

# XXXIXth RENCONTRES DE MORIOND

QUANTUM INFORMATION AND DECOHERENCE IN NANOSYSTEMS

La Thuile, Aosta Valley, Italy

January 25 - February 1st, 2004

<http://www.lps.u-psud.fr/moriond04/>

We are pleased to announce the XXXIXth Rencontres de Moriond on

QUANTUM INFORMATION AND DECOHERENCE IN NANOSYSTEMS

to be held in La Thuile, Aosta Valley, Italy, from Sunday January 25th to Sunday February 1st, 2004.

The purpose of the Rencontres de Moriond is to discuss recent findings and new ideas in *Quantum Nanoelectronics*, particularly on the topics of *Quantum Information and Decoherence in nanosystems*. The meeting intends to promote fruitful collaboration between experimentalists and theorists and between various institutions by bringing together physicists in a beautiful and inspiring setting.

This event is the continuation of a series of Rencontres de Moriond sessions on the mesoscopic physics of nanoelectronic systems which have been held in Les Arcs (France) 2001, 1999, 1996 and in Villars sur Ollon (Switzerland) 1994.

La Thuile is a pleasant winter sport resort located in the Italian Alps, at 1450m alt., about 120 km from Geneva. The nearest international airports are in Geneva and Milano.

We are looking forward to seeing you in La Thuile

C. Glattli, M. Sanquer and J. Tran Thanh Van

## BULLETIN

### I - PLACE AND DATE

The XXXIX Rencontres de Moriond session devoted to QUANTUM INFORMATION AND DECOHERENCE IN NANOSYSTEMS will be held in La Thuile from Sunday January 25th to Sunday February 1st 2004. La Thuile is a pleasant winter sport resort located in the Italian Alps, at 1450 m alt., about 120 km by road from Geneva.. The nearest international airport is Geneva (Switzerland). If you arrive in Geneva International Airport, do not forget that you (especially citizens from Russia) may need a transit visa, coming through Switzerland to Italy .

*Postal address of the meeting:*

Rencontres de Moriond

Planibel Hotel - La Thuile

Aosta Valley

11016 La Thuile (Aosta), Italy

Please begin your fax with: Attention to Rencontres de Moriond.

Phone number: 39 (0)1 65 88 45 41

Fax number: 39 (0)1 65 88 45 35

### II - PURPOSE

The purpose of the Rencontres de Moriond is to discuss recent findings and new ideas in mesoscopic physics and other areas of fundamental physics in a pleasant, relaxed and intimate atmosphere. The meeting intends to promote fruitful collaboration between experimentalists and theorists and between various institutions by bringing together physicists in a beautiful and inspiring setting.

### III - SCIENTIFIC ORGANIZATION

#### 1. Program

The topics which will be discussed include :

- 1) Quantum Coherence and Decoherence Scheme in Nanosystems
- 2) Quantum Entanglement and Information Processing with Mesoscopic Systems
- 3) Quantum Noise Measurements, Full Counting Statistics, Quantum Detection.
- 4) Quantum Transport in Molecular and Atomic Scale Systems
- 5) Hybrid Systems like Normal Metal-superconductor, Ferromagnetic Metal-superconductor, Metal-fractional Quantum Hall or Metal-Luttinger.
- 6) Correlated systems : Kondo, "0.7 plateau" in QPCs, Luttinger liquids and Dots.
- 7) Cross Disciplinary Talks

The detailed program of the meeting will be established according to the latest experimental and theoretical results at the time of the meeting.

#### 2. Organization:

*International Advisory Committee:*

***M. Büttiker (Geneva), L. Glazman (Minnesota), C. Lambert (Lancaster)  
J. Van ruitenbeek (Leiden), G. Schon (Karlsruhe), U. Sivan (Haifa),  
Y. Gefen (Weizmann), G. Wendin (Goteborg).***

*Program Committee*

***C. Glattli (Saclay, France), T. Martin (Marseille, France), Montambaux (Orsay, France), B. Pannetier (Grenoble, France), M. Sanquer (Grenoble, France)  
J. Tran Thanh Van (Orsay, France)***

*Main organizers*

***M. Sanquer (CEA Grenoble, France), C. Glattli (CEA Saclay and ENS Paris), France***

#### 3. Contributions

If you wish to present new results in the framework of the program, please send a title and an abstract using the template [abstract.tex](#) to the main organizers as soon as possible and by November 15th, 2003, at the latest.

