

## Minutes of the 29th Scientific Committee

Author: Annie BAGLIN

Reference:

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## **Minutes of the 29th Scientific Committee**

Held at Institut d'Astrophysique Spatiale Orsay, September 2nd 2008.

Prepared by par:	Annie Baglin	
Accepted by:	The SC members	

## MODIFICATIONS OF THE DOCUMENT

Ed.	Revs.	Date	Modifications	Visa
1				

## REFERENCE DOCUMENTS

Reference	Title of the document
SC29-DR1	Mission status O. Vandermarcq CNES
SC29-DR2	Seismology activities E. Michel
SC29-DR3	Exoplanet search activities P. Barge
SC29-DR4	SRa02 and LRa02
SC29-DR5 a and b	LRc03 M. Barbieri, E. Michel
SC29-DR6	Pipelines of corrections M. Auvergne
SC29-DR7	Data deliveries S. Chaintreuil



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## **DIFFUSION:**

G. ALECIAN	OPM	X
M. AUVERGNE	OPM/LESIA	X
A. BAGLIN	OPM/LESIA	X
P. BARGE	LAM	X
C. CATALA	OPM/LESIA	X
M. DELEUIL	LAM	X
M. FRIDLUND	RSSD/Estec	X
R. GARRIDO	IAA/Spain	X
T. GUILLOT	OCA	X
E. JANOT-PACHECO	Sao Paulo University	X
L. JORDA	LAM	X
E. MICHEL	OPM/LESIA	X
A. NOELS	IA Liege	X
M. OLLIVIER	IAS	X
H. RAUER	DLR Berlin	X
D.ROUAN	LESIA	X
I. ROXBURGH	QMW London	X
J. SCHNEIDER	OPM	X
G. VAUCLAIR	OMP	X
W. WEISS	IA Vienna	X
J-L. COUNIL	CNES	X
O. VANDERMARQ	CNES	X
C. IMAD	OPM/LESIA/secretariat	X



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## **Participants:**

G. Alecian, M. Auvergne, A. Baglin, P. Barge, C. Catala, M. Deleuil, R. Garrido, T. Guillot, E. Michel, A. Noels, M. Ollivier, H. Rauer, D. Rouan, I. Roxburgh, J. Schneider, G. Vauclair, O. Vandermarcq, W. Weiss

**Invited** S. Chaintreuil for point 7, M. Barbieri for point 4.4 in teleconf **Non-attendees:** JL Counil M. Fridlund, E. Janot-Pacheco, L. Jorda,

### **1** Mission status

Olivier V. presents the last operations and the overall status of the satellite (see DR29-1). Everything is going well.

There has been some loss of data due to defects of the ICONES network. The problem seems to be solved.

### 2 Status of the scientific activities

### 2.1 In seismology

Eric M. presents the activities on the individual targets (already 80 have been observed). Some papers on data analysis are ready and some in progress for the interpretation. (SC29-DR2)

Annie B. has prepared a first version on an excel table gathering information on the targets and on the work done on the data, as far as we know it!

It is decided to post it on the web page of the seismology group.

**Action SC29-1:** AB, EM post the target-sismo table (version 0) on the web page of the seismology group, asap

#### 2.2 In exo detection and confirmation

Pierre B. presents the results of the 8 detection teams (SC29-DR3) and the coordination of their activities.

The H and H exercise using true CoRoT light curves on which artificial transits have been added is going on.

#### 2.3 In the APs

Werner W. says that the field is very active and blossoming but that it is very difficult to have a global idea. It is too early.

Most programmes need spectroscopic studies, which take time and delay the papers.

Concerning the new AO, called AO-4, the answers were due September 15th.

Only 3 answers have been received, and examined by the SC:

\* Search for radio emission from extrasolar planets using CoRoT observations by W. Gonzalez (INPE, Brazil),

Already accepted in AO-1

\*An accurate view on the light change of long period variables by T. Lebzelter, (IA Vienna, Austria)



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Accepted but need for targets and difficulty due to the estimate of the magnitude \* Rotation of chemically peculiar stars: period changes and differential rotation by W. Weiss (IA Vienna, Austria)

Accepted but suggestion to coordinate with the other AcroCoRoT activities. As for the preceding AOs a letter will be send by the PI of CoRoT to the PIs of the corresponding APs.

### 2.4 CoRoTpub

Tristan G. proposes to extend the accessibility to the CO-Is and collaborators nominated by the Co-Is, so that CoRoTpub remains the main source of information and not private mails. Accepted.

### 3 PR activities

Annie B. recalls the press release on Corot-exo\_4b (CP4) in august.

