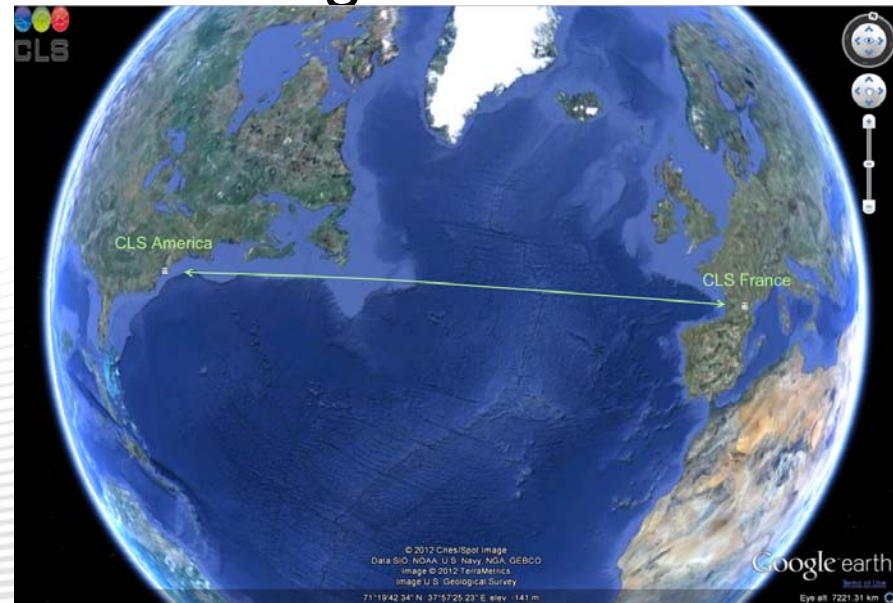
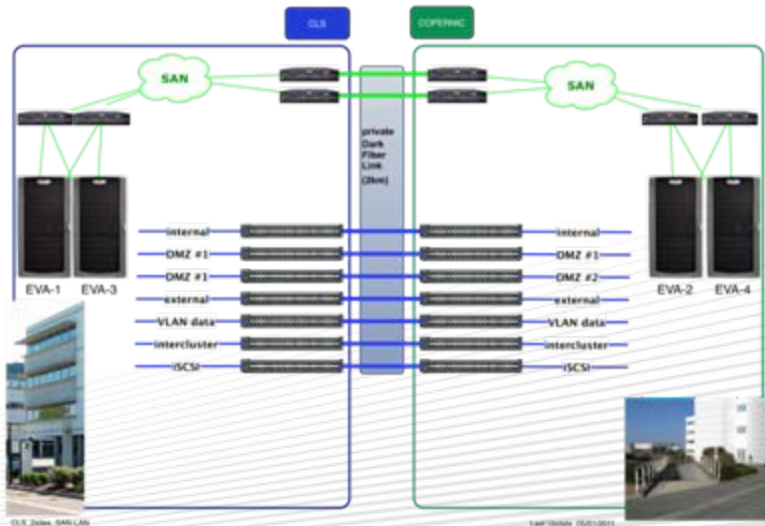
- **Fairbanks & Wallops**
 - N15 to N19
- **Svalbard (NOAA antenna)**
 - N15 to N18 blind orbits
 - NPP (Suomi)
- **Svalbard (Eumetsat antenna)**
 - METOP-A, METOP-B
 - N19 blind Orbits (received through NOAA link)
- **McMurdo**
 - METOP-B
- **Inuvik & Kiruna:**
 - SARAL



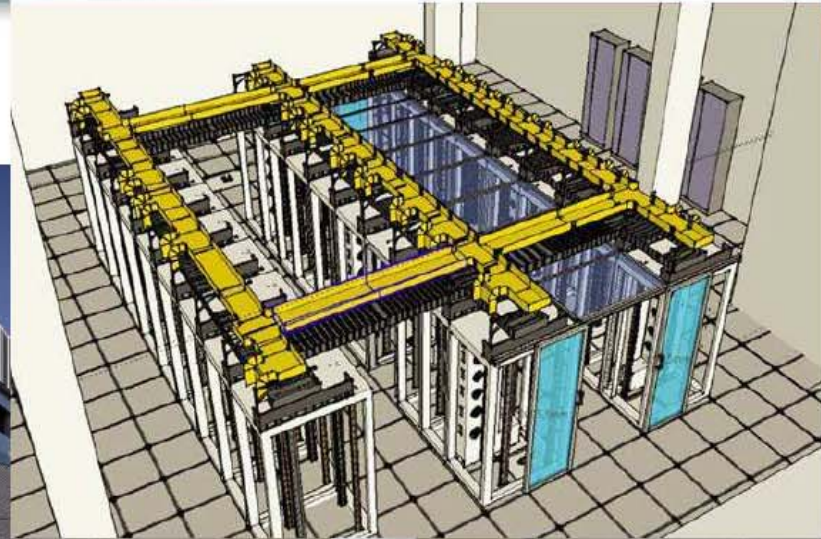
- On 24 April 2013, EUMETSAT transitioned operational services from MetOp-A to MetOp-B. MetOp-B became the operational mission for the a.m orbit.
- Data recovery from MetOp-B will occur at Svalbard and McMurdo. Timeliness benefit of McMurdo data recovery is for MetOp-B only. MetOp-A data will continue to NOAA on a best effort basis and without the timeliness benefits of half orbit dumps at McMurdo