***Due to the limited time available and size of the meeting, only a selected number of talks and possibly participants will be accepted. Poster sessions will be also organized.***

*For further informations please contact:*

***Christian Glattli,***

***CEN Saclay, SPEC, F-91191 Gif sur Yvette Cedex (France)***

***Phone: 33 (0)1 69 08 72 43, Fax : 33-(0)-1 69 08 87 86, email: cglattli@spec.saclay cea.fr  
and***

***LPMC, ENS, 24 rue Lhomond, F-75231 Paris cedex 05 (France)***

***Phone: 33 (0)1 44 32 25 24, email: christian.glattli@lpmc.ens.fr***

***Marc Sanquer , CEN Grenoble, DRFMC, 17 Avenue des Martyrs, F-38054 Grenoble cedex 9 (France)***

***Phone : 33-(0)-4 38 78 43 67, Fax : 33-(0)-4 38 78 50 96, e-mail : sanquer@drfmc.ceng.cea.fr***

#### 4. Proceedings:

Proceedings of the conference will be published. The deadline for contributions is May 1st 2004.

The contributors have to use the following two files to prepare the written version of their talk under LaTeX:

moriond.tex (containing the publisher's instruction: it can be used as a template)

moriond.pdf (a compiled version of moriond.tex)

moriond.sty (the style file, PLEASE DO NOT MODIFY).

If you had already downloaded the files from the web site, please replace them by these new ones.

A paper camera-ready version should be sent by May 1st 2004 to

C. Glattli  
Service de Physique de l'Etat Condensé  
CEN Saclay,  
F-91191 Gif-sur-Yvette France  
FRANCE

The final hard copy that you send must be absolutely clean and unfolded

#### IV - PRACTICAL ORGANIZATION

##### 1. Conference Dates

***The meeting will begin on Sunday January 25th 2004 at 18 h 00 and will end on Sunday February 1st, at 11 h 30.***

##### 2. Conference facilities:

The following equipment will be available: a slide projector for 5cm x 5cm slides, an overhead projector for transparencies and a projector for computer presentations. Speakers can bring their presentations on their laptops (while the compatibility of such devices has improved recently, we ask you to bring a back up copy for overhead projector).

Limited internet connections will be available from the hotel. In particular, a wireless hub will be installed.

##### 3. Conference Fee

The conference fee for participants will be 330 Euros. It will cover the cost of the copy of the proceedings and the cost of all social events.

Payment can be made:

- before the conference by bank transfer (add 22 Euros for bank fees) to Moriond bank account: Banque de Savoie, Place de l'Hotel de Ville,  
73700 Bourg St Maurice, France.

ADREMOR - Bank Code 10 548, Branch 00013, Account 00047 135 153, key 67,

Swift Code : BSAVFR2C

In this case, the transfer should clearly indicate your name to identify the payment. The corresponding voucher should imperatively be handed on the conference site.

- on the conference site by traveller's checks or personal checks in Euros to the order of "Rencontres de Moriond", handed to the secretariat upon your arrival or within the first 2 days of the workshop.

Please avoid cash payment if possible.

If you have to change money, note that the exchange rate in Les Arcs is less advantageous than in cities like Paris or Geneva.

Credit cards are not accepted.

#### 4. Accommodations

Housing will be in Hotel Planibel, La Thuile. Meals will be served in this hotel for all participants.

The hotel bill shall be paid directly to the hotel. Credit card payment (for the hotel accommodations only) can be accepted.

The cost (full board) will amount to 595 Euros (double occupancy).

It will be difficult to obtain single rooms. Only a few will be available at an additional cost of 140 Euros. Single rooms should be reserved before November 30th, 2003.

For accompanying members, the costs are as follows:

- 595 Euros per adult
- 434 Euros per child (6 -10 years old)
- 297 Euros per child (4 - 6 years old)

It will not be possible to find accommodation for your family if you have not requested it by November 30th, 2003.

**Important Notice:** Hotel reservations are made for the whole session: i.e. from the evening of Sunday, January 25th to the morning of Sunday, February 1st (including lunch before departure of the conference bus to Geneva).

