

WHAT NEWS FROM THE LAST COROTWEEK ?

COROTCASE ACTIVITIES

On the EM model

Conducted emission and susceptibility measurement on EM case

No problem compared to satellite requirements

No problem concerning the susceptibility

TM/TC test compatibility between Platform and Instrument EM equipments

On the FM model

FM Harness is integrated in the case

FM equipments were integrated and electrically checked to prepare the Camera long duration test

Auto compatibility test were executed between Exo and Astero chains

The level of the perturbation between chains (because clock sequence differences between each CCD) is very low

SOFTWARE ACTIVITIES

Validation of software in charge of equipment functionalities

All software non conformances are corrected with a very short time by DLR

Exigence URD	Description	Plan d'essai					
		Recette DPU	Commandabilité BEX	Validation DPU	Validation UTN	Validation instrument	Validation 1553
		5.1.1. Initialisation DPU (PBS) :					
COM-511-01-D		X					
COM-511-02-D		X					
		5.1.2. Passage du DPU en mode Opérationnel (initialisation APS)					
		5.1.4. Initialisation et reset du BEX					
COM-514-02-BU			X				
		5.1.5. Initialisation UTN					
COM-515-01-U					X		

Mai			Juin		Juillet		Aout	Septembre	Octobre	Novembre		Décembre
Objet : Recette / Validation APS Ressource : DPU + Simu BEX Responsable : Vincent		Non régression Pack 2-N	CRE Pack 2-N (avant BT case FM)	Ecarto Grossière	Complément : CR + NCR	Process Scientifiques ASTERO	Ecarto Fine	Départ d'un DPU pour Cannes	Process Scientifique : EXO	Pack 4 (DPU partagé avec UTN)		
Objet : Validation UTN Ressource : UTN : DPU + BEX + PC Responsable : IWF Vanderlei		Non régression Pack 2-N		Fenêtres binnées Large HK BEX Synchro BEX / APS (cf NCR 63)	Complément : CR + NCR	Modes Instrument	Performances Longue Durée		Support Expertise			
Objet : Autre essais Ressource : ETN, UTN + BCC, autre (à préciser) Responsable : Vanderlei ou ?		Test 1553 avec 2 DPU		Complément CRE Pack 2-N (Ecarto Grossière)	Transition Grande - Petites Fenêtres DPU + BEX + BCC							
Mai			Juin		Juillet		Aout	Septembre	Octobre	Novembre		Décembre

Essais
Fonctionnels
Case FM

Validation
Fonctionnelle
Instrument

Créneau Possible
pour complément
Fonctionnel
Instrument

Dernière limite pour
complément
Fonctionnel Instrument

Improvement of the FM model, by a new shielding around Focal Box to protect it from the parasitic light

Integration of FM Focal Box with FM Dioptric Objective

Validation FM performances compared to the EQM Camera results

Tests in vacuum chamber :