- 2 Global Processing Centers
 - Fully Redundant
 - 24/7 Dedicated and Qualified Staff
 - October 2012 CLS Toulouse processing center moved to a new building



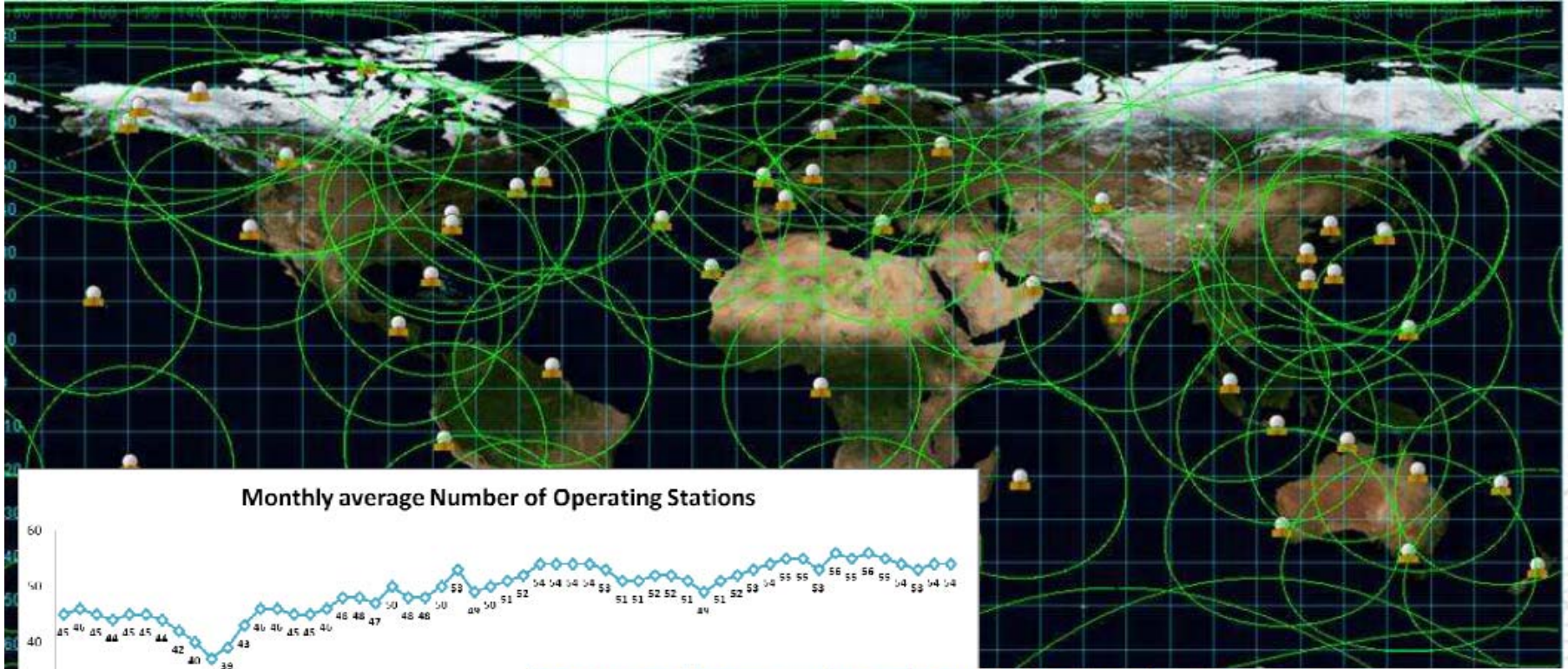
Ground Segments (GPC)



