Nuclear Physics in Astrophysics XI (NPA XI) conference
Dresden, Germany, 15-20 September 2024

https://events.hifis.net/e/NPA-XI

First circular, dated 26 January 2024

The 11th edition of the Nuclear Physics in Astrophysics conference series will take place in Dresden, Germany, from 15.-20.09.2024. The conference is organized under the auspices of the Nuclear Physics Board of the European Physical Society.

Scientific scope

The Nuclear Physics in Astrophysics XI (NPA XI) conference addresses the field of nuclear astrophysics as a whole. Scientific topics include:

- Cosmology and Big Bang
- Early stars and galaxies
- Hydrostatic stellar burning
- Explosive processes, jets, γ-ray bursts
- Cosmochemistry
- p-, ν-, rp-process nucleosynthesis
- Neutron stars, mergers, gravitational waves
- Astrophysical s-process
- Astrophysical r- and i-processes
- New tools and techniques, data formats, and open access

Important dates

26.01.2024	First Circular
26.01.2024	Abstract submission opens
15.03.2024	Deadline for abstract submission
15.04.2024	Notification of acceptance of abstracts for oral / poster presentation
03.05.2024	Deadline for applications for financial support
15.05.2024	Deadline for early bird conference registration

Call for contributions

Abstracts of scientific contributions can be submitted via the conference web page, clicking on the tab "abstract submission". Abstract submission is already open and closes on 15.03.2024, see Important Dates.

The selection of abstracts for plenary oral presentations or poster presentations will be based on the advice of the conference's Scientific Advisory Board.

In order to foster interdisciplinary discussions, only plenary sessions are foreseen, with a mix of experimental and theoretical talks in each session. The conference will include a "wine and cheese" poster viewing reception. Posters will be displayed for the duration of the meeting in the foyer of the meeting room. Selected posters will in addition get a chance for a 1-minute flash presentation in one of the plenary sessions.

Scientific Advisory Board

Giuseppina Battaglia, Instituto de Astrofisica de Canarias, Spain
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Hendrik Schatz, Michigan State University, USA
Thomas Siegert, Universität Würzburg, Germany
Rodolfo Smiljanic, Nicolaus Copernicus Astronomical Center, Warsaw, Poland
Giuseppe Verde, INFN Catania, Italy

Confirmed Invited Speakers

Philip Adsley, Texas A&M, USA: Indirect experimental approaches to charged particle reactions in astrophysics.
Anish Amarsi, Uppsala University, Sweden: Stellar abundances with 3D model atmospheres
Almudena Arcones, TU Darmstadt, Germany: Origin of the heavy elements - theory status
Carlo Bruno, University of Edinburgh, UK: Reactions with stored nuclei
Kelly Chipps, ORNL, USA: Nuclear Astrophysics at FRIB
Artur Choplin, Universite Libre de Bruxelles, Belgium: Impact of nuclear physics parameters on i-process simulations in AGB stars
Richard deBoer, University of Notre Dame, USA: Neutron sources in stars
Tim Dietrich, University of Potsdam, Germany: Multi-messenger constraints on the neutron-star equation of state and the Hubble constant
Cesar Domingo Pardo, CSIC University of Valencia, Spain: Neutron capture reaction rates for s-process nucleosynthesis
Anthea Fantina, GANIL, France: Nuclear physics constraints on the equation of state
Anna Frebel, MIT, USA: Galactic Archaeology
Stephan Fritzsche, Helmholtz Institute Jena, Germany: Atomic physics data for kilonova modelling
Jan Glorius, GSI, Germany: Study of proton-induced reactions at the ESR
Sébastien Guillot, IRAP Toulouse, France: Recent results from NICER
Brynmor Haskell, Nicolaus Copernicus Astronomical Center Warsaw, Poland: Probing high density physics in the gravitational wave astronomy era
Michèle Heurs, Hannover, Germany: Gravitational Wave Astronomy
Heshani Jayatissa, Los Alamos National Lab, USA: Stellar nucleosynthesis in explosive environments
Beatriz Jurado, LP2I, Bordeaux, France: Surrogate-reaction approach for studying fission of stored ion beams for astrophysics
Gavin Lotay, University of Surrey, UK: Nuclear physics and X-ray bursts
Sébastien Martinet, Université Libre de Bruxelles, Belgium: Evolution of stars
Denise Piatti, INFN Padova, Italy: The $^{12,13}C(p,\gamma)^{13,14}N$ reactions
Marco Pignatari, Konkoly CSFK, Hungary: Impact of stellar yields on galactic chemical evolution
David Rapagnani, University of Naples, Italy: Nuclear astrophysics at LUNA and LUNA-MV
Stephan Rosswog, University of Hamburg, Germany: Neutron star mergers and nucleosynthesis
Asa Skuladottir, Florence, Italy: Abundance observations and neutron capture nucleosynthesis
Else Starkenburg, Kapteyn Astronomical Institute, Netherlands: Chemically Pristine Stars in the Milky Way
Reto Trappitsch, EPFL Lausanne, Switzerland: Signatures of stellar nucleosynthesis in meteorites
John Tomsick, Space Sciences Laboratory, Berkeley, USA: Compton Spectrometer and Imager – science case and plans
Sophie Van Eck, Université Libre de Bruxelles, Belgium: Carbon enhanced metal poor stars
Meng Wang, IMP Lanzhou, China: Bρ-defined Isochronous Mass Spectrometry at the CSRe

Mathis Wiedeking, University of the Witwatersrand, South Africa: Extracting model-independent nuclear level densities away from stability
Matthew Williams, University of Surrey, UK: Nuclear astrophysics at TRIUMF

In addition, a handful of last-minute invitations may be issued in the spring to cover important breaking new scientific results.

Venue

The conference will take place on the campus of Technische Universität Dresden (TU Dresden), close to the center of Dresden.

Dresden, Germany, is a city of 500,000 and the regional capital of Saxony. It is known for its historically reconstructed city center and the scenic surroundings called “Saxon Switzerland”.

Dresden can be reached by air (international airport Dresden with many connections with changeover in Frankfurt or Munich), by train from Berlin or Frankfurt, or by long-range bus from many cities in Europe.

Registration

The conference registration will open in February, 2024. The deadline for early bird registration will close on 15 May, 2024.

For individual members of the European Physical Society (EPS) and of recognized national physical societies, the early bird registration fee is 400 €. For PhD students and young postdocs (PhD+2), a reduced fee of 150 € is applied for early bird registration. Full details on the fee structure and reductions are available on the conference web site.

Financial support is available for selected participants and may be requested by contacting the organizers.

European Physics Journal A Topical Collection “Nuclear Physