



CENTRE NATIONAL D'ÉTUDES SPATIALES



## **36th Scientific Committee**

**May 21st, 2010**

# **COROT : Mission & Project STATUS**

## Events since previous Science Committee (1/2)

### ■ Satellite operations in short

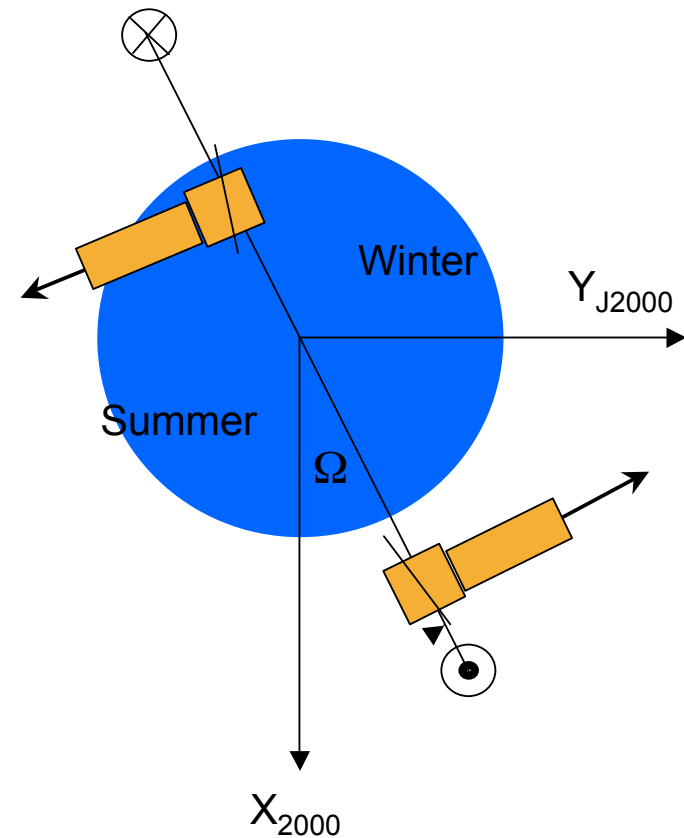
- ♦ SRa03 stopped March 29th
- ♦ Operations for the stop of the Orbit drift : **nominal**
  - from the 29th of March to the 1st of April
- ♦ Operations LRc05 : **nominal**
  - from the 2nd to 9th of April :
  - Seismology observation started on the 6th
  - Exoplanet observation started on the 9th
  - Final seismology masks uploaded on the 9th