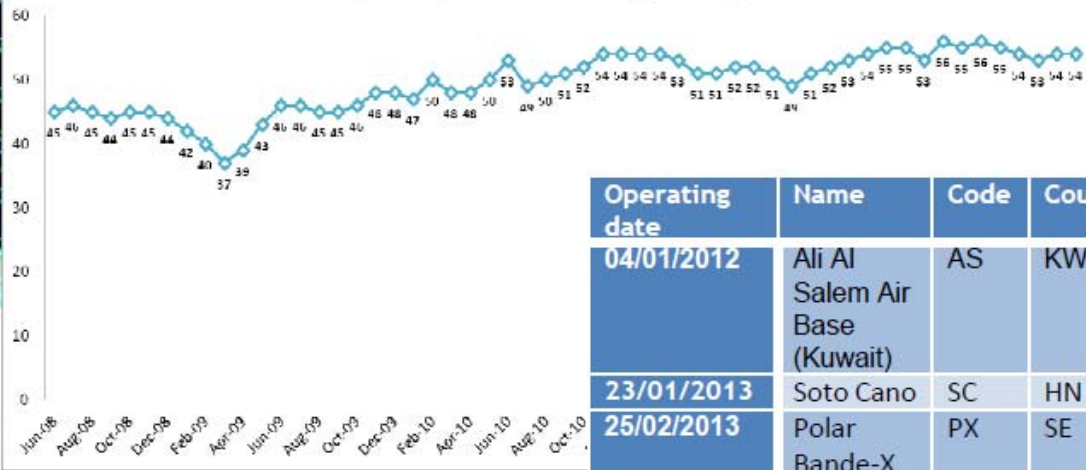
NEW ARGOS CONTROL ROOM



GROUND SEGMENT (LUT)



Monthly average Number of Operating Stations



Operating date	Name	Code	Country	Operator	Possible satellites					
04/01/2012	Ali Al Salem Air Base (Kuwait)	AS	KW	USAF	NK	NL	NN	NP		
23/01/2013	Soto Cano	SC	HN	USAF	NK	NL	NN	NP		
25/02/2013	Polar Bande-X Saral	PX	SE	Eumetsat						SR



- **UPGRADE 3 CLS STATIONS:**

LIMA, HATOYAMA, LANNION

Completed

- **UPGRADE 9⁸ 'NON-CLS' EXISTING STATIONS:**

REUNION, MIAMI, BALI

Completed

PAPEETE

October 2013

OMAN, ATHENS, LAS PALMAS

2013

MONTEREY

Waiting for authorization

- **PROCURE AND INSTALL 4 NEW STATIONS:**

CAPETOWN

April 2012

ASCENSION ISLAND, LIBREVILLE, EASTER ISLAND

2014/2015

- **UPGRADE 3 EXISTING AUS/NZ STATIONS:**

CASEY, CAPE FERGUSON, WELLINGTON

2013 / 2014 ?

Antennas Selected for Upgrading

YELLOW

CLS STATIONS (3)

ORANGE

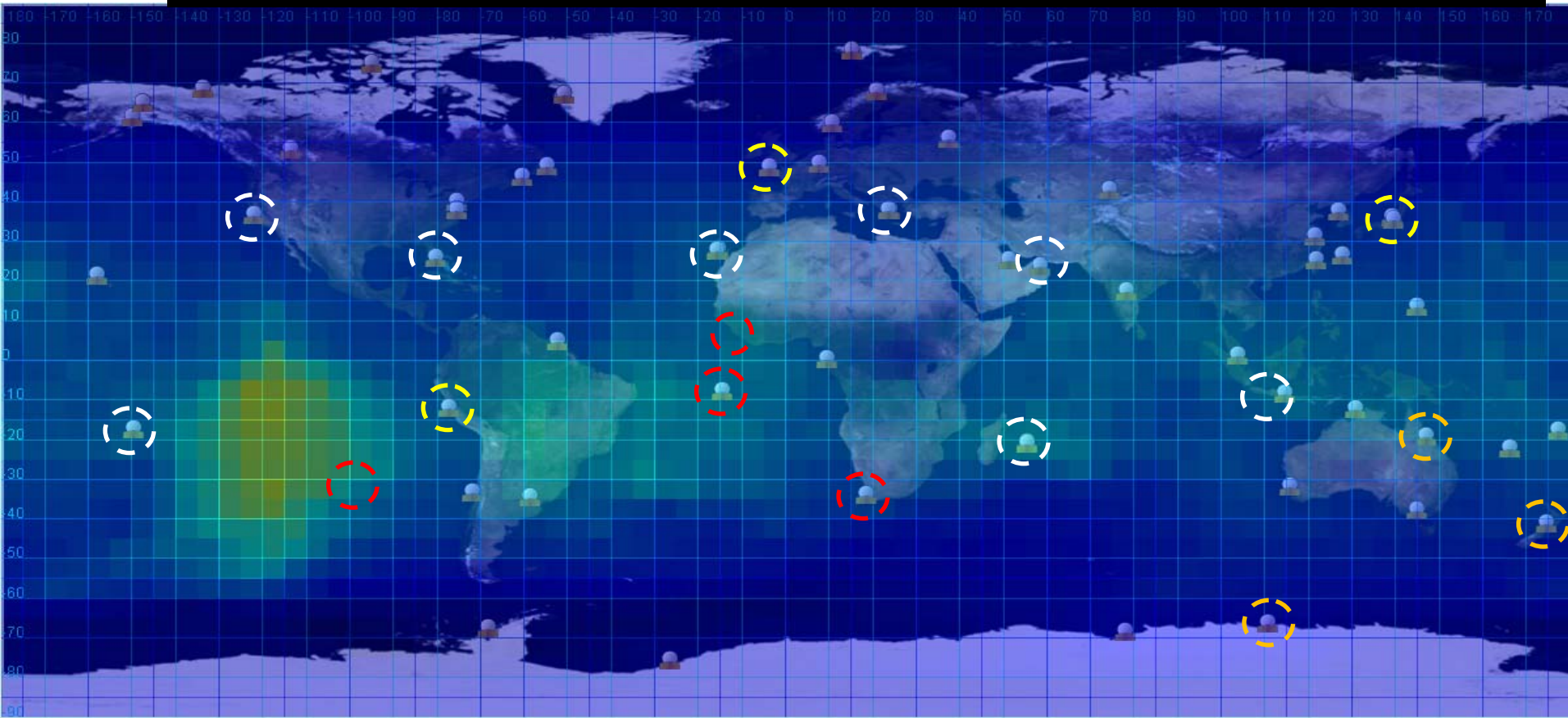
BOM stations (3)

