



Cabourg, France, August 27 – September 2, 2017

Registration as from March 1, 2017 through the Euroschool website www.euroschoolonexoticbeams.be

FIRST CIRCULAR

The production and use of energetic radioactive beams is a rapidly developing field in nuclear physics. Pioneering experiments are taking place, dedicated facilities are being commissioned and new facilities are planned. The aim of the EUROSCHOOL ON EXOTIC BEAMS is to introduce PhD students and young post-doctoral researchers to this field and also present recent experimental and theoretical advances. Each school consists of a number of lecture courses given by specialists in the field, starting from a basic level but also including more advanced seminars. Students are invited to contribute to the school by presenting a poster and participating in practical sessions.

The Euroschool is an annual event initially funded by the EU and now supported by several funding agencies and large research facilities in Europe. The school started off based at Leuven, Belgium in 1993; since 2000 it has travelled around and was organized in various European cities (Jyväskylä - 2001, Les Houches – 2002, Valencia - 2003, Surrey - 2004, Mainz - 2005, Trento - 2006, Houlgate – 2007, Piaski – 2008, Leuven 2009, Santiago de Compostela – 2010, Jyväskylä – 2011, Athens – 2012, Dubna – 2013, Padova – 2014, Dubrovnik – 2015, Mainz - 2016).

SCHOOL BACKGROUND

More than 3000 different atomic nuclei have been synthesized in the laboratory but these represent only a fraction of all possible nuclear species that are expected to exist in nature. The shortest-lived nuclei far from stability are labeled exotic because they cannot be found naturally occurring on Earth, and they are also difficult to produce experimentally. Even though they occur at the femtometer scale, exotic nuclei not only provide answers to fundamental scientific questions on the origin of the elements but they are also relevant for macroscopic applications in many areas: low-carbon energy generation; medical diagnosis and treatment; analysis for environmental, engineering, biomedical, geological and cultural studies; etc. The structure of nuclei far from stability can be investigated, in particular, by using radioactive ion beams (RIBs). The development of the first generation of RIB facilities has already opened up new possibilities to probe exotic nuclei. Future advances and access to new regions of the nuclear chart necessitate the advent of new RIB research infrastructure. Key questions addressed by experimental programs also require developing advanced theoretical methods, often coupled to innovative and high-performance computer simulation techniques that also find applications in other areas of science.

The **2017** edition of the EUROSCHOOL ON EXOTIC BEAMS will be organized together with GANIL in **Cabourg, France**, at the Sweet Home residence and will cover general topics on the physics of exotic

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nuclei, experimental and theoretical studies of nuclear structure and reaction dynamics, nuclear astrophysics and interdisciplinary applications.

TOPICS and LECTURERS

- Epistemology: **Vincent Bontems**
- Ground-state properties: **Bradley Cheal**
- Ab-initio theories: **Thomas Duguet**
- Fission: **Cedric Simenel**
- Nuclear shapes: **Andreas Görger**
- Nuclear astrophysics, experimental aspects: **François de Oliveira**
- Nuclear data for Astrophysics: **Stéphane Goriely**
- Neutrinos: **Thierry Lasserre**

A more detailed program will follow in due course.

VENUE

The EURO SCHOOL ON EXOTIC BEAMS 2017 will be held at the “Sweet Home Residence” in Cabourg, France, www.sweethome-cabourg.fr. There will be accommodation for all the students and lecturers in this residence.

Cabourg is a commune in the Calvados department in the Normandy region of France on the coast of the English Channel, at the mouth of the river Dives. The back country is a plain, favorable to the culture of cereal. The town sits on the Côte Fleurie (Flowery Coast) and is a very popular destination in summer. Cabourg is under the influence of an oceanic climate, with fresh summers and very mild winters and owes its popularity to three things: the beaches, the interesting architecture and lively atmosphere in the town centre.

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Arriving to Cabourg by plane

The nearest international airports are those of Paris Charles-de-Gaulle (240 km), Paris Orly (230 km) and Paris Beauvais (210 km). From the Paris airports to Caen you can easily travel by train or shuttle-bus. The distance between Caen Centre and Cabourg is of 30 km. From Caen you can take the “Green Line” bus n° 20 to Cabourg (4 euro) or a taxi (approx. 45 euro).

Other national airports nearby are those of Caen Carpiquet (40 km), Deauville (30 km), Le Havre-Octeville (80 km). From there you can take a taxi (approx. 80 euro)

Arriving to Cabourg by train

The nearest main railway station is in Caen, at 30 km from Cabourg. From there you can take a bus to Cabourg, the “Green Line” bus n° 20 (4 euro) or a taxi (approx. 45 euro).