## Orbit drift

### ■ Summary of the operations

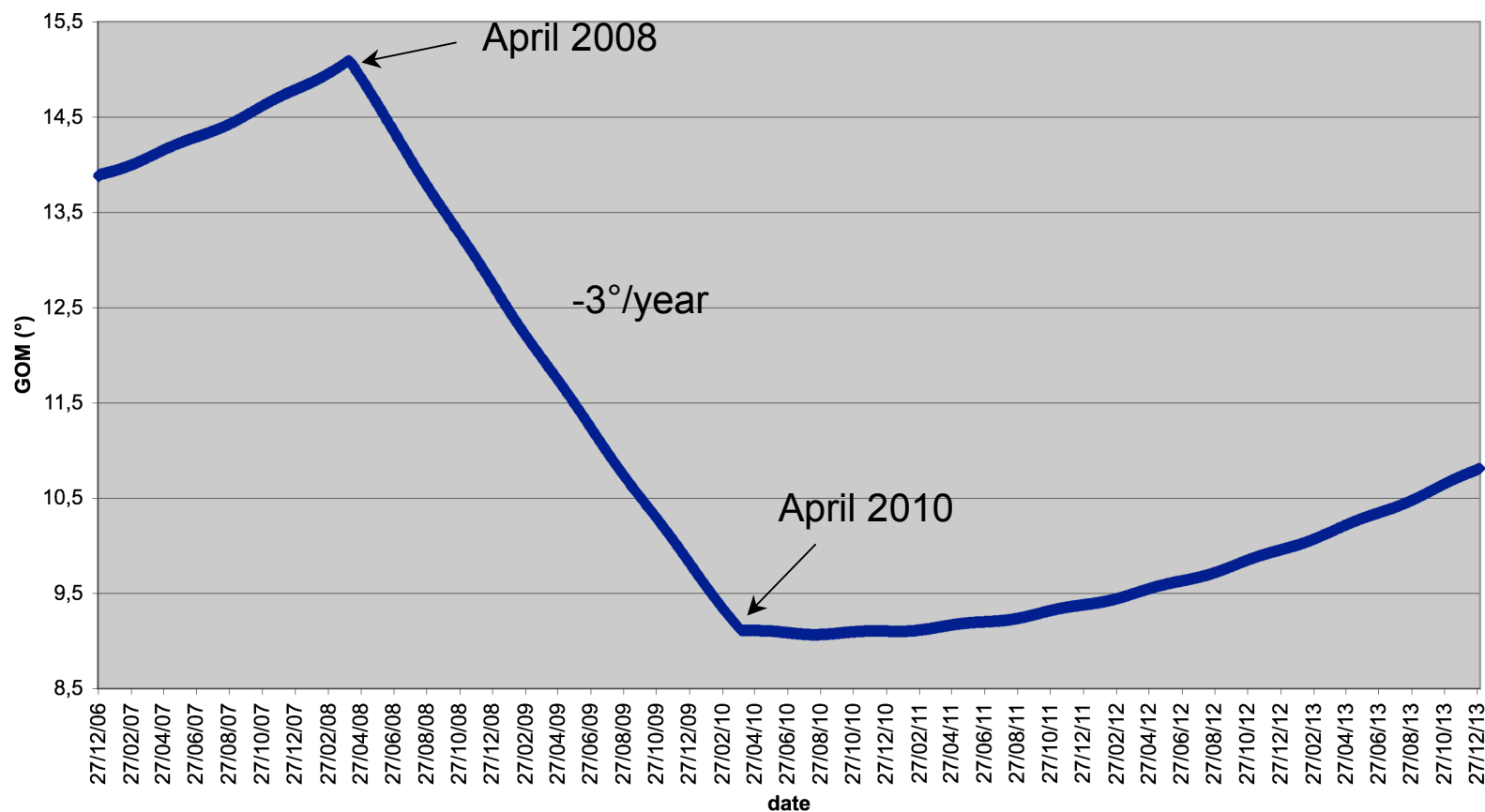
- March 29th : calibration of the thrusters
- March 30th : Satellite upside down rotation (towards summer pointing direction)
- March 31st and April 1st : 1st & 2nd orbit maneuvers