RED

New Antennas (4)

WHITE

Existing Stations (8)



Visualiser les stations...

Afficher les stations

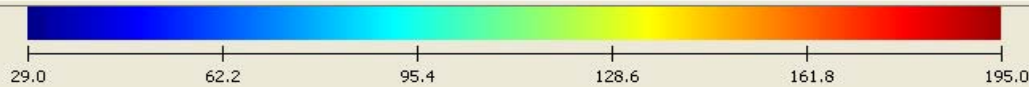
Afficher les cercles

Min. 29

Max. 195

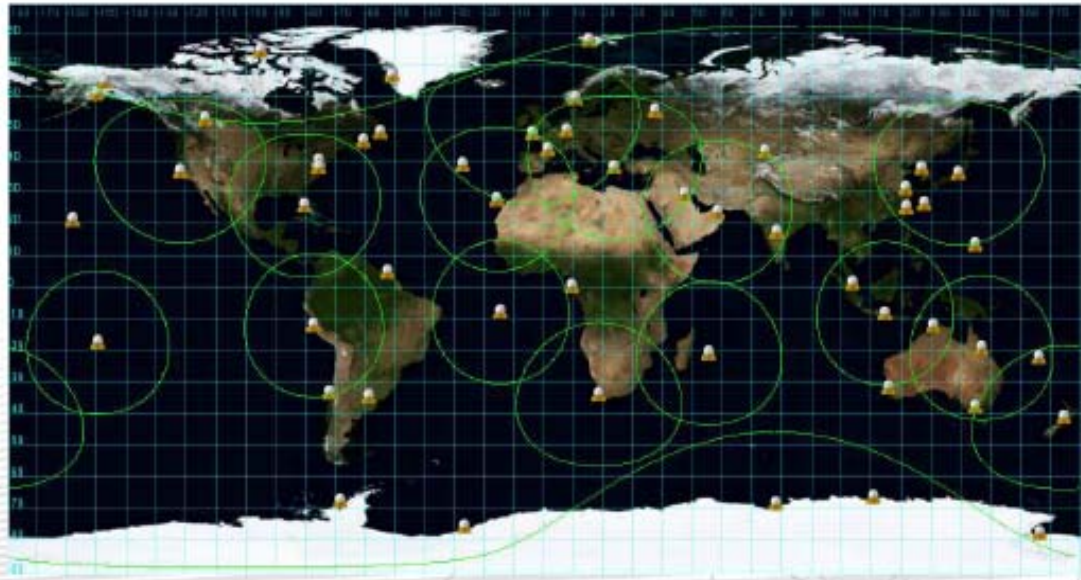
Visualiser les applications...