Please note that the total cost of the meeting will not be reduced even in case of partial attendance.

Cancellation of hotel reservations should be made before December 15th 2003. After this date, the hotel will charge us for the entire cost and we will have to ask the participants, who cancel their attendance later, to pay for the total accommodation cost as listed above.

#### IMPORTANT NOTICE

Please note that your reply to the program committee member who sent you the invitation is not considered as a registration. Registration for your attendance to the workshop and hotel reservation will only be made on receipt of the attached registration form.

Please return your registration form as soon as possible! If it is not received by November 30th, 2003, we may not be able to get hotel reservations for you.

#### V - TRAVEL

1. From Paris to Geneva by TGV. Please note that reservations are compulsory for TGV trains.

2. From Geneva Airport to La Thuile

a). Conference bus

With the Conference buses: departure from Geneva International Airport on Sunday, January 25th: the bus will leave at 13 h 30,

Return Conference buses are scheduled to leave La Thuile on Sunday, January 25th at 12 h 30 sharp (after lunch) and will reach Geneva airport and then CERN (if requested) around 17 h 00, depending on the traffic.

b). By car

La Thuile can be easily reached by car, by the A40 highway to St Gervais, then by the E25 to Chamonix, Courmayeur and Pré Saint Didier and then turn right direction to La Thuile via Strata Statale Valle d'Aosta (10 km).

If chains are necessary, the sooner you put them on, the better.

#### IMPORTANT NOTICE

Please note that your reply to the program committee member who sent you the invitation is not considered as a registration. Registration for your attendance to the workshop and hotel reservation will only be made on receipt of the attached registration form.

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REGISTRATION FORM  
XXXIXth RENCONTRES DE MORIOND  
QUANTUM INFORMATION AND DECOHERENCE IN NANOSYSTEMS  
<http://www.lps.u-psud.fr/moriond04/>  
La Thuile, Aosta Valley, Italy  
January 25- February 1st, 2004

**Important remark: Talk requests should NOT be made through this administrative form, but sent by email to the main organizers (M. Sanquer or C. Glattli), as described in section III.3 of the bulletin.**

PLEASE INDICATE CLEARLY YOUR NAME, FIRST NAME AND COMPLETE ADDRESS OF YOUR INSTITUTION ON THIS FORM!

Mr Ms Name ..... First Name .....  
Date of birth ..... Professionnal status .....  
Nationality .....  
Is it your first attendance?.....  
Experimentalist Theorist  
Collaboration .....  
Field of interest.....  
HOME INSTITUTION ADDRESS (1) .....

.....  
.....  
Phone : .....  
Fax : .....  
E-mail : .....  
INSTITUTION MAILING ADDRESS (2).....

.....  
.....  
Phone : .....  
Fax : .....  
E-mail : .....

Which institution should appear on all the conference documents ? 1 or 2  
HOME ADDRESS : .....

.....  
.....  
Phone : .....  
Fax : .....  
Will you be accompanied :  
By your spouse : Name & First Name .....  
By your children : First Name ..... Age .....

First Name ..... Age .....

First Name ..... Age .....

If you wish to have a single room, please mention it (suppl. of 140 Euros) Yes No

If you wish to share a double room, please specify :

Smoker Non-smoker

What will be the approximate time of your arrival on Sunday January, 25th: by train ..... by car ..... by plane .....

Will you use the conference bus :

On Sunday January 25th from Geneva airport to La Thuile at 13 h 30:

No Yes Number of seats .....

On Sunday February 1st from La Thuile to Geneva at 12 h 30:

No Yes Number of seats .....

Date : .....

Signature :

Please return this registration form as soon as possible to :

Claude Barthelemy

Rencontres de Moriond

LPT - Batiment 210

Universite Paris-Sud

91405 Orsay Cedex

FRANCE

Phone : 33 (0)1 69 15 82 16

Fax : 33 1 (0)1 69 15 82 87

E-mail : moriond@th.u-psud.fr

DEADLINE FOR REGISTRATION : NOVEMBER 30TH, 2003

NO HOTEL RESERVATION WILL BE MADE WITHOUT THIS REGISTRATION FORM