- Control of the CCD quality

- Optical performances and optical adjustment

- Light proof

- Vignetting in the field of view

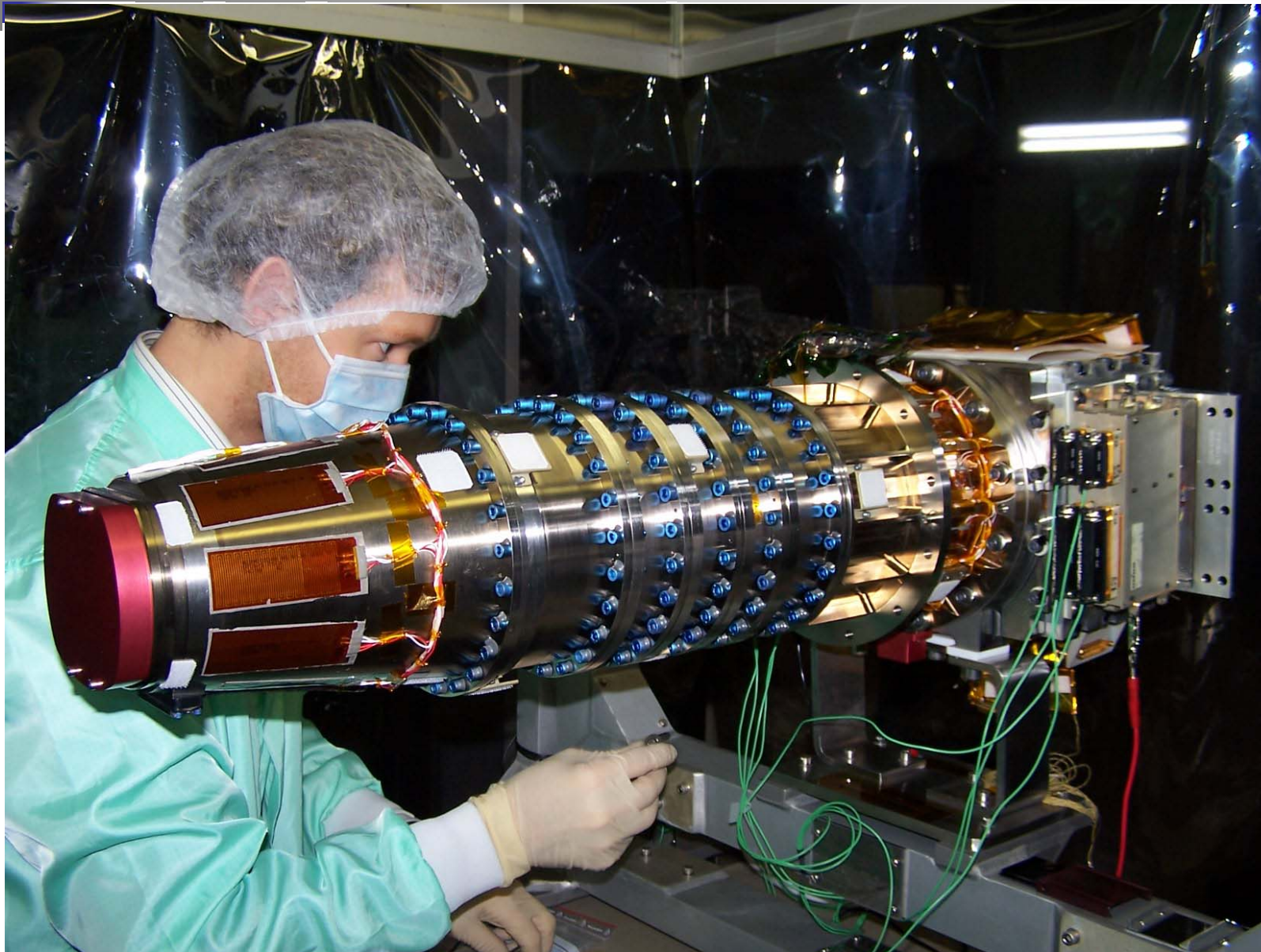
COROTCAM Transport to the Telescope to Toulouse

Long duration test preparation

- Adjustment of the optical ground equipment

- Integration of the electronic equipments with the Camera in the vacuum chamber

COROTCAM come back and beginning of long duration test



QM BAFFLE

- New modelisation and new design of the baffle feet
- Agreement on the design and mechanical modelisation results
- Manufacturing of the new feet



Good results compared to modelisation

Mechanical and thermal qualification with checking the good alignments of the vanes