1 Spare

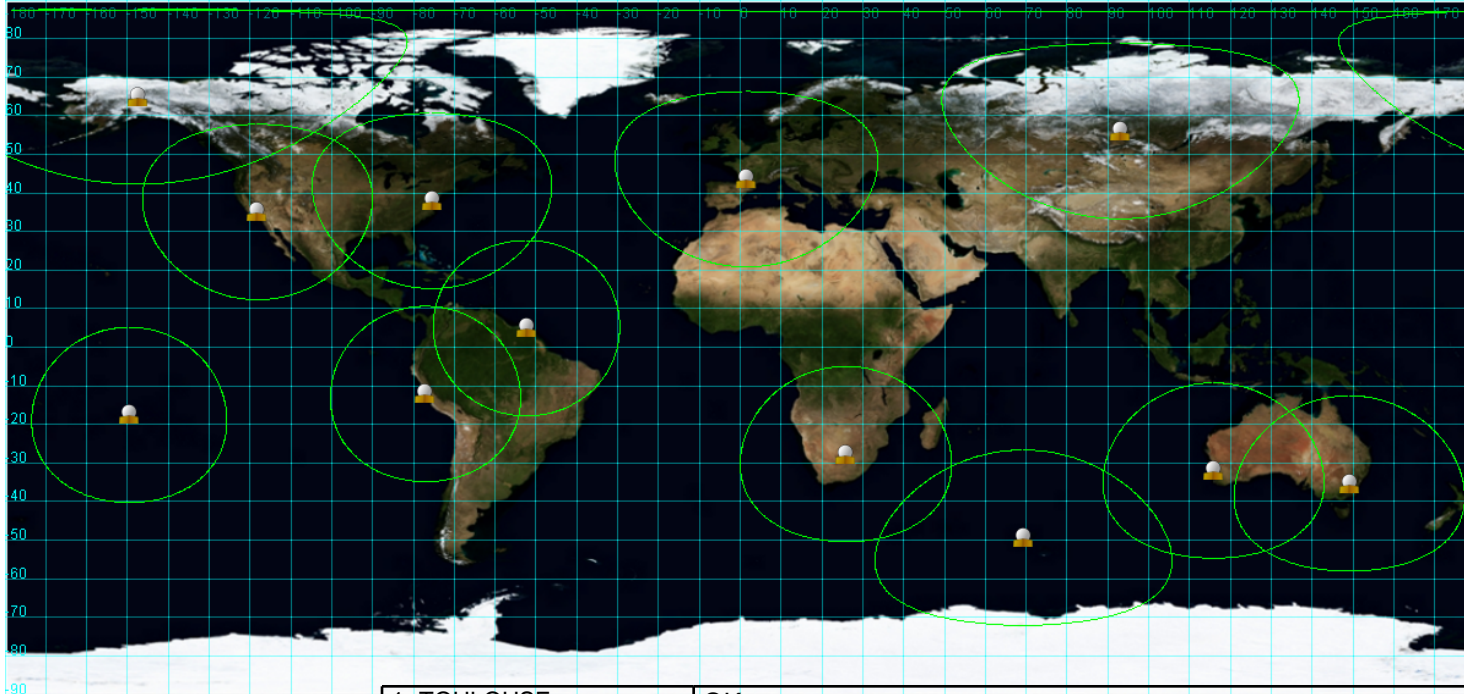


- Antennae upgraded in the scope of HRPTA4 Project
 - FL - Station Lannion (Météo-France)
 - LM - Station Lima (CLS Pérou)
 - FR – Station La réunion (Météo-France)
 - RV – Station Ramonville (CLS - France) (for hardware testing)
 - SA - Station Cape Town (South Africa - SAWB) (replacement)
 - HT - Station Hatoyama (CLS, Japan)
 - MI - Station Miami (NOAA, USA)

