

Title: Minutes of the 11<sup>th</sup> Scientific Committee

Version: 1

Author : Annie BAGLIN

Page: 1

# Minutes of the 11th Scientific Committee

held in Berlin, December  $9^{th}$  and  $13^{th}$  2003.

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# **DOCUMENTS DE REFERENCES**

Index	Reference	Titre du document
DR1:	COROT.DESPA.01.014	Scientific policy and Data rights
DR2		
DR3		



Minutes of the 11<sup>th</sup> Scientific Committee

Title:

Référence: COROT.LESIA.04. 02

Version: 1

Author : Annie BAGLIN

Date:05/01/04

Page: 2

# **DIFFUSION:**

G. ALECIAN	OPM	Х
T. APPOURCHAUX	RSSD/Estec	Х
M. AUVERGNE	OPM/LESIA	Х
A. BAGLIN	OPM/LESIA	Х
P. BARGE	LAM	Х
L. BOISNARD	CNES	Х
P. BODIN	CNES	Х
T. LAM-TRONG	CNES	Х
C. CATALA	OPM/LESIA	Х
M. DELEUIL	LAM	Х
R. GARRIDO	IAA/Spain	Х
T. GUILLOT	OCA	Х
C. IMAD	OPM/LESIA	Х
E. JANOT-PACHECO	Sao Paulo University	Х
L. JORDA	LAM	Х
M. JOUBERT	CNES	Х
A. LEGER	IAS	Х
E. MICHEL	OPM/LESIA	Х
A. NOELS	IA Liège	Х
H. RAUER	DLR Berlin	Х
D.ROUAN	LESIA	Х
I. ROXBURGH	QMW London	Х
J. SCHNEIDER	OPM	Х
G. VAUCLAIR	OMP	Х
W. WEISS	IA Vienna	Х



Minutes of the 11<sup>th</sup> Scientific Committee

Version: 1

Page: 3

# **Participants:**

All members except D. Rouan, M. Joubert and T. Appourchaux

Title:

# 1- Debrief of CW5, preparation of CW6

More than 100 participants; 10% increase since Marseille. Very high standard for all presentations. The programme was too stuffed.

CW6 will be held in Orsay.

Due to the Venus transit on June 8<sup>th</sup>, it is proposed to have it some times before, on the second half of May. Depending on availability of conference rooms, the date will be fixed in early January.

For CW6 it is proposed to keep half a day without preprogrammed sessions to allow for restricted meetings and unformal discussions.

It is also suggested that the coordinators invite speakers for their session, in accordance with tehir well defined programme, and that non sollicited talks be transformed into posters.

M. Auvergne announces that the "instrument session" will probably be shorter (half a day) as the ingeniors will be extremely busy at that time. He proposes to focus on the properties of the light curves.

On the other hand, the APWG session will be more important, as progress reports and discussions on the preparation of the answer to the AO will be necessary. They should not be in paralle with other sessions.

The preliminary agenda of the next CWs is:

- December 2004: Granada
- June 2005: Toulouse
- December 2005: Natal ?

# 2- Situation of Eddington

A brief summary of the situation is given by I. Roxburgh, stressing that Eddington is not dead. After the SPC proposal for an "affordable programme", many (600) scientists have signed the letter of support send to the ESA Council. State representatives have been contacted. Industrial activities are going on at Astrium and Alcatel, and the first EM detectors have been delivered by EEV, and they are very good.

# **3- Update of the list of CO-Is**

It has been said that concerning the partners, it remains under the responsability of the coordinator (member of SC) to nominate the Co-Is of their country. But the SC stresses once more that it is important to be careful about the involvement of the Co-Is in the Corot preparation. The Brasilian Co-Is have been chosen:

Jane Gregorio-Hetem: pre main sequence evolution Ramiro de la Reza: protoplanets François Cuisinier: giants José Renan de Medeiros: rotation, activity, solar like stars.

×**	Title:	Référence: COROT.LESIA.04. 02
	Minutes of the 11 <sup>th</sup> Scientific Committee	Version: 1
	Author : Annie BAGLIN	Date : 05/01/04 <b>Page: 4</b>

As Thierry Appourchaux will leave RSSD in March a new SC member will be nominated and the list of Co-Is reviewed by the RSSD director rapidly. The updated list of Co-Is is given in Annex A.

## 4- Status of the collaborations

Thien Lam-Trong presents the situation in the different countries. He stresses the fact that recently efforts have been made to improve the relationships, in particular in terms of interface, by identifying precisely the responsabilities and the circulation of information. He feeels that this has been successful and fruitful and thanks all the partners for this effort.

In Austria, everything is on track now; the additional budget has been obtained

In **Germany**, there has been some delays due to budget diffculties in DLR, but they have been managed and contained.

In **Belgium** there has been strong concern about the baffle design which was not stiff enough. With very strong support from CNES solutions have been found now, but the situation remains touchy! With **Spain**, the contribution has been slightly modified, abandoning the use of the Villafranca ESA

antenna which was too complicated to manage, and transferring the funds to the development of the Software of the Mission Centre ( by GMV company).

At **RSSD**, the manufacturing of the FM DPU is going on; no problem.

With **Brazil**, discussions are still undergoing on the use of the Natal antenna. The contribution to the Mission Centre by providing ingeneers has started and will be completed early next year.

The ESA contribution, corresponding to industrial contracts, is managed by CNES.

T L-T confirms the planning with a launch in the first semester of 2006; but he says that the major concern presently is the increase of the cost of the instrument, by  $\sim 30$  %, due essentially to the successives delays, of up to one year now!

#### **5-** Proposition of new countries to contribute to COROT

The Most team: A. Baglin proposes to nominate J. Matthews as a Co-I.

J.M. proposes to give access to the COROT Team to the MOST data in advance, for technical purpose and eventually also for preparing the programme of observations. This contribution is considered as very important by all SC members.

The SC asks A.B. to continue the discussions with J.M. and if positive, to prepare a formal agreement between Canada and France, may be also with the French and Candian space agencies.

**Danemark** has contacted A.B. proposing to contribute as a country and not only on the ESA quota. Discussions are underway.

**Hungary** is willing to contribute to the ground based observation programme as agreed by Claude Catala. Depending on the level of contribution some colleagues could become Associated scientists.

**S. Adelman** from US proposes to contribute in observing Corot targets with his spectrometer ASTRA, which is considered as a very useful addendum to the G/B observation programme for a better characterisation of the targets. The good solution will be also to have him as an Associated scientist in a classical Corot team.

	Title:	Référence:
		COROT.LESIA.04.02
	Minutes of the 11 <sup>th</sup> Scientific	
	Committee	Version: 1
<b>Stat</b>	Author : Annie BAGLIN	Date:05/01/04
		Page: 5

## 6- List of principal targets, drift of the orbital plane.

As discussed during the plenary sessions, the list of principal target candidates has been updated. Priorities have been discussed among the groups, but time was missing to reach a final list. The SC asks AB to prepare a document presenting this list and the properties of these targets, and priorities; a draft should be issued by the end of January and circulated in the SC, for publication to the whole community on February 15<sup>th</sup>.

Concerning the drift of the orbital plane, the SC agrees to study this possibility, enlarging the flight domain of the ascending node from 14.5 degrees to 6.5. It is understood that a final decision on the drift parameters (initial value of omega, time and speed of the drift) will not be needed much before the flight.

### 7- Data rights and Publication policy

The two documents presented by P.Barge and A. Noels (see Annex B) have been presented by their authors and discussed.

Though some differences exist between the two components of the Core Programme it is agreed that the preliminary results e.g. detection of candidate planets and detection of oscillations will be published by the project team, as soon as possible before any scientific interpretation. The SC agrees on the content of both proposals and decide to modify accordingly the document

"Scientific policy and Data rights" (action A.B. for the next meeting).

The list of authors should be agreed upon in advance.

It is also recalled that at CS9 an internal refering process has been proposed, and the SC remains favorable to that. It is asked to have a detailed discussion on the organisation of such refering process at the next meeting.

#### 8- A Call for Letters of intent for the Seismology Core programme

E. Michel confirms the intention to issue a call for Letter of Intent concerning the whole seismology Core Programme, including both Long and Short Runs. This call will evidently be restricted to Co-Is and their teams. A tentative schedule is to issue it next spring, with answers one month before CW7 in autumn 2004, for examination at CS13.

#### 9- Letters of intent for the Additional programmes

A general presentation has been given by W. Weiss.