- ♦  $\Delta i$  achieved =  $0.062^\circ$
- ♦ 2.3 Kg of ergols consumed

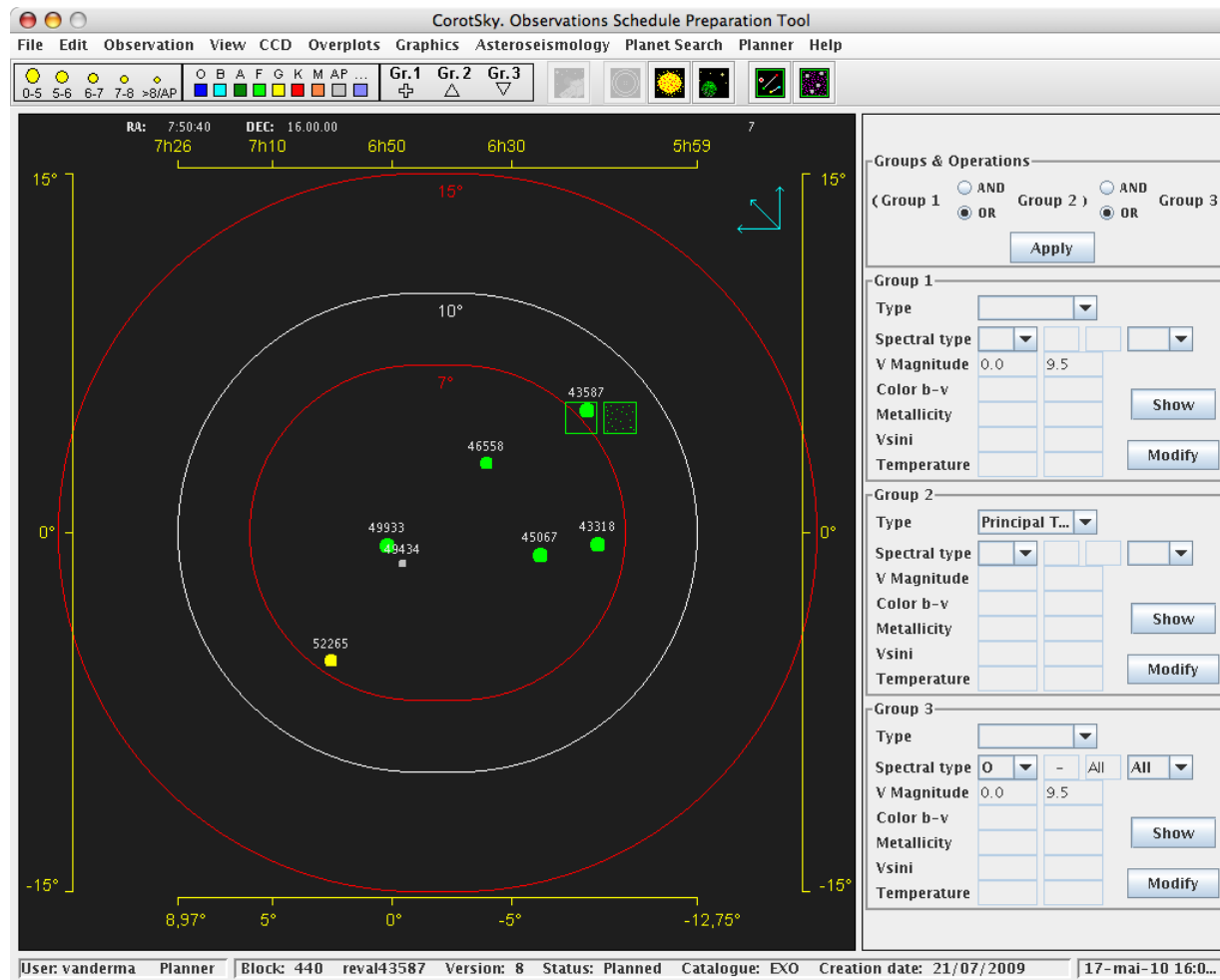


## Orbit Drift evolution

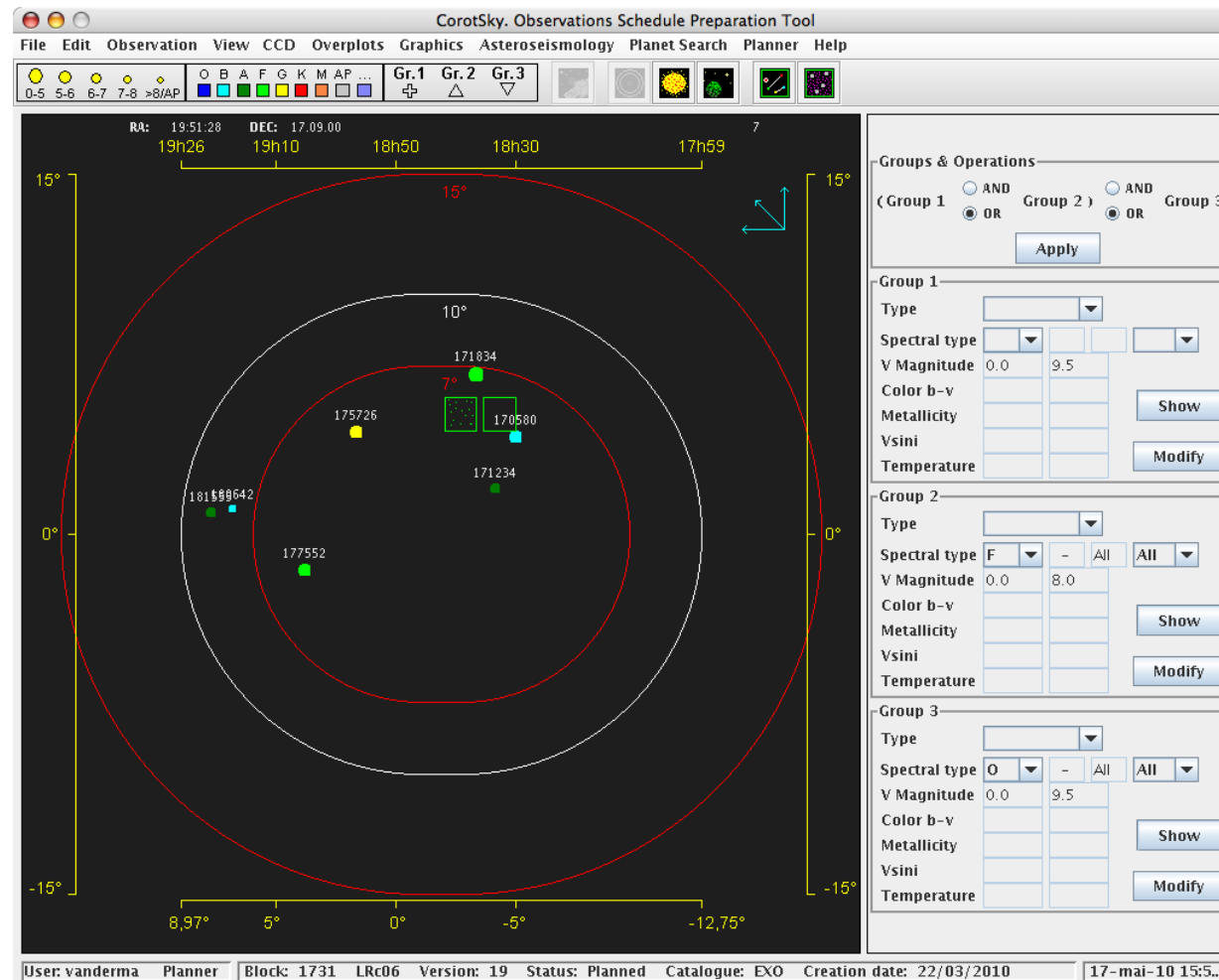
Evolution (passée et future) de l'ascension droite du nœud ascendant



## « Winter eye » around r.a 100°



## « Summer eye » around r.a 280°



## Mission Status

### ■ Mission

- ♦ 1241 days in space
- ♦ LRc05 is the 14th Run
- ♦ 120 000 stars observed or being observed

### ■ Status of SRa03

#### ♦ Seismology channel

- A2 - **24 days** of data with refined photometric masks (27 days total including rough masks))
- 5 TM Starmasks (Astero Imagettes 35x35), 5 Light Curves

#### ♦ Exoplanets channel

- E2 - **24 days** of data
- 32 TM Starmasks (Exo Imagettes),
- 1392 Chrom + 2745 MonoChrom Stellar Light Curves
- 1(initial) + 1 update of the Oversampling list of Exo stars along the run