- Target of the Project

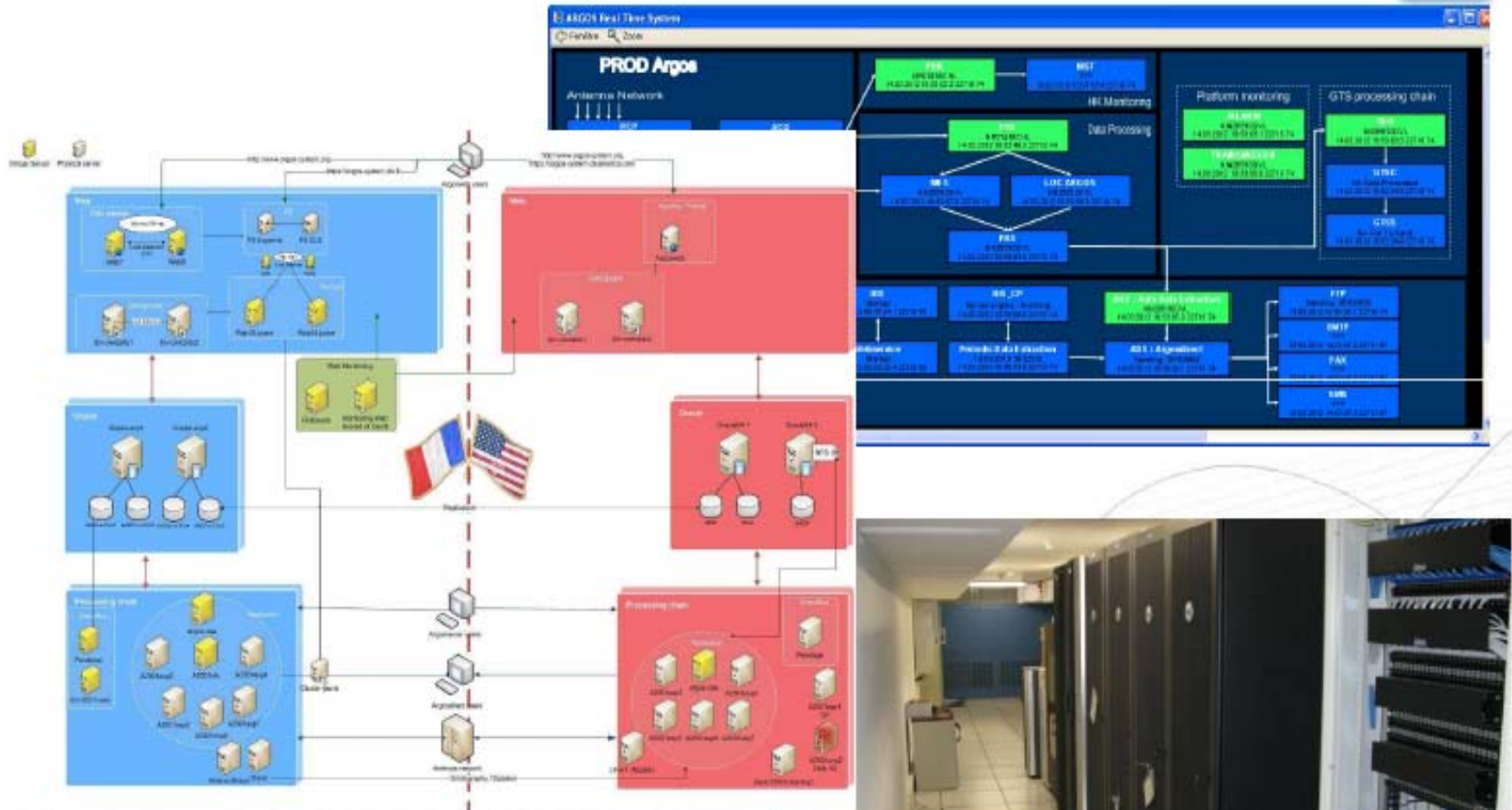


Ground Segment (ORBITO)



1- TOULOUSE	OK
108 - GILMORE_N	OK
109 - KOUROU_N	OK
111 - HARTBEES_N2	OK
112 - CANBERRA_N	Canberra orbitography platform will be stopped in March/April 2012 due to the host site destruction. The platform will be installed in a place to be determined.
113 - LIMA-N	OK
114 - KRASNOIARSK	Stopped on 01/26/06. Expecting administrative paper in order to restart this PTT. A. Salman in charge.
116 - PAPEETE	OK
118 - WALLOPS	OK
119 - KERGUELEN_N	OK
149 - PERTH	OK
110 - MOJAVE	OK

ARGOS Architecture



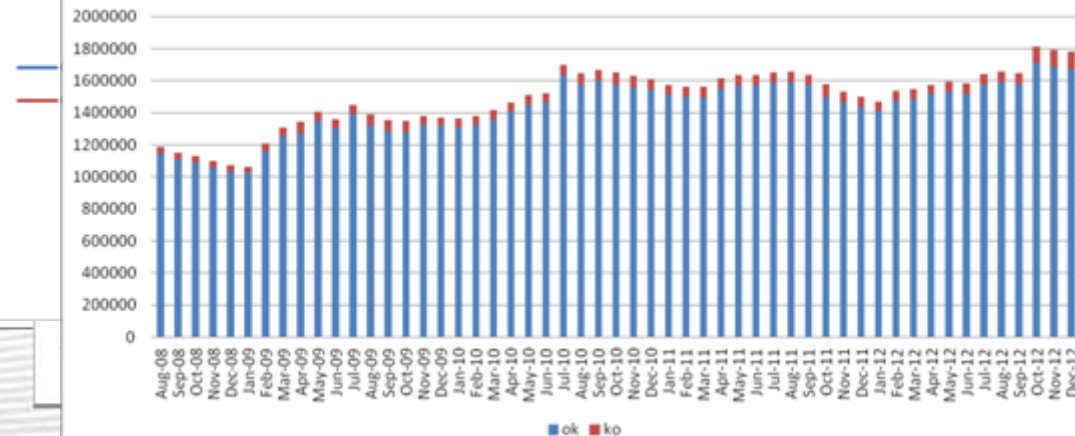
Per day	2008	2009	2010	2011	2012
Messages received	1 969 658	2 273 233	2 871 885	2 904 476	2 790 580
Distinct Messages received	1 164 717	1 272 459	1 470 953	1 451 938	1 443 247
Argos Locations	66 176	77 837	94 151	92 168	93 343
GPS Locations	187 829	185 496	205 259	212 587	224 857