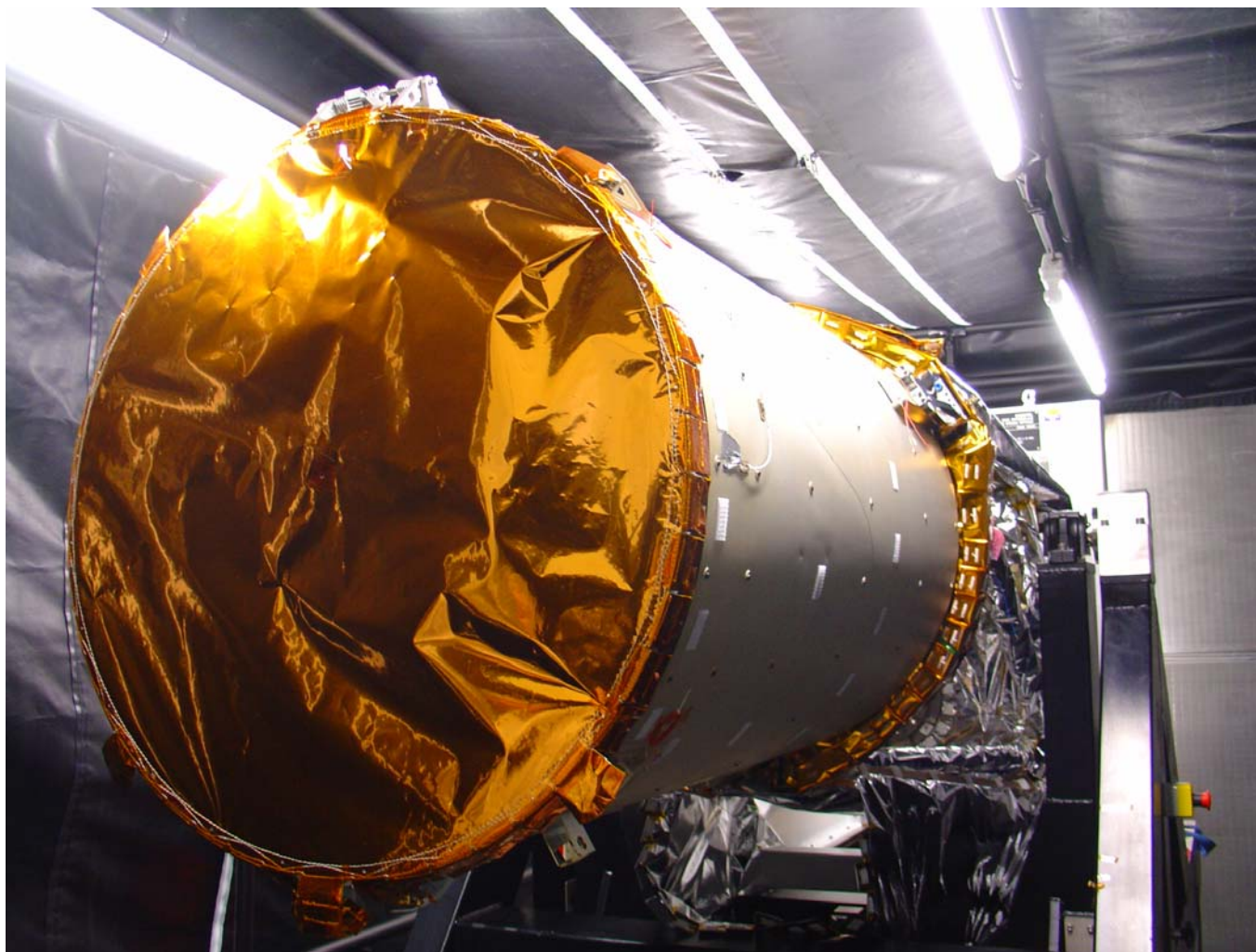




**Success of the Cover opening test (on vacuum chamber)
but not on environmental pressure**

**Adjustment of the design for the FM model : spring stiffness and
mechanical pieces on the hinge**

Baffle/Cover delivery to CNES for integration on FM Telescope
All interfaces checking



FM BAFFLE

Manufacturing of flight model

Integration on the way

FM COVER

Success of the opening test
of FM cover on the environmental pressure



Integration Camera in the Telescope

- Validation of right alignment and correct dimensions between pupil of entry and pupil of objective
- Angular value validation of line of sight compared to the reference plan of telescope
- Geometrical length validation in the field of view
- Validation of the shim thickness to have the right adjustment of the focalisation for EXO and ASTERO focal plan

Camera disassembled from the telescope to go to the long duration test

Conclusion of the tests :

The results are correct, but some points stay opened and are in the course of investigation:

