



# PhyNuBE

October 06 – 11, 2024

Oléron

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## 1<sup>st</sup> circular

The third edition of PhyNuBE of the Groupement de Recherche Resanet will take place at the **CNRS center of Oléron (France) between October 6 (arrival) and October 11 (departure)**. We propose to address two scientific topics that are nuclear astrophysics and nuclear fission.

The PhyNuBe scientific meetings are intended to gather and educate students and senior scientists around major scientific topics of our field, as well as reinforcing links between theory and experiment and encouraging cross-fertilize activities. The meeting will comprise a series of invited overview talks, oral contributions, and poster presentations.

The astrophysics part will cover quiescent and explosive burning phases of stars in which nuclear physics plays an essential role, such as massive stars, novae, x-ray bursts, or neutron star mergers. Theoretical aspects of stellar modeling, nuclear reaction rates, and spectroscopy will be covered. Experimentally, results from reaction cross-section measurements of astrophysical relevance involving neutral, charged particles and neutrinos will be presented and confronted to observations.

Concerning fission, the most relevant experimental programs for measuring fission cross sections, probabilities, fission fragment properties, and the associated emitted particles will be discussed, thus highlighting the related challenges, the solutions provided, and the main results. The advances and challenges in fission theory will also be covered by discussing the latest developments in microscopic dynamical models based on the energy density functional theory and in more phenomenological models. The various talks will also illustrate the importance of the fission process for fundamental nuclear physics, societal applications, and nuclear astrophysics.

A large amount of time will be dedicated to discussions and debates, as well as outdoor activities. Financial support for local expenses is possible on demand. Students are strongly encouraged to participate. Fees are estimated to 550 euros for a single room and 440 Euros for twin rooms with double occupancy and full board. Bus shuttles are planned to be organized from the train station of La Rochelle to the CNRS center of Oléron. Their departure on October 06 and 11<sup>th</sup> will be communicated later and will be synchronized with TGV trains from Paris.

**Submission abstract:** May 13<sup>th</sup> to July 7<sup>th</sup>

**Notification of acceptance of abstracts:** July 16<sup>th</sup>

**Registration deadline:** August, 31<sup>st</sup>

More details on the web site: <https://indico.in2p3.fr/event/32007/>

The PhyNuBE3 meeting is organized under the umbrella of the GDR Resanet by:  
F. Hammache, B. Jurado, D. Lacroix, A. Lemasson, G. Scamps and O. Sorlin.



**GANIL**





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## Speakers on Astrophysics

- Aurélie Bonhomme (IPHC, Strasbourg, France)
- Arthur Choplin (ULB, Bruxelles Belgium)
- Nicolas De Séreville (IJClab, Orsay, France)
- Thibaut Dumont (IPHC, Strasbourg, France)
- Chloé Fougères (CEA/DAM, Bruyères-le-Châtel, France)
- Stéphane Goriely (ULB, Bruxelles Belgium)
- Fairouz Hammache (IJCLab, Orsay, France)
- Marcel Heine (IPHC, Strasbourg, France)
- Guillaume Hupin (IJClab, Orsay, France)
- Jose Jordi (UPC, Barcelona, Spain)
- Iolanda Matea (IJCLab, Orsay, France)
- Sara Naimi (IJCLab, Orsay, France)

## Speakers on Fission

- Audrey Chatillon (CEA/DAM, Bruyères-le-Châtel, France)
- Beatriz Jurado (LP2I, Bordeaux, France)
- Nathalie Pillet (CEA/DAM, Bruyères-le-Châtel, France)
- Diego Ramos (GANIL, Caen, France)
- Luis Robledo (University of Madrid, Spain)
- David Regnier (CEA/DAM, Bruyères-le-Châtel, France)
- Guillaume Scamps (L2I Toulouse, France)
- Christelle Schmitt (IPHC, Strasbourg, France)
- Pierre Tamagno (CEA, Cadarache, France)
- Jon Wilson (IJClab, Orsay, France)
- Boguslaw Wloch (LP2I, Bordeaux, France)