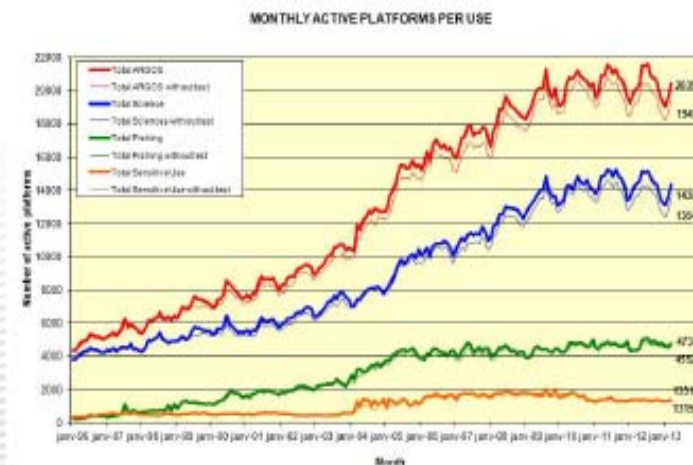
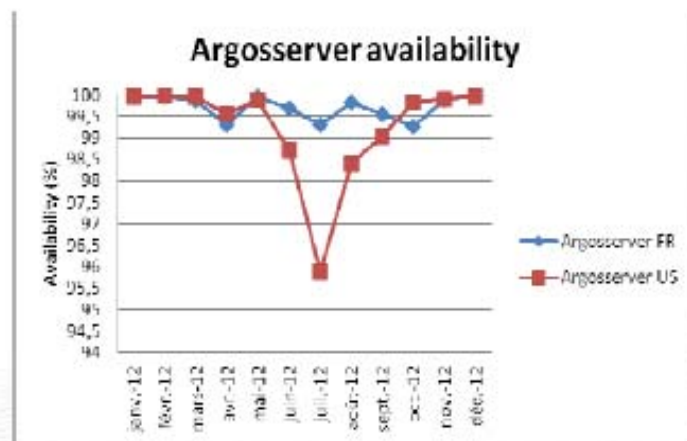
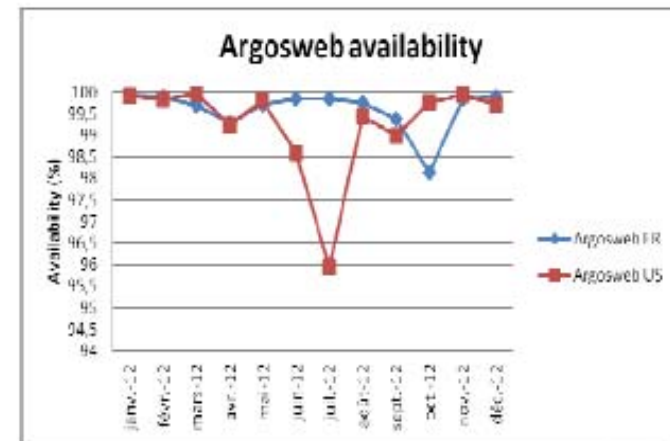
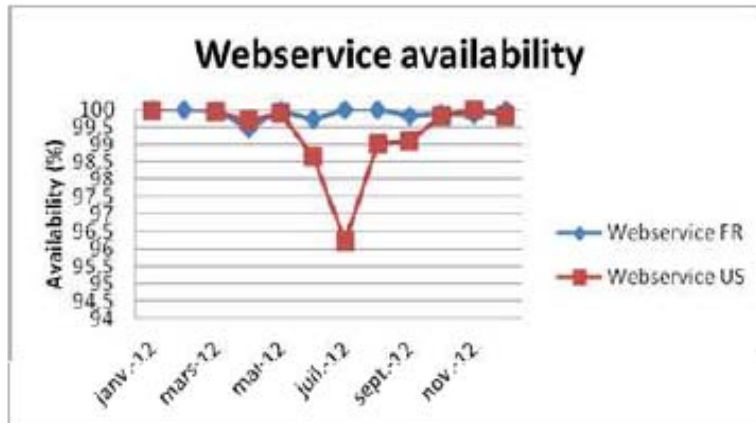
GTS : Number of observations