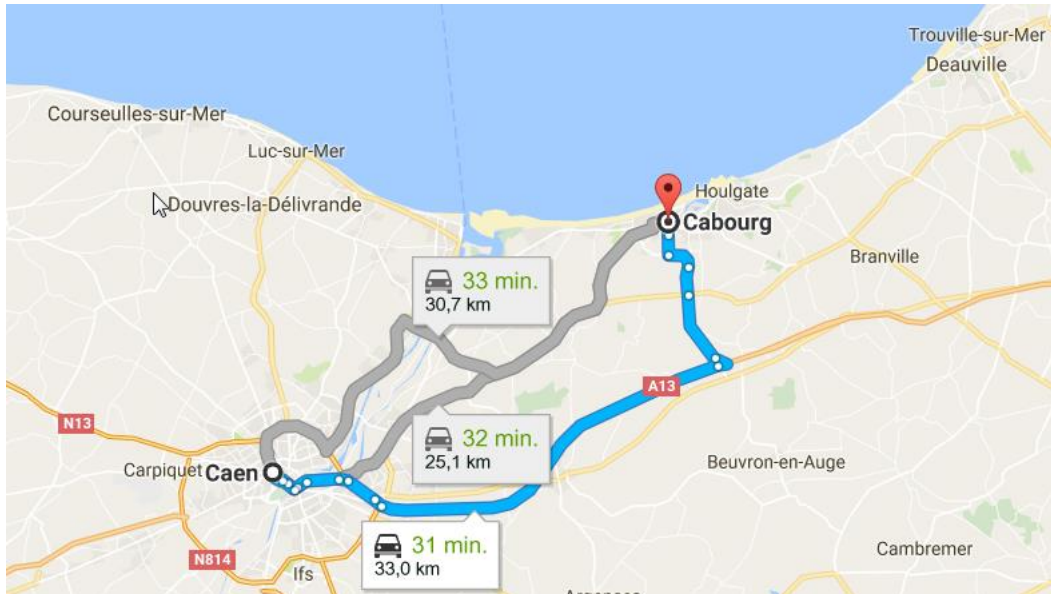
There is a little railway station in Cabourg. Only few trains run per day between Dives-Cabourg station and Deauville-Trouville station. You can find all timetables for this line from Paris to Dives-Cabourg, on this website : <http://www.voyages-sncf.com/>. From this railway station you can take a taxi.

Arriving to Cabourg by boat

From the UK, you can easily reach the Normandy Coast by ferry. The price comparison websites aferry.co.uk and directferries.co.uk have a search function to compare the available ferries from all operators at your chosen port between the UK and France.

You will arrive at Ouistreham Port. From there you can take a taxi to Cabourg (approx. 45 euro).

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REGISTRATION

As from March 1, 2017

A link to the online application form will be available from March 1 onwards at the Euroscool website www.euroschoolonexoticbeams.be

The deadline for applications is April 30th.

In order to fulfill the goals of the School, the total number of participants has been limited to 70. Participants will be selected from the pool of applicants by the Board of Directors (BoD).

You will receive a confirmation about your acceptance to the School. For some of you it might be necessary to obtain a visa to enter the country. Please start with this procedure as soon as you have received the confirmation of your acceptance. Invitation letters can be obtained from the Euroscool secretary at Euroscool@kuleuven.be.

REGISTRATION FEE

Your registration will only become final after payment of the registration fee, which amounts to 250 Euro per student. Payment instructions can be found on the Euroscool website and will also be mentioned in your acceptance email. This fee **includes** lodging in double rooms (bed linen and towels included) with full board (breakfast, lunch and dinner) during the whole school, starting with the welcome reception and dinner on Sunday evening, August 27 and closing the week with breakfast on

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Saturday, September 2. During your stay, you will also have access to the infrastructure of the residence (pool, mini-golf, pétanque, bar...). The excursion during that week is also included. All other expenses will have to be borne by you.

A limited number of travel grants are available after motivated request. In order to apply, please fill in the application form available on the website.

Scientific Committee of the Euroschool (BoD):

- Dolores Cortina-Gil, Universidade de Santiago de Compostela, Spain
- Hans Fynbo, Aarhus University, Denmark
- Héloïse Goutte, GANIL, Caen, France
- Sotirios Harissopulos, NCSR “Demokritos”, Athens, Greece
- Ari Jokinen, University of Jyväskylä, Finland
- Silvia M. Lenzi, University of Padova and INFN, Italy
- Gerda Neyens, KU Leuven, Belgium
- Marek Pfützner, University of Warsaw, Poland
- Andrey Popeko, JINR, Dubna, Russia
- Christoph Scheidenberger, GSI, Darmstadt, Germany (Chair)
- Dario Vretenar, University of Zagreb, Croatia
- Fabienne Vanalphen, KU Leuven, Belgium (Secretary)

The email address for the School is: euroschool@kuleuven.be

We look forward to meeting you in Cabourg!