



XVIII International Symposium on NUCLEI IN THE COSMOS

Palau de Congressos, Girona (Catalonia, Spain)

June 15 – 20, 2025

FIRST CIRCULAR

Nuclei in the Cosmos (NIC) is a biennial series of Nuclear Astrophysics conferences. These interdisciplinary events gather together several hundred nuclear physicists, astrophysicists and cosmochemists, to review, share, and discuss recent advances (and challenges) in this field, covering broad areas, from the origin of the elements to the nuclear processes that power stars and their evolution. As such, it has become the most important international meeting in Nuclear Astrophysics. Prior to each edition of the Conference, a School for graduate students and early career researchers is also held.

The series began in 1990, with the conference organized by Heinz Oberhummer and Claus Rolfs in Baden bei Wien, Austria, and changes location for every edition. To date, 17 editions of NIC have taken place in different towns, countries, and continents:

1990 NIC I	Baden bei Wien, Austria
1992 NIC II	Karlsruhe, Germany
1994 NIC III	Gran Sasso, Italy
1996 NIC IV	Notre Dame, USA
1998 NIC V	Volos, Greece
2000 NIC VI	Aarhus, Denmark
2002 NIC VII	Fuji-Yushida, Japan
2004 NIC VIII	Vancouver, Canada
2006 NIC IX	CERN, Switzerland
2008 NIC X	Mackinac Island, USA
2010 NIC XI	Heidelberg, Germany

2012 NIC XII Cairns, Australia
2014 NIC XIII Debrecen, Hungary
2016 NIC XIV Niigata, Japan
2018 NIC XV Gran Sasso, Italy
2021 NIC XVI Chengdu, China (online)
2023 NIC XVII Daejeon, South Korea

VENUE

NIC XVIII will take place in Summer 2025 (**June 15 – 20**) at the **Palau de Congressos**, Girona (Catalonia, Spain), a conference center conveniently located near the city center:

Palau de Congressos de Girona
Pg. De la Devesa, 35
17001 Girona (Catalonia, Spain)

<https://gironacongressos.girona.cat/eng/index.php>



Girona (Population: 100 000 inhabitants) is a city with a rich history (*Gerunda*, a Roman settlement, was established around 75 AD). It has a mild climate, unique gastronomy, and is well connected, with two airports nearby (Girona and Barcelona-El Prat) and a high-speed train connection to Barcelona (37 min.).



Girona, site of NIC XVIII.

TOPICS AND FORMAT OF NIC XVIII

The scientific program of NIC XVIII will cover recent advances and future directions and perspectives in all areas of interest for Nuclear Astrophysics, including, among others:

- Cosmology, the early universe and Big Bang nucleosynthesis
- Stellar abundances: spectroscopic vs. meteoritic determinations; presolar grains
- Nuclear reactions
- Neutrinos
- Stellar evolution (I): hydrostatic phases –AGB stars; s- and i-process
- Stellar evolution (II): explosive nucleosynthesis –Novae, X-Ray Bursts, Supernovae, Neutron star mergers; r- and p-process
- High-density matter; EOS of neutron stars
- Atomic and nuclear inputs for Astrophysics
- Galactic chemical evolution
- New facilities and experimental techniques in Nuclear Astrophysics

NIC XVIII will follow the spirit of all previous NIC meetings. The program will consist of plenary talks only (no parallel sessions), with a blend of invited review talks and selected oral and poster contributions, covering all areas of interest in experimental, observational and theoretical Nuclear Astrophysics.

NIC XVIII will be an in-person only event. All sessions will be recorded and will become available for the registered participants after the symposium (no proceedings are being planned).

NIC SCHOOL

NIC XVIII will be preceded by the usual **NIC School**, which will be held on **June 9 – 13, 2025** (the week before the NIC Symposium) at the **Royal Academy of Sciences and Arts of Barcelona**:

Reial Acadèmia de Ciències i Arts de Barcelona

La Rambla, 115

08001 Barcelona (Catalonia, Spain)

<https://www.racab.cat/?lang=en>



The NIC School, especially aimed at PhD students and early career researchers, will cover a rich variety of Nuclear Astrophysics topics, providing basic background before attending the NIC Symposium. More details will be given in the *Second Circular* (and in a specific circular).

COMMITTEES

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WEBPAGE AND CONTACT

More information is available on the Conference webpage:

<https://indico.icc.ub.edu/event/341/>

Information on registration fees, support, abstract submission, and accommodation will be provided in the *Second Circular*.

Inquiries related to NIC XVIII should be sent to the email address: nic2025@ieec.cat

IMPORTANT DATES

Second Circular: December 2024

Registration: (Early Bird) January 10 – March 31

(Regular) up to May 1

Abstract submission: January 10 – March 1

We look forward to welcoming you all at NIC XVIII!

Sincerely yours, Jordi José, Chair
 Laura Tolós, Vice-Chair
 On behalf of the *Local Organizing Committee* of NIC XVIII