81 anwers to the call for Letter of Intent have been received from 55 different Pi's involving at least 300 different researchers from Europe and Brazil. The majority (54 LoI) proposes to use date obtained during long runs with the exo-CCDs, All other observing modes (long run with seismology CCDs, short runs with Exo and seismology CCDs) have been proposed about equally frequently. About 1/5 of the LoI's actually were concerned with Core Program and do not qualify for the AP. For the remaining letters, about 1/3 was proposing seismology related science, little more than 1/3 with truly additional science, i.e. not related to seismology nor exoplanets, and less than 1/3 with survey type of projects.

<u>)</u>	Title:	Référence: COROT.LESIA.04. 02
	Minutes of the 11 <sup>th</sup> Scientific Committee	Version: 1
	Author : Annie BAGLIN	Date: 05/01/04
		Page: 0

A. Baglin recalls that we will have to keep in mind the relative contributions of each partners so as to keep a correct balance between the PIs of the APs ( those we call GIs when they are not already Co-Is!) at the latest stage of the selection.

All answers have been examined by the SC, and answered.

The answer contains 2 parts: a general one (see Annex C) and specific comments.

It has been agreed that we do not need the formal AO for proposals before <u>the end of 2004</u>. This leaves time to improve the proposals, to develop collaborations and to perform complementary observations.

# **10- PR activities**

Following a presentation of B. Foing in the plenary session, the SC considers that the lead has to be taken by CNES.

Thien Lam-Trong proposes to set up a group with representatives of the different parties to coordinate the PR activities. He will send a message to all "coordinators" in january; they will have to nominate one contact person for these activities.



# Annex A: List of Co-Is as presented at this meeting

Name	first name	Country/lab	Institution	activity	WG
RAUER	Heike	Germany	DLR Berlin	Dynamics of the Hot Giants	F/EGBO
HATZES	Artie	Germany	Thueringer	GBO exo and sismo	E/S
PAETZOLD	Martin	Germany	Koln	Exo atmospheres	E
WUCHTERL	Guenther	Germany	MPI	Planet formation mass distribution	E
() COMPLEXE	Guennier	Germany			L
APPOURCHAUX	Thierry	ESTEC	RSSD	Data analysis, solar type	S
FOING	Bernard	ESTEC	RSSD	Link to space missions, activity	А
FRIEDLUND	Malcom	ESTEC	RSSD		?
GONDOIN	Philippe	ESTEC	RSSD		?
NOFIS	Anlatta	Polgium	Liàna	Staller evolution	S
AFDTS	Conny	Belgium	Liege	Bata Caph SPR	S
AENIS SCHELAIDE	Diahard	Belgium	Leuven	Non adiab analysis	S
MACAN	Diama	Delgium	Liege	Spectroscopy, analysis	SCRO
INAGAIN	Alain	TPC	Liege	Spectroscopy analysis	SODO
JORISSEN	Alalli	IBC			
GARRIDO	Rafael	Spain	IAA	GBO photometry	S
RIBAS	Ignacio	Spain	Barcelona	Ecclipsing binaries	AP
DEEG	Hans	Spain	IAA	transit detection	E
ROCCA-CORTES	Theo	Spain	IAC	Data analysis and interpretation	S
WEISS	Werner	Austria	Vienna	APWG +lambda Boo, Ro Ap	S/AP/SGB
HANDLER	Gerard	Austria	Vienna	gam Dor	AP/S
LEBZELTER	Thomas	Austria	Vienna	AGBs	AP
LAMMER	Helmut	Austria	Graz	exoplanet atmospheres	
ROXBURGH	Ian	IIK	OMW London	Excitation and amplitudes	S
COLLIER-CAMERON	Andrew	UK	St Andrews	Activity modeling	AP
OUFLOZ	Didier	Switzerland	Geneve	GB follow-up	E
KIEDSEN	Hans	Danemark	Aarhus	TBC	SGBO
MONTEIRO	Mario	Portugal	Porto	Stellar modeling (TBC)	S
		8		2g (2.2.2)	
PORETTI	Enio	Italy	Merate	Spectrosocpy/delta scuti	SGBO
JANOT- PACHECO	Eduardo	Brazil	Sao-Paulo	Seismology of hot stars	S/SGBO
Gregorio-Hetem	Jane	Brazil	Sao Paulo	pre main sequence	AP
de la Reza	Ramiro	Brazil	ON Rio de J.	protoplanets	AP/E
Cuisinier	françoic	Brazil	OV Rio de J.	giants	AP
Rean de Medeiros	José	Brazil	Natal	solar like, rotation	S, AP
MICHEL	Eric	France	LESIA	SWG+delta scuti analysis	S