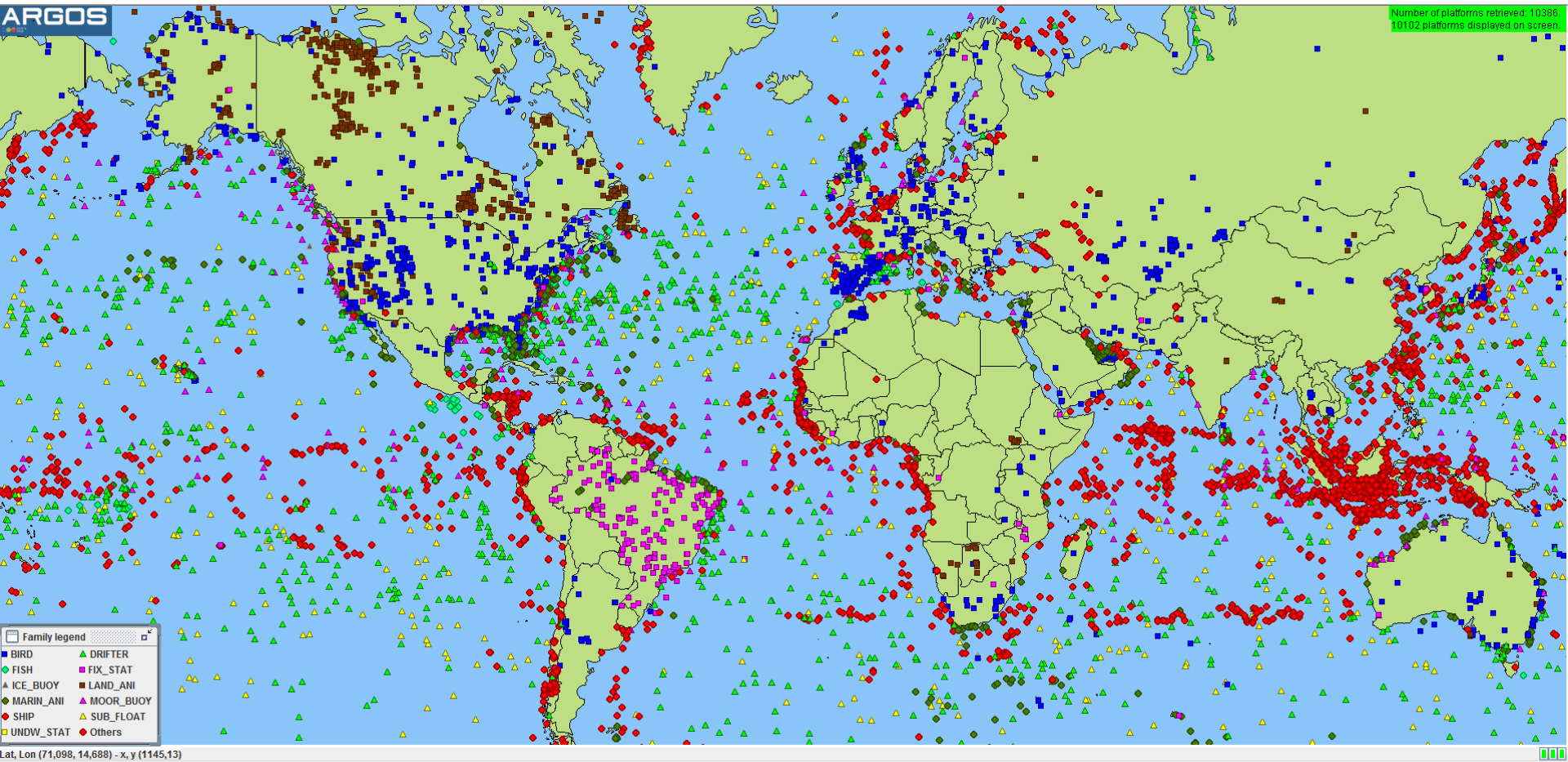


2012 FR Annual availability: 99.73%
2012 US Annual availability: 99.27%

Number of messages processed per day







- **Online Archive data downloading feature through Argos Web (last 12 months available)**
- **Argos data from 1997 – 2007 (Argos 86) transfer to Unix format**
- **Replacement of Oracle Database Servers in CLS A**
- **Replacement of Argos Processing Servers with Virtual Servers in Toulouse and DC**
- **Upgrade of the Oracle database version. Migration to the Oracle 11GR2 version**

