



**Basic concepts in Nuclear Physics: theory, experiments and applications.**

**September 9<sup>th</sup> – 13<sup>th</sup>, 2012**

**La Rábida, Huelva (SPAIN)**

### **FIRST ANNOUNCEMENT**

Dear colleagues and friends,

This is the first announcement of the 2012 La Rábida International Scientific Meeting on Nuclear Physics: *“Basic concepts in Nuclear Physics: theory, experiments and applications”*.

The event will take place from September 8th (arrival day) to 14th (departure day), 2012 in the campus of the International University of Andalucía (UNIA) at La Rábida. This campus is fully equipped for this kind of events, providing also a very pleasant and relaxed atmosphere that favours a close contact among the participants. It includes library, lecture, access to computer services, and seminar rooms, as well as gardens and entertainment places. Residence, restaurant, and coffee services are also provided. La Rábida (province of Huelva) is within walking distance from the “Monasterio de Santa María de La Rábida”, the Franciscan monastery where Columbus took refuge in 1490. It is also close (about half an hour) to the beach and to the Doñana National Park.

The School, that will last one week, aims to provide the students and young postdocs a wide and solid education in the field of Nuclear Physics, showing in a clear and pleasant way the basic concepts of Nuclear Physics and their multiple applications in very different aspects of the human activity. This new edition follows closely the previous one, hold in 2009 (see <http://atomix.us.es/institucional/rabida/>). In the past, the Nuclear Physics Group at the University of Sevilla has organized International Summer Schools on very different topics related to Nuclear Physics. Here we present a list of titles and dates: *“The Hispalensis Lecture on Nuclear Physics: Exotic Nuclear Physics”* (2003), *“An advance Course in Modern Nuclear Physics”* (2000), *“Many-body theory of correlated fermion systems”* (1997), *“Response of the nuclear system to external forces”* (1994), *“Nuclear Physics at the Borderlines”* (1991), *“Nuclear Astrophysics”* (1988), *“Theory of Nuclear Structure and Reactions”* (1985) and *“Heavy-Ion Collisions”* (1982).

Although the lectures will constitute the main part of the meeting, an active contribution of the participants is expected with discussions and presentation of their own works. There will be some time for selected seminars, short communications, or poster sessions. In addition, we intend the lectures to be collected in a book that could be used as a reference text.

### **Topics and lecturers**

The objective of the meeting is to offer the attendance the opportunity to get in close contact with experienced researchers and hear their clear account of the nowadays state-of-the-art in some

hot topics in Nuclear Physics. The course is proposed to be divided in three main topics: theory, experiments and applications. Having in mind the time available, we have selected six speakers, four hour lecturing each one. The list of speakers and topics is as follows:

- Prof. Alberto Del Guerra. University of Pisa (Italy). Topic: *The use of Nuclear Physics and HEP Detectors in Medicine*.
- Prof. Waclaw Gudowski. KTH Royal Institute of Technology (Sweden). Topic: *Transmutation of nuclear wastes : Accelerator Driven Systems and Reactors*.
- Prof. Ruprecht Machleidt. University of Idaho (USA). Topic: *Nuclear forces*.
- Prof. Gabriel Martínez Pinedo. GSI (Germany). Topic: *Supernovae and the origin of heavy elements*.
- Prof. David J. Rowe. University of Toronto (Canada). Topic: *Fundamentals of Nuclear Models*.
- Prof. Piet Van Duppen. KU Leuven (Belgium). Topic: *Nuclear structure research using radioactive beams*.

The organizers have emphasized in the invitation letter to the lecturers the importance of interaction with young students, as well as the pedagogical character of the meeting.

### Fees

The fee is EUROS 420. It covers the participation in the meeting as well as the 6 days full board and lodging in double room (from the evening of Saturday, September 8<sup>th</sup>, to the morning of Friday, September 14<sup>th</sup>), social events, the bus Sevilla–la Rábida (round trip) and a copy of the proceedings of the School. A few number of single and handicap rooms may also be available. **Scholarships** covering board and/or accomodation will be provided in some cases. PhD students and young postdocs are encouraged to apply.

### Applications and Contact Information

The application form is already available on the web page of the Meeting, and a preliminary program will be sent as soon as possible with the second announcement.

Meeting Web Page: <http://atomix.us.es/institucional/rabida12/>

The e-mail address for correspondence is: [rabida@us.es](mailto:rabida@us.es)

### Organizing Committee

SEVILLA UNIVERSITY:

Juan A. Caballero (director), Clara E. Alonso and María Victoria Andrés.

HUELVA UNIVERSITY:

José E. García-Ramos and Francisco Pérez-Bernal.

### Advisory Committee

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