- A line of sight skew of about 100 pixels between optical model and measurement

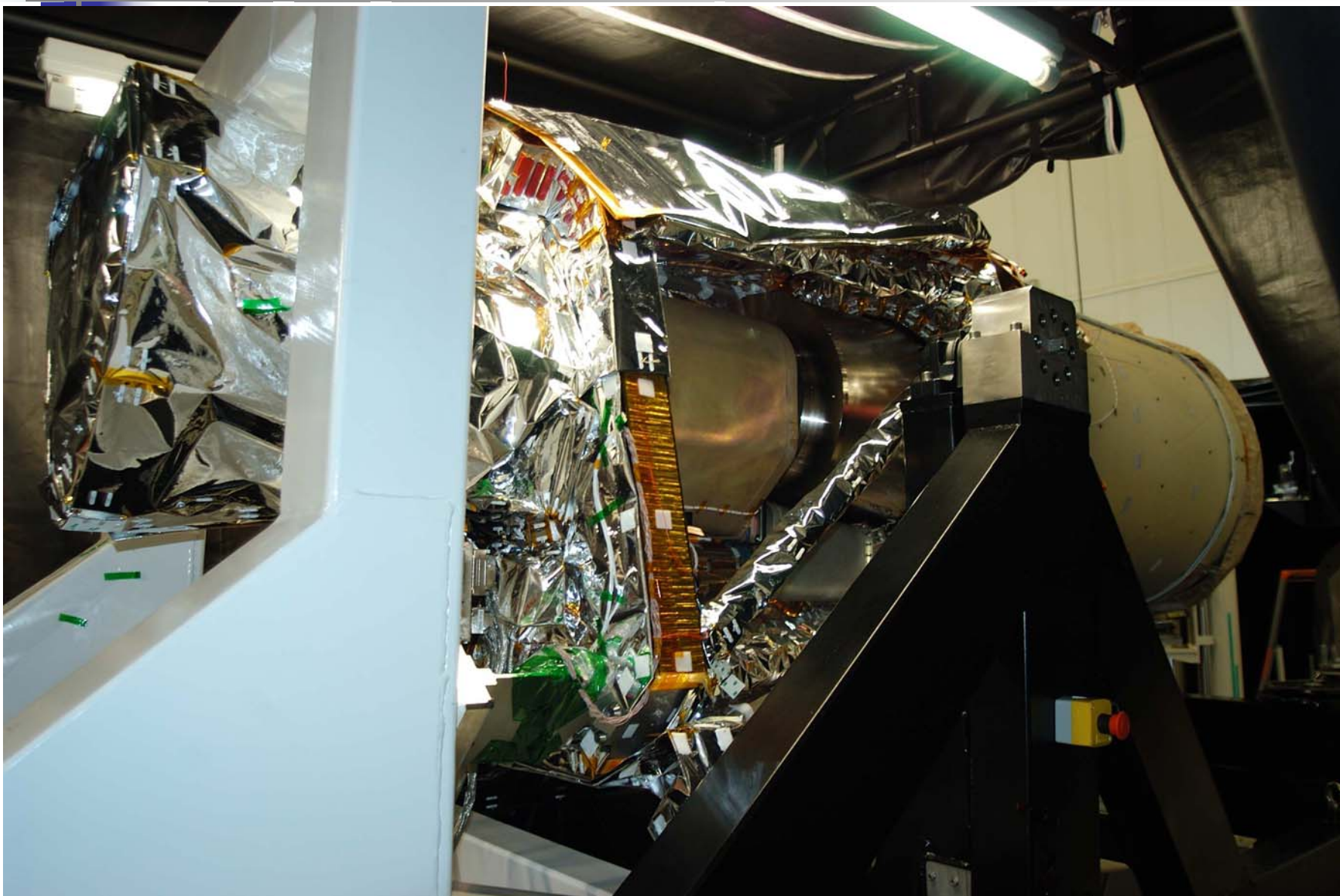
- A difference in shim thickness of about 100 μm between optical model and measurement