## Status of the system

■ **Satellite** : Nominal

■ **Instrument**

♦ Chain 2 (Sismology A2 CCD & Planet Search E2 CDD) : Nominal

■ **Ground segment**

♦ Corot Control Center : Nominal

♦ Corot Mission Center : Nominal

♦ Ground stations : Nominal

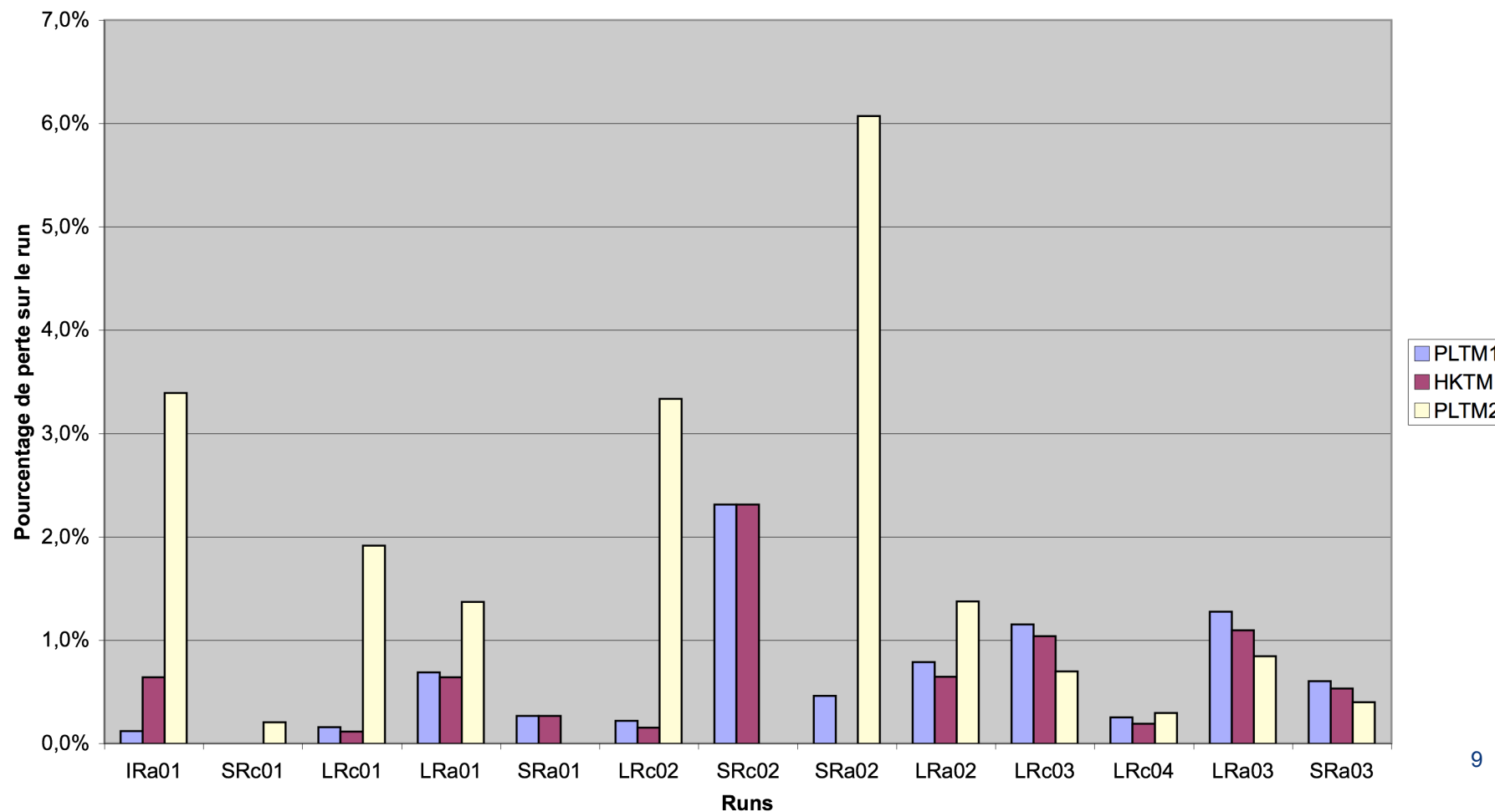
♦ ALC Stations : Nominal

■ **CDC** : review of the CDC held the 9,10th of March



## TM Loss by Run

Pourcentage des pertes de chaque type de TM par Run



## And the next ...

### ■ Ground segment

- ♦ **Corotsky to be upgraded (target = week 22) :**
  - A third Exo catalog added => EXO2mass
- ♦ **On-going studies to secure the PLTM**

### ■ Operations

- ♦ **LRc06 : Scheduled from the 5th to the 9th of July**
- ♦ **LRa04 (or SRa04) planned beginning of October**

### ■ June 10<sup>th</sup> 2010 : REVEX (Exploitation Review)

- ♦ **Status of Platform, instrument, performances and tendances**
- ♦ **Status of the ground system**
- ♦ **Data status**
- ♦ **Feedback from the review of the CDC (Documentation, Long term archiving, ...)**
- ♦ **Mission evolution**