	Title:	Reference:
	Minutes of the 48th Scientific Committee Author: Annie BAGLIN	COROT.LESIA.13.00x Version: 0 Date: / 2013

Minutes of the 48th Scientific Committee

*Held at Institut d'Astrophysique de Paris, Salle des Séminaires
on October 17th 201*


Prepared by:	Annie Baglin	
Accepted by:	The SC members	

MODIFICATIONS OF THE DOCUMENT

Ed.	Revs.	Date	Modifications	Visa
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REFERENCE DOCUMENTS

Reference	Title of the document
SC48_DR1_CD.pdf	Mission status
SC48_DR2_MD.pdf	
SC48_DR3_EM.pdf	
SC48_DR4_MO.pdf	Correction pipeline evolution
SC48_DR5_AD.pdf	Corrections in the sismo field - Discontinuities at the change of mask - Parasite frequencies and jitter
SC46_DR6_JC.pdf	Correction of jumps, the exoplanet point of view
SC45_DR7_SC.pdf	Data processing and data production
SC45_DR8_CD.pdf	Archiving at CNES
SC45_DR9_PO.pdf	CoRoT at CDS through Vizier

	Title:	Reference:
	Minutes of the 48th Scientific Committee Author: Annie BAGLIN	COROT.LESIA.13.00x Version: 0 Date: / 2013
		Page: 2

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	<p>Title: Minutes of the 48th Scientific Committee</p> <p>Author: Annie BAGLIN</p>	<p>Reference: COROT.LESIA.13.00x Version: 0</p> <p>Date: / 2013</p> <p style="text-align: right;">Page: 3</p>
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Participants:

All members except E. Janot-Pacheco, J. Cabrera
E. Poretti by skype.
Invited Olivier Vandermarcq, Alexis Deru (LESIA)

A few changes since the last SC:

- Malcolm Fridlund is no more the ESA representative, as he is now in Berlin at DLR and ESA has not nominated a new one.
- François Bouchy replaces Claire Moutou who is now at CHFT in HawaiĪ.
- Christophe Donny is our new project Manager at CNES for the last phase (F) of the mission, replacing Olivier Vandermarcq.

The SC warmly thanks Olivier for his important work, and wishes him good luck for his new activities.

Annie B. proposes to focus this meeting (which will be shorter than usual) on the corrections. A first presentation of the structure of the long term archiving will follow.

1. Mission status

It is presented by Christophe (see SC48_DR1_CD.pdf).

After 2274 days devoted to science, the data collection has stopped.

The mission is now in phase F that will last approximately 2 years.

A REVEX (revue d'exploitation) has been held by CNES on September 18th.

Christophe presents the actions proposed by the review board, which are mostly under the responsibility of the SC.

Several participating country representatives express their strong concern about the attitude of their agencies, which want to cut the support to the mission, as it does not produce new data anymore. They ask CNES Science directorate to send a letter to the agencies stressing the importance of the finalisation of the treatments, the set up of the final archives, and the need for a support of these activities. This has been done just after the meeting by CNES Science Directorate.

2. Recent results


2.1 From the exoplanet search programme

Magali D. presents the recent report of the CEST meeting held on October 16th, (see SC48_DR2_MD.pdf) and the status of the different papers in preparation, including the Mega paper (overview of all the detected candidates and of the way towards planet characterisation), which is almost ready

2.2 In stellar physics

Following a presentation by EM of the last published papers (see SC48_DR3_EM.pdf).

Konstanz Z. mentioned the imminent publications on the Multisatellite and site campaign on NGC

	Title: Minutes of the 48th Scientific Committee Author: Annie BAGLIN	Reference: COROT.LESIA.13.00x Version: 0 Date: / 2013 Page: 4
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2264, in which CoRoT has played an essential role. Two first papers are almost ready for submission in AJ, ~50 pages each).

3. Data

3.1 Evolution of the pipe-line of corrections

MO recalls all the preceding steps (see presentations in the previous SC and SC48_DR4_MO.pptx), the existing pipe-line and the recently discovered effects.

Alexis D. presents his work on the data (see SC48_DR5_AD.pdf) of the bright stars channel (sismo). It is now possible to correct precisely the discontinuity appearing at the beginning of the run when the precise mask, using the information of the imagerie, replaces the initial rough one. He also reports on his investigations of parasite frequencies appear sometimes in the bright star channel (sismo), as remarked first by Patrick B. and Frederic B. on LRA03. These effects are very probably correlated to the jitter, and indicate that sometimes the correction is not sufficient. It is being studied with the help of Fabio Fialho.

Let's recall that the sudden changes of the temperature of the CCDs (to maintain it in an optimal range) produces discontinuities in the quantum efficiency and then in the stellar flux. This effect has been corrected at the N2 level since N2 version V3.0., adjusting the height of the correction to the height of the temperature jump for each event.

3.2 Correction of jumps in the faint star channel (exo)

In addition to temperature, other effects produce sometimes discontinuities as for instance the radiation damage which excites hot pixels. At the last SC there has been a wish to try to improve the « quality » of these data by correcting from these jumps and to propose « smoother » LCs to the standard users.

If a correction is to be implemented, it has to be done very rapidly, as it has to be finished by early 2015.

So a decision has to be taken very soon, before the end of the year, as asked by the REVEX Board.

Pascal Bordé presents the contribution of Juan C. (SC48_DR6_JC.pdf), who was unable to join. It describes how the exoplanet hunters correct the jumps, by different methods.


But, these corrections often suppress low frequencies in the data, in particular in the domain of red giant pulsations. So these corrections may be dangerous.

It is decided to maintain the present N2 level, and if a correction of jumps is reasonable, to add a class of data called for instance « discontinuities removed »

This question needs to be debated rapidly, following the recommendations of the REVEX Board (A-R6-4 and A-R6-7).

Action SC48-1: Frederic B. and Magali, organise a workshop

The meeting will be held in Paris, at Institut d'Astrophysique de Paris from Thursday 12th December at 14h to Friday 13th at 17h, in room 281.

	<p>Title: Minutes of the 48th Scientific Committee</p> <p>Author: Annie BAGLIN</p>	<p>Reference: COROT.LESIA.13.00x Version: 0</p> <p>Date: / 2013</p> <p style="text-align: right;">Page: 5</p>
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It will decide to make corrections or not, and if yes, by which method.
Then the development, test and implementation phases will start and will have to be finished by the end of 2014.

4. Treatment and distribution

4.1 Production of the final versions of N1 and N2

Sylviane presents the status of the data available in the mission archive, and the foreseen reprocessing (see SC48_DR7_SC.pdf).

The last version of the N1 data will be available by the end of this year. It will include the new algorithm to improve the correction of the Background in the faint star channel (exo), as presented at SC46_DR3_MO.pdf/

For the N1 → N2 pipeline, there remain a few open questions. We are waiting for the results of the study of parasite frequencies, and for the decision of the workshop on corrections of jumps

As soon as decisions of implementation are taken, the production is quite fast.

But SC stresses that there is a need for scientific validation, which is time consuming.

4.2 Delivery and privacy period

Very soon all the data will become public, in their initial version.

But as described by Sylviane, reprocessing will continue till 2015, and reprocessed data are regularly uploaded to the mission archive.

The discussion is introduced by Frederic B., which proposes to suppress the one-year privacy period for the reprocessed data.

The SC members express different points of view. It seems dangerous to suppress the advantage of the CO-Is till the end of the official mission, which justifies the support of the Agencies.

So, it is decided to keep the present data rights rules for the reprocessed versions.

5. Long term Archiving and legacy

To the question: What has to be archived and when ? the answer is “Stellar fluxes and complementary technical informations” and before mid 2015.


This SC is devoted to a first overview of the Long Term Archiving landscape. Further discussions and decisions will be the main purpose of the next SC.

5.1 Archiving at CNES

Christophe explains the role of CNES in the Long term archiving framework, being set up at CNES for the new missions (see SC48_DR8_CD.pdf).

This project produces automatic documentation, often from old documents, and does not represent the reality of the mission at present.

Action SC48-2: The project is asked to comment the documentation, and to provide the list of auxiliary data needed in this very, very Long Term Archive.

	Title: Minutes of the 48th Scientific Committee Author: Annie BAGLIN	Reference: COROT.LESIA.13.00x Version: 0 Date: / 2013 Page: 6
---	---	--

During this exercise, it became evident that the naming of the data, in a very very long term perspective, raises problems.

It is an heritage of the development phase. As we know, any data can be used for any scientific purpose, and should not be assigned a name which precludes of its scientific use. We know that the so-called “exo-data” are used by many stellar physicists, and we observed also in the former “sismofield” stars hosting planets.

Many SC members are in favour of naming the data as “bright stars channel” and “faint stars channel”.

5.2 Archiving at IAS and mirrors

Frederic B. recalls that the CoRoT data Archive at IAS is part of the IDOC/ project, which archives space data from different missions, and is planned to be kept over a long period of time.

The CoRoT Data will belong to the stellar system data D2S.

A new interface is under construction, and as soon as it has sufficiently evolved, you will be asked to make remarks and criticisms.

This archive is specific of stellar photometric time series, and mainly directed towards specialists of this domain.

5.3 Archiving at CDS

Pierre Ocvirk gives an overview of what has been recently developed in the CDS environment at Vizier (see SC48_DR9_PO.pdf). It is foreseen that this access, in the global context of Vizier, will be used by any scientist working on specific objects and discovering that CoRoT data exist for it.

He strongly asks the users to comment, and make propositions of modifications.

Action SC48-3: all SC members: Remarks on the CDS CoRoT archive, asap

Action SC48-4: gather the remarks on the CDS Corot archive, AB before the next SC

6. Outreach

***The Wikipedia paper** is now in very good shape, thanks to Arlette and Daniel.


Available at http://fr.wikipedia.org/wiki/Corot_%28t%C3%A9lescope_spatial%29, presently only in French.

An action form the last SC to improve the front page is not yet done!

Action SC48-5: to all SC members : read carefully the page and send your remarks to the authors asap. Please, do not make corrections by yourself; we need some coordination.

7. Next meeting

After the workshop on corrections, probably first half of January. A doodle will be open soon.

	<p>Title: Minutes of the 48th Scientific Committee</p> <p>Author: Annie BAGLIN</p>	<p>Reference: COROT.LESIA.13.00x Version: 0</p> <p>Date: / 2013</p> <p style="text-align: right;">Page: 7</p>
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8. Actions

8.1. From the preceding SCs

SC28-4	Document on corrections	SC, MO, AB	Dec 2008	
SC43-2	Upgrade of the web page	PB, FB	Next SC	
SC44-4	Organize the test of the different methods for contaminants detection	MO	asap	
SC47-2	Modification of the wikipedia pages: front page and mission,	AB+OV	asap	
SC47-4	Modify the public page of CoRoTpub,	Tristan Guillot	asap	

6.2 From this SC

SC48-1	organise a workshop in Paris on jump correction	FB, MD	End of 2013	
SC48-2	comment the documentation produced at CNES, provide the list of auxiliary data needed for the C archive LTA.	SC, AB, MD et ?		
SC 48-3	Remarks on the CDS CoRoT archive	All SC member	assap	
SC 48-4	Gather the remarks of the users on the CDS archi	AB	Next SC	
SC-48-3	Read carefully the page and send your remarks to authors.	All SC member	assap	