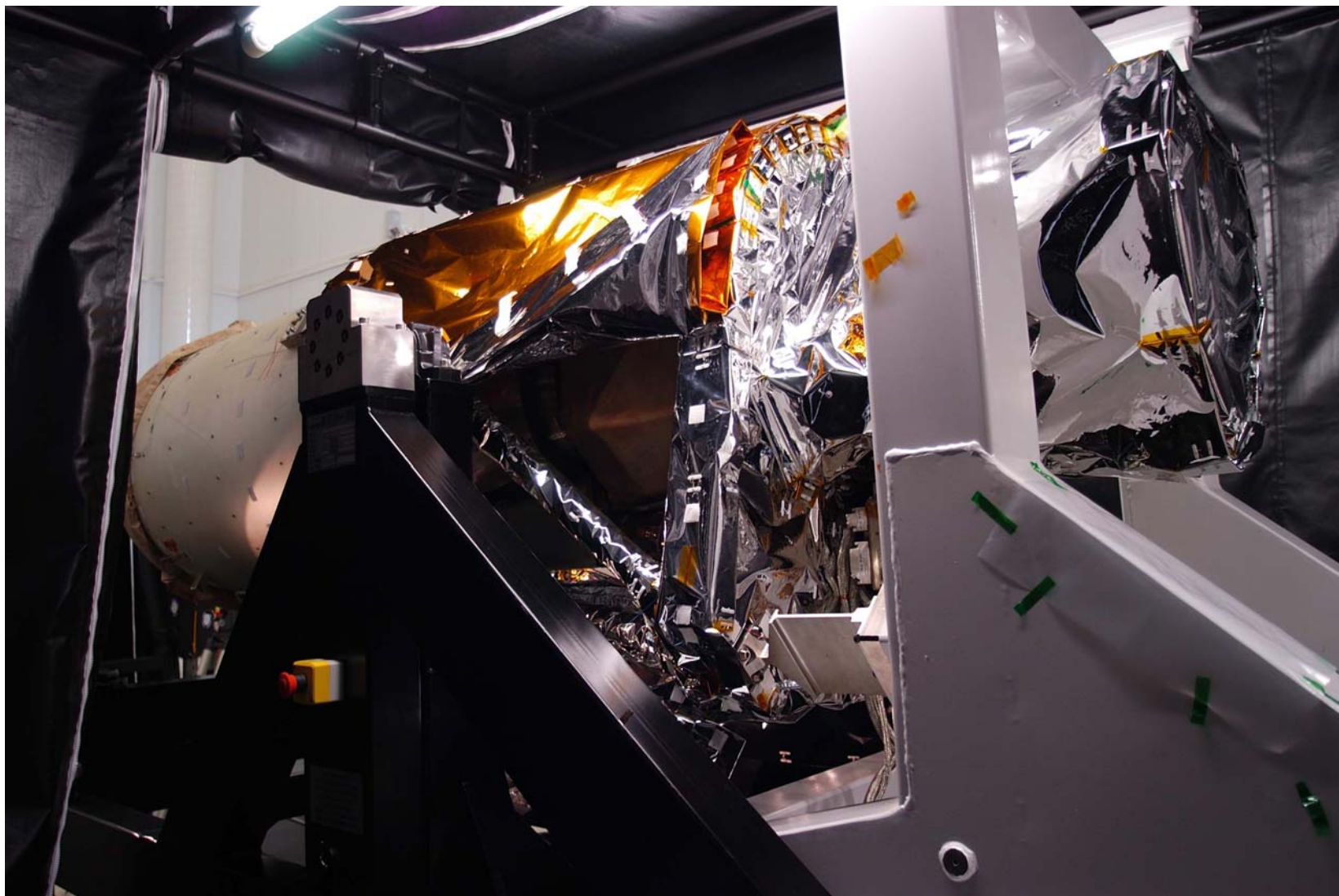
- (perhaps there is a correlation between the line of sight skew and this thickness)