In the absence of Magali D. she presents the next press conference on CoRoT-exo\_3b to be held in Marseille on October 6<sup>th</sup> (CP5)

Eric M. presents the paper accepted in Science on detection of oscillations and granulation in solar like stars. A press conference is organised on October 22<sup>nd</sup> at Paris Observatory by Science, Observatoire d Paris, CNES and INSU (CP6).

The next press events should take place during the Symposium, for which we should accumulate material.

Many attendees ask for a clear and common explanation of the few number of confirmed planets, to be used outside the CoRoT community, especially in the relation with press.

**Action SC29-2:** P. Barge: prepare such a rationale at the occasion of the CEST meeting on October 16<sup>th</sup>.

## **4 Future Pointings**

#### 4.1 Selection SRa02

The SRa02 run is focussed on the seismo field with two programs: the core programme on O stars and the Additional programme on HD 46375.

The only request for the APs in the exofield is a list of B and Be stars. See SC29-DR4.

#### 4.2 Selection LRa02

The LRa02 run belongs to the core programme

In seismology it is focussed on HD 52265. Though the field is quite poor the selection contains

Requests from APs: a few binaries, B and Be stars as well as Red giants.

Due to the late delivery of the complement of the exodat catalogue, the exo selection is not done yet. See SC29-DR4.

### 4.3 SRa02/LRa02

The anticentre session will end with LRa02, on April 3<sup>rd</sup>.



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Following a question by Annie B. to the SC members, the time of the switch from SR to LR was discussed.

Taking into account that the long run cannot be reduced by more than  $\sim \! 10$  days, that the two programmes of the short run would benefit from several days increase, and taking also into account some operational constraints, Olivier V. proposes to start the operations on LRa02 on November  $12^{th}$ , leading to 30 days for the short run and 139 days for the long one. The SC accepts this.

### 4.4 Choice of LRc03

Mauro B., in teleconf from Marseille, presents the choice of the exo group (SC29-DR5a), which maximises the density of bright dwarfs in a 15° circle around the centre of the eye. The seismology content is quite poor, as presented by EM (SC29-DR5b). The SWG asks for a very tiny displacement to accommodate an O star. This is accepted.

## 5 Exo Input catalogues

Magali D. remarks that telescope time and observations are being obtained by several APs. She asks for a cooperation of these Programmes to the EXODAT effort, which benefits to all the programmes. It is proposed to have a discussion on that at the next CO-I and GI meeting.

## 6 Correction pipe line status.

Michel A. presents the recent developments (See SC29-DR6).

- \*A new version of the jitter correction is ready for both channels. It improves significantly the data in 80% of the cases.
- \* The sismo imagettes are now reduced using PSF fitting. It reduces the noise by approximately 20%
- \* The exo imagettes pipe line is being implemented.

## 7 Data delivery

Sylviane C. presents the agenda of the data already delivered and the future plan (see SC29-DR7).

There have been some difficulties in the treatment of LRa01 due to data losses. A new release, correcting these, is almost ready.

Co\_Is are asked to look carefully at the information given in the News of Mission Archive at IAS, to be aware of the version of the data they are using.

The new version of the pipeline leads to a new treatment of all the data.

The scientific committee is asked to make priorities between the production of the new version and the production of the data of the last runs.

Two scenarios are presented by Sylviane.

Some discussions show that it is difficult to take a decision on the spot.

The importance of the new exo corrections tends to favour a release of V2 data on long runs and IR asap. SRa01 is an AP on the exochannel and needs some rapid treatment also.



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Other short runs focus on the seismology channel for which the V2 version may be less critical. With tees priorities a new schedule is proposed by SC on the last slide, after the meeting.

**Action 29-3**: AB: Circulate the new planning with its rationale asap, and propose a decision taken by the Advisory Board by October 27<sup>th</sup>.

The alarm mode is now working at CNES and the chain is now sufficiently fast.

<u>First public delivery</u>: Some members proposed that the first delivery occurs at the symposium and not exactly on December 10<sup>th</sup>, one year after the first CO-I delivery. It has been said that the access to the data was delayed at the beginning due to computer problems at IAS, and that one should take this into account.

Others feel that we have to stick to our commitments.

Finally it is decided, with a very short majority (8/7) to deliver on December 10<sup>th</sup>.