2 <b>6</b>

# Minutes of the 11<sup>th</sup> Scientific Committee

Title:

# Référence: COROT.LESIA.04. 02

# Version: 1

Author : Annie BAGLIN

Date: 05/01/04

Page: 8

CATALA	Claude	France	LESIA	SGBOWG	SGBO
ROUAN	Daniel	France	LESIA	onboard treatment	Е
GOUPIL	Marie-Jo	France	LESIA	Moderate rotation	S
MOSSER	Benoit	France	LESIA	Solar system planets	E/S
SAMADI	Reza	France	LESIA	Amplitudes	S
TIPHENE	Didier	France	LESIA	Intrument	Instr
BARBAN	Caroline	France/NOAO	LESIA	Synthetic light curves, colors	S
SCHNEIDER	Jean	France	LUTH	Exoplanet science and ambiguities	E/EGBO
ALECIAN	Georges	France	LUTH/GEPI	Chemically peculiar stars	S
HUBERT	Anne-Marie	France	GEPI	Be stars	AP/S
LEBRETON	Yveline	France	GEPI	Stellar models	S
LEGER	Alain	France	IAS	Earth like planets	E
BOUMIER	Patrick	France	IAS	Instrument	Inst
BAUDIN	Frederic	France	IAS	Time frequency analysis	S
OLLIVIER	Marc	France	IAS	Instrument	E/Instr
		_			_
BARGE	Pierre	France	LAM	EWG+Hot planet statistics	E
DELEUIL	Magali	France	LAM	EGBO	EGBO
JORDA	Laurent	France	LAM	Data reduction	E
MOUTOU	Claire	France	LAM	EGBOWG	EGBO
LLEBARIA	Antoine	France	LAM	Masks in E field	E
BOUCHY	François	France	LAM ?	Radial velocities	EGBO
VAUCLAIR	Gerard	France	ОМР/ГАТ	WD	S
TOUBLANC	Dominique	France	OMP/CESP	Catalogues	F
VALICIAIR	Svlvie	France	OMP/LAT	Diffusion and mixing	S
RIFLITORD	Michel	France	OMP/LAT	Fast rotation	S
CHARPINET	Stephane	France	OMP/LAT	Corotsky	SGBO
LIGNIERES	François	France	OMP/LAT	Rotating models	S/SGBO
	114113010		0	Terming means	5.5020
GUILLOT	Tristan	France	OCA	Hot Jupiters	Е
PROVOST	Janine	France	OCA	Direct seismic analysis	S
BERTHOMIEU	Gabrielle	France	OCA	Optimisation interpretation	S
TOUTAIN	Thierry	France	OCA	Data analysis	S
TURCK-CHIEZE	Sylvaine	France	Sap/CEA		S
GARCIA	Rafael	France	Sap/CEA	Data reduction	S
SOLANO	Enrique	Spain	LAEFF	GB Data base	SGBO
AUVERGNE	Michel	France	LESIA	IS	Inst
BAGLIN	Annie	France	LESIA	PI	



# Annex B: Data rights and publication policy: P. Barge and A. Noels contributions

## **Exoplanet core programme : Data distribution policy by Pierre Barge.**

According to the document DR1 light-curves (LCs) of a long run will be delivered to all Co-Is after 4-6 months, a delay necessary for instrumental corrections and data validation.

A "warning mode" will be implemented at the CMC level; it will be defined by the project team. Its role is to perform a first order transit detection, on packets of N1 data, in order to trigger target selection for oversampling operations (512s --> 32sec).

The oversampling capacity was decided a long time ago to get more informations on deep periodic transits (by Hot Giant planets).

Of course the existence of early detection during the observations and before LCs delivery to the Co-Is, raises questions on rights and publication policy.

My proposition, is the following:

--> positive detection, identified as planetary transits with high confidence level, should be published as soon as possible (for the biggest events there is no need to wait for N2 products),

--> the list of authors should be limited to Co-Is of the Scientific Committee and to Co-Is of the Project Team deeply involved in CoRoT and its pipeline,

--> the composition of the author list should be decided by the SC.

