

# Minutes of the 42nd Scientific Committee

Author: Annie BAGLIN

Reference:

#### COROT.LESIA.12.002 Version: 1

Date: 10 / 02 / 2012

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# **Minutes of the 42nd Scientific Committee**

Held at Institut de Recherche en Astrophysique et Planétologie, Toulouse, on February 3rd 2012.

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
SC42-DR1-OV.pdf	Mission status
SC42-DR2-EP.pdf	Ground based FU in sismo Dec/Jan
SC42-DR3-EM.pdf	Next pointings
SC42-DR4-MA.pdf	Technical issues for the extension
SC42-DR5-SC.pdf	Statistics on the use of the templates



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### DIFFUSION:

G. ALECIAN	OPM
R. ALONSO	Observatoire de Geneve
M. AUVERGNE	OPM/LESIA
A. BAGLIN	OPM/LESIA
F. BAUDIN	IAS
P. BORDE	IAS
S. CHAINTREUIL	OPM/LESIA
M. DELEUIL	LAM
M. FRIDLUND	RSSD/Estec
R. GARRIDO	IAA/Spain
T. GUILLOT	OCA
A. HATZES	Tautenbourg
E. JANOT-PACHECO	Sao Paulo University
E. MICHEL	OPM/LESIA
C. MOUTOU	LAM
A. NOELS	IA Liege
M. OLLIVIER	IAS
E. PORETTI	Obs Brera, INAF
H. RAUER	DLR Berlin
D.ROUAN	LESIA
I. ROXBURGH	QMW London
J. SCHNEIDER	OPM
G. VAUCLAIR	OMP
W. WEISS	IA Vienna
K. ZWINTZ	IA Vienna
O. LA MARLE	CNES, Paris
O. VANDERMARQ	CNES, Toulouse
C. IMAD	OPM/LESIA/secretariat



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#### **Participants:**

All members except G. Alecian, M. Deleuil, T. Guillot, A. Hatzes, O. La Marle, A. Noels, M. Ollivier, J. Schneider, W. Weiss

H. Rauer on visio conf.

#### 1. Mission status

See SC42-DR1-OV.pdf

The present run is the 22nd one, and the total duty cycle is slightly higher than 90%

The satellite is still working very well, with no difficulties.

The pointing has been lost on December 20th due probably to a collision with a small particle.

This is under investigation by CNES. Only18 hours of data have been lost.

## 2. Observing programme

### 2.1. What is being performed this winter

As said before the two first runs of the period are over.

Presently LRa06 reobserves CoRoT-7 and CoRoT-12, and several sismotargets from LRa01 and even IRa01.

Ennio P. presents the achievements of the Ground based Follow-up of the sismo programme during this winter (see SC42-DR2-EP.pdf).

A new LP has to be propose. It seems to be the best strategy, as we cannot rely on the acceptation of individual proposals. He stresses that we should select targets with line profile variations before September to prepare the proposal.

Ennio P. proposes to prepare, with EM, such a list of potential seismic targets able to give a strong scientific case for the study of the line profile variations and then help to give strength to the Large Programme.

Action SC42-1a: prepare a list of targets for a new ESO LP. E.P., next SC

Action SC42-1b: check and complement Ennio's list, EM

On HARPS, CoRoT-7 is presently followed, with 3 measurements per night., and on a few nights on HIRES.

#### 2.2. Propositions for next summer and winter periods.

Next summer

Action SC 41-2 has been closed.

The programme of this summer is

- *LRc09*: HD 179079 a planet-host star (V=8) to look for inner transiting planets, to detect the reflected light from the 14 days non-transiting planet, and to make rough seismology of the host star. I twill be observed till the beginning of July.
- *LRc10*: HD 169689/690 an eclipsing binary composed of a red giant + a B star, observed in LRc04, but with a bad coverage of the primary eclipse. The secondary eclipse



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will be covered by LRc10 on July 20th.

EP recalls that the HARPS observations are starting on July 3rd.

The precise pointings are not yet tuned. (see SC42-DR3-EM.pdf)

**Action SC42-2:** CM, EM, MA, AB, propose the precise pointing of LRc09, February 17 th. **Action SC42-3:** CM, EM, MA, AB, propose the precise pointing of LRc10 by mid-March

Next winter

EM recalls that the O stars are a priority of the first extension. It can be performed only in winter, and should last long! (see SC42-DR3-EM.pdf).

The region of NGC 2244 seems the most promising. It has been observed in SRa02. It also contains HD 46375 a star with planet.

**SC42-4:** Propose the pointing of next winter at the next SC.

#### 3. Publications and Outreach

#### 3.1. Update of the Scientific Results web page

As said before it should be upgraded every two months.

