



LAL Workshop

Dynamics of planetary satellites and rings

Lille Observatory, 15-16 December 2010

Theme

This workshop will be the opportunity to discuss various aspects of the dynamics of planetary satellites and rings, such as ring-satellite interactions, tidal effects, origin, resonant structure and evolution of ring systems, etc. Recent results, in particular from the Cassini mission around Saturn, as well as open problems will be addressed.

Invited speakers

Carl D. Murray, Astronomy Unit, Queen Mary, University of London
Nick Cooper, Astronomy Unit, Queen Mary, University of London
Bruno Sicardy, LESIA-Paris Observatory and Institut Universitaire de France
Valéry Lainey, IMCCE-Paris Observatory
Sébastien Charnoz, AIM-CEA and Paris VII University

Organizing committee

Stéfan Renner, LAL-IMCCE-Paris Observatory and Lille 1 University
Alain Vienne, LAL-IMCCE-Paris Observatory and Lille 1 University
Marc Fouchard, LAL-IMCCE-Paris Observatory and Lille 1 University
Florent Deleflie, LAL-IMCCE-Paris Observatory
Martine Pichon, Secretary, LAL and Lille 1 University

Location

The workshop will take place at Lille Observatory, 1 impasse de l'observatoire, 59000 Lille, France (longitude 3°4'15" E, latitude 50°36'57" N, altitude 32m).

Access to the Observatory from public transport: bus L1 station "Gaston Berger" / subway line 2 station "Porte de Douai" / website: <http://www.transpole.fr>

Practical information

Registration is opened until Sunday 31 October.

The workshop will start at 10:00 AM on Wednesday 15 December.

There is no participation fee.

Participants will have access to the Observatory wireless connection.

Lunch will be served (for free) at the restaurant of Faidherbe High School (500m from Lille Observatory).

A dinner in the city (free for all the participants) will be organized on Wednesday evening.

Registration

In order to register, please send an e-mail to [lille-ring\[at\]imcce.fr](mailto:lille-ring[at]imcce.fr), stating your affiliation and, if any, the title of your presentation.

Accommodation

You can book your hotel [here](#) through the Lille Tourism Office.

Important dates

16 September: first announcement

31 October: registration deadline

15 November: final program

15-16 December: workshop

List of registered participants

Name	Affiliation
S. Breiter	Poznań Observatory and Adam Mickiewicz University
R.-M. Baland	Royal Observatory of Belgium
S. Charnoz	AIM-CEA and Paris VII University
N. Cooper	Astronomy Unit, Queen Mary, University of London
M. Elmoutamid	LESIA-IMCCE-Paris Observatory
M. Fouchard	LAL-IMCCE-Paris Observatory and Lille 1 University
V. Lainey	IMCCE-Paris Observatory
A.-S. Libert	Dynamical Systems Unit, University of Namur
B. Noyelles	Dynamical Systems Unit, University of Namur
C.D. Murray	Astronomy Unit, Queen Mary, University of London
S. Renner	LAL-IMCCE-Paris Observatory and Lille 1 University
P. Rosenblatt	Royal Observatory of Belgium
B. Sicardy	LESIA-Paris Observatory and Institut Universitaire de France
G. Valsecchi	IASF-Roma, INAF
T. Van Hoolst	Royal Observatory of Belgium
A. Vienne	LAL-IMCCE-Paris Observatory and Lille 1 University
M. Yseboodt	Royal Observatory of Belgium

Program

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Participants

Slawomir Breiter, Rose-Marie Baland, Sébastien Charnoz, Nick Cooper, Maryame Elmoutamid, Marc Fouchard, Valéry Lainey, Anne-Sophie Libert, Benoit Noyelles, Carl D. Murray, Stéfan Renner, Pascal Rosenblatt, Bruno Sicardy, Giovanni Valsecchi, Tim Van Hoolst, Alain Vienne, Marie Yseboodt

Program

Wednesday 15th December

10:00 am – Coffee

10:45 – S. Renner & A. Vienne Introduction

11:00 – C.D. Murray The dynamics of Saturn's F ring

11:45 – N. Cooper Astrometry and dynamics of small satellites associated with planetary rings - examples from Saturn and Jupiter

12:30 – Lunch

2:00 pm – V. Lainey Quantification of tidal dissipation in giant planets from astrometry

2:45 – S. Charnoz Origin and evolution of Saturn's inner moons

3:30 – Break

4:00 – B. Noyelles Theory of the rotation of Janus and Epimetheus

4:20 – R.-M. Baland Titan's Obliquity: an evidence of a subsurface ocean?

4:40 – M. Yseboodt Laplace plane and equilibrium obliquity: application to natural satellites and to Mercury

5:00 – A. Vienne & S. Renner Visit of the observatory

8:00 – Dinner in « L'Assiette du Marché »

Thursday 16th December

9:30 am – Coffee

10:00 – B. Sicardy The Lagrange points beyond Gascheau's value

10:45 – A. Vienne Modern ephemerides of planetary satellites

11:05 – S. Renner The evolving Neptunian ring arcs, as revealed by NACO-VLT

11:25 – P. Rosenblatt Origin of the Martian moons Phobos and Deimos **Cancelled**

11:45 – Discussions and Lunch

2:00 pm – S. Breiter The YORP effect - achievements and challenges

2:45 – Discussions

4:00 – End of the workshop

Version of 13 December 2010

Contact

For registration or further information, please contact us at [lille-ring\[at\]imcce.fr](mailto:lille-ring[at]imcce.fr).

Images from <http://ciclops.org> (credit: NASA/JPL/Space Science Institute)

Updated by Stéfan Renner

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