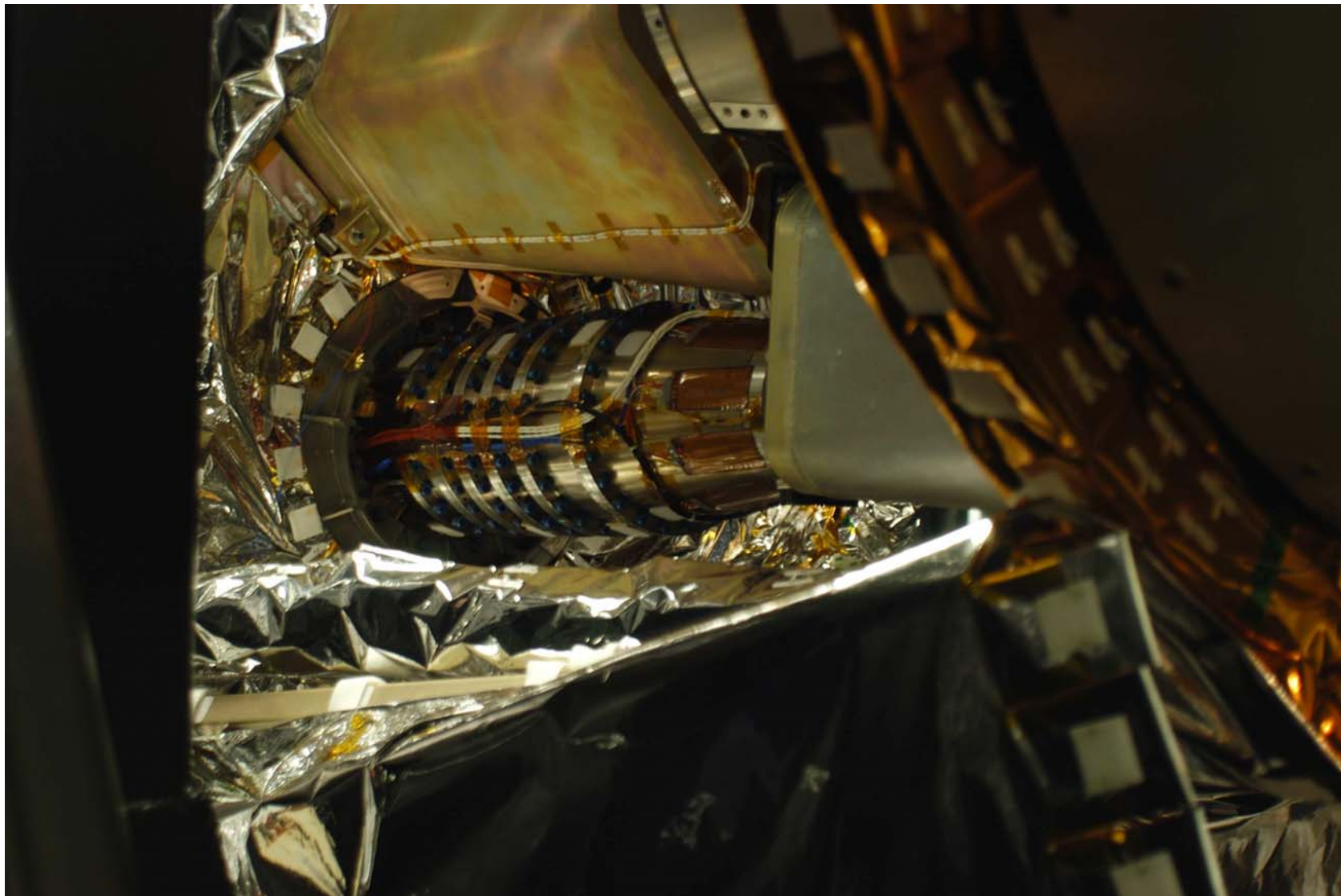
- Measurement perturbed by a bad stability of temperature of Dioptric Objective :
an improvement to evacuate the Watts of Focal Box (on environmental pressure) is under development

All investigations must be solved at the end of long duration test of Camera

Integration of the MQ baffle on the telescope







Test of Instrument pointing the sky in direction of the Polaris star
(see Michel Auvergne presentation)





N°	Nom de la tâche	Durée	2005											
			1er trimestre			2e trimestre			3e trimestre			4e trimestre		
			Jan	Fév	Mar	Avr	Mai	Jui	Jul	Aoû	Sep	Oct	Nov	Déc
1	AIT Instrument COROT	166 jours												
2	Intégration sous-systèmes	35 jours												
3	Calibration CorotCam MV	21 jours												
4	Intégration CorotCase MV	14 jours												
5	Intégration et réglage Instrument	86 jours												
6	Réglage optique	16 jours												
7	Intégration Instrument	75 jours												
8	Montage du baffle	31 jours												
9	ESSAIS D'ENVIRONNEMENT INSTRUMENT	80 jours												
10	ESSAIS EMC	17 jours												
15	ESSAIS VIBRATION	14 jours												
22	Post-vib / Pré-VT	8 jours												
29	ESSAI VIDE THERMIQUE ET OPTIQUE	25 jours												
42	Activités finales	16 jours												