The last update of the list of publications has been done in November.

CM recalls that in addition to updating the list of publications, which is quite easy, we should also refresh the texts of presentation of each topic.

**Action SC42-5:** Pascal B. and Fréderic B. present improvements and modification of the webpage, next SC.

### 3.2. Proceedings of CoRoT 2

The preparation of the manuscript has been done by Thierry Semaan on a CDD contract at Paris Observatory. Graphics are from P. Amoyel, as usual!

A last reading is being done by MD, CM, EM, MA, AB.

The final manuscript will be send for printing on February 17th (300 copies of 350 pages).

#### 4. Data treatments and deliveries

#### 4.1. The exo imagette pipeline

The algorithms are now used extensively by Susana B. The results seem very satisfactory.

There are two last steps: implementation in the data treatment chain  $N1 \rightarrow N2$  and validation.

The implementation is done by Pierre-Yves C. in collaboration with Sylviane C.

AB insists on the fact that the validation cannot be done by the developers. She recalls also that a document describing the treatments has been asked at the last SC.

Konstanz Z. proposes to perform this validation.



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#### 4.2. Status of the treatments and deliveries

The YSOVAR2 group (in charge of the combined observations of NGC2264) is asking for N2 data as soon as possible. SC proposes to deliver them at the end of February.

#### 5. CoRoT III

#### **5.1.** Scientific Proposal

Action SC41-6 is closed. The proposal document has been issued on January 20th, and distributed to all the Co Is.

It will be presented on February 6th at the Astronomy group at CNES.

If accepted by CNES (probably not before June), there will be a Steering committee to assess the international contributions.

Pascal Bordé and several other members of the SC propose to try to involve new scientists in this new period.

It is decided to organise a CoRoT Week in winter, when the decision will be taken.

Action SC42-6: Discussion on the organisation of this CW; next SC

#### **5.2.** \* Technical issues

The questions raised in the agenda are presented by Michel A (see SC42-DR4-MA.pdf).

#### \* Access to the barycenter information

MA has already contacted the experts of the onboard software. The modifications have been identified, and the work needed is being evaluated by LESIA and DLR. It does not seem impossible, but will require some complementary manpower

In any case it will need a redistribution of the TM volume and may be also the repartition between TM1 and TM2.

Action SC42-7: OV present a table of the TM allocations, ASAP

#### \* Modification of the templates set

Following an action from the last SC, Sylviane C. has produced some statistics of the use of the templates and presents them; (see SC42-DR5-SC.pdf).

The conclusions have to be discussed more to decide whether a new set of templates should be calculated, tested and implemented.

#### \* number of windows on the seismology CCD

The max number of seismology targets cannot be greater than 8 (reading of the CCD in less than 1 sec, with five targets the readout time is 0.83 sec). It will be also necessary to reduce the size of some windows. As it is difficult to find bright stars

with five windows, the new targets will be faint stars V > 8-9.

Adding new windows increases also the telemetry volumes.



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A global evaluation could be done if the need for the exoplanet programme is clearly defined.

### 6. General management

**List of CO-Is:** It is said that for this new period, we could soften the rules of nomination of the Co-Is, and take more into account the contributions to the scientific discoveries. Action still open, for next SC.

**Next SC Meeting**: In mid April, in Paris.

EM recalls that the SF2A annual meeting is in June in Nice.

The Brazilian Astronomical Society is the guest.

There are already some sessions related to CoRoT topics

#### 7. Actions

### **Actions still open**

SC37-1	Document the imagette photometry accuracy	Tranfered to	asap
		S Barros	
SC28-4	Document on corrections	SC, MA. AB	Dec 2008
SC40-5	How to use the TM of the sismo imagettes,	MA	Next SC

SC41-3	Discussion at CEST on the publication policy	MD	Next CEST
SC41-4	Update the list of builders, CO-Is, SC	AB	Next SC
	members		

#### **Actions from this SC**

SC 42-1a	Present the project of the asteroseismic ESO	E.P.	Next SC
	LP supporting CoRoT extension		
SC42-1b	check and complement Ennio's list of targets	EM	June?
SC42-2:	propose the precise pointing of LRc09,	CM, EM,	February 17
		MA, AB	th.
SC42-3	propose the precise pointing of LRc10	CM, EM,	by mid-
		MA, AB	March
SC42-4:	Propose the pointing of next winter		next SC.
SC42-5:	present improvements and modification of the	Pascal B.	next SC.
	webpage,	Fréderic B.	
SC42-6	Organisation of the CW next fall	AB	Next SC
SC42-7:	present a table of the TM allocations	OV	asap