--> all Co-Is will be informed of positive detections to start the programme of complementary observations.

On the other hand, validated light-curves are delivered to the whole Co-I community, and all of them will be considered on equal footing, as previously decided. Then, it will be time for second order detections and for detailed scientific analysis.

This proposition preserves some difference between Co-Is deeply involved in the definition and preparation of the mission (since 1995 or more ...) and others.

#### Asteroseismology core programme: Data policy by Arlette Noels

During the one-year privileged time starting at the first light curve obtained, the following «!policy!» should help the members of the Asteroseismology Working Group to benefit from the work and efforts already made during the preparation of the mission while being encouraged to join their efforts as best as possible in the interest of science.

All the Co-Is have an immediate access to all the asteroseismology data, i.e. the light curves, as soon as they are computed by the Corot data center. Outsiders of the Corot team have access to these data one-year later.

× 🙀	Title:	Référence: COROT.LESIA.04. 02
	Minutes of the 11 <sup>th</sup> Scientific Committee	Version: 1
	Author : Annie BAGLIN	Date: 05/01/04
		Page: 10

The seismology community is organised in task forces, e.g. group of scientists working together on the same problem.

These task forces must remain flexible and any SWG member can join any task force anytime once he shows expertise and/or has access to a tool in the particular fields of the task force.

Letters of «linterest!» should be sent to Eric Michel stressing the experience and the numerical tools available as well as the scientific aspects which to be covered.

According to these answers, the «!task forces!» already defined by Eric are updated. Each member of the SWG can belong to more than one task force according to his (or her) experience and to the particular tools available in his research team.

The coordinator of each task force plays a major role :

- 1- He is informed by each team of its ongoing research ass soon as it is started and obviously before submission for publication.
- 2- He transmits the information to other teams doing similar research in order to favor exchanges and collaboration between the SWG members.
- 3- He has no power to impose or prevent collaborations for the publications.
- 4- If a problem occurs, he informs the Scientific Council which will be the only organ allowed to take the appropriate measures.

#### Annex C: Reply to the Letters of Intent for the Additionnal Programme

Common part of all messages

Dear colleague,

We have received your Letter of Intent and examined it together with all the other letters during a special meeting of the Science Committee.

A total of 81 letters have been received from 55 different PIs and which involved about 200 different scientists from Europe and Brasil. This unexpected heavy response clearly illustrates the interest of the scientific community in COROT and its Additional Programmes.

The LoIs were concerned with 55 (!) requests for data from the seismo-fields obtained during long runs, 17 for similar exo-fields, 44 requests for short runs, 23 with the seismo-field and 21 with the exo-field.

The Scientific Committee thank you all for your answers which have been very useful to the Scientific Committee and to the whole scientific Community, as a first step to prepare and optimize the observations.

However, this answer is not at all a commitment. A formal Announcement of Opportunity for proposals will be issued later.

The Committee made General remarks, as well as Specific recommendations (see below) on your letter to help you in the preparation of a true Proposal.

Title:	Référence:
	COROT.LESIA.04. 02
Minutes of the 11 <sup>th</sup> Scientific	
 Committee	Version: 1
Author : Annie BAGLIN	Date : 05/01/04
	Page: 11

As we have decided to issue this AO not before fall of 2004, there is sufficient time for optimizing the strategy.

The list of answers will be available on the web page of the APWG at http://ams.astro.univie.ac.at/space\_corotAPWG.php

Wishing you a Merry Christmas and all the best for a successful New Year,

# GENERAL REMARKS

1- The constraints of the mission have been generally very well taken into account.

- Only a few projects are not feasible. Some others need more studies.

- Programmes asking for data of the long runs in the exo-field do not raise specific problems.

- Some programmes addressed Core Programme science. They are not considered in the context of Additionnal Programes

2- Several groups have common interest, for instance binaries, activity.... The Scientific Committee encourage them to cooperate trying to converge to common proposals.

3- The number of requests for short runs is 10 times larger than is expected during the nominal lifetime of the mission!

Groups requiring short runs are encouraged to

- verify that a short run is necessary

- contact other proposers to try to combine different scientific objectives in the same run, using e.g. closeby targets.

4- In its final selection the Scientific Committee will have to take into account the level of contribution of each country. The present answers do not reflect this situation. Merging of proposals, as mentionned in 2 can help in this respect.