## 8 Follow-Up activities

#### 8.1 ESO

- \* The groundbased follow-up of the seismology programme has been granted a new Large Programme at ESO, with Ennio Poretti as PI. 15 nights per semester were granted for three successive semesters. The observations will be obtained with HARPS on the 3.6m telescope. As for the previous LP (on FEROS@2.2m) the goal is to observe line profile variations of CoRoT early-type targets (delta Scuti, gamma Dor, beta Cep, Be,...), with two objectives:
- help the identification of low-degree modes observed with CoRoT by comparing photometric and spectroscopic data
- detect and characterize higher degree modes than those observed with CoRoT. The ESO LP will be complemented by observations at OHP and Calar Alto, which will be requested on a semester-by-semester basis.
- \*In APs there are different individual proposals, many of them being accepted Somme coordination is needed, but this is difficult. Could also be put at the agenda of the next CO-Is meeting.
- \* For the Exoplanet follow-up programme, the last period has been very bad, as no proposition has been accepted. A. B. has sent a letter to the DG to inform him about the situation and to ask for DDTime to get some time in period 82.

In addition our French representative at the council, Laurent Vigroux will present the question to the Committee, next week to try to draw the attention of the DG. The representatives of the partners will try to help. However, as not all ESO states are member of CoRoT, they probably lack information about this mission.

Let's note that a significant part of the radial velocity FU is done on SOPHIE at OHP.

#### **8.2** CFHT

Some DDT has been obtained to observe LRc03 on Megacam and a specific AO observation on one exoplanet target.



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#### 8.3 NASA

The AO for NASA/Keck time for the FU of CoRoT has been issued. Dead line September 30<sup>th</sup>. The announcement is posted on the Keck webpage.

### 8.4 Visibility of proposals

Tristan G. proposes to post the proposals on CoRoTpub.

Werner W. remarks that it raises a problem as the proposals are not public. It is suggested to enter only the title, the Pi name and the time requested.

## 9 Extend of the mission

The SC thinks that an extend of the mission is desirable, even necessary

All the partners express their will to continue too.

CNES considers that the prolongation of the exploitation of the satellite should be examined by its scientific advisory groups (Astronomy and then Universe Science) and then approved by the CNES CPS (Comité des Programme Scientifique).

This process shall be, of course, initiated by a documented request from the Scientic community (at first the PI and the SC).

An accurate scheme may be to send a letter to the Programme Director S. Janichewsky . A more documented file will be prepared in parallel to be examined by CNES and its scientific advisory group. The next meeting of the Astrophysics group is planned on January 15-16, 2009. The proposal shall then be available before the end of the year.

## 10 Symposium

The SC remarks that the schedule for abstract submission is too tight. It is modified The dead line is November 16<sup>th</sup> and the acceptance December 2<sup>nd</sup>. A meeting of the Advisory Board of the Scientific Committee will be held on December 1<sup>st</sup>.

List of invited speakers should be on the web at the end of the month.

The choice will be finalised through e-mail asap.

Concerning the publication, A and A proposes a "special feature" associated to the symposium but which will not be an image of the contributions. It will be composed only of referred papers.

Dead line for submission will be February 22<sup>nd</sup>, and deadline for acceptance May 30<sup>th</sup>.

A discussion with A and A (C. Bertout), C. Aerts and A. Baglin just after the SC meeting leads to the following planning:

Electronic delivery, free of charge will be in June and the paper version available in August. Special colours reprints will be available and paid by the HELAS contribution. Some papers not presented in the symposium could also be published in this volume.

## 11 General business

### 11.1 Data document

§ 4.2.2 Responsibility for data analysis: Replace J. de Ridder by C. Barban



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Replace B stars by O and B stars The new version is data\_rights\_6.2.pdf

## 11.2 A new Co-I GI meeting

It seems important that the Co-Is continue to share their experience in data analysis It is proposed to have a 3<sup>rd</sup> Co\_Is meeting on Friday 6<sup>th</sup> at the end of the symposium. **Action SC29-4** A.B.: organise CO-Is and GI meeting 3.

As there were very few members still in the room, it is decided to prepare the programme by mail.

Next SC meeting December 2<sup>nd</sup> at Institut d'Astrophysique in Paris



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## 12 Actions

## Actions from SC 19.

SC19-1	Document on the observing programme	AB	July 1st	

## **Actions from SC27**

SC27-9	Prepare an upgrade of the booklet for Aps WW	WW	April 15	
SC27-12	Prepare the new version	AB	April 30th	

## **Actions from SC28**

SC28-1	Ugrade of the sismo booklet	EM	June 25th	
SC28-4	Document on corrections	SC, MA. AB	Dec 2008	

## **Actions from SC29**

SC29-1	post the target-sismo table on the web page of	AB,EM	asap
	the seismology group et		
SC29-2	prepare a rationale to explain the small number of confirmed planets	PB	October 16 <sup>th</sup> .
SC29-3	Circulate a new planning with its rationale asap, and propose a decision taken by the Advisory Board.	AB	october 27 <sup>th</sup>
SC29-4	prepare the 3 <sup>rd</sup> CO-I GI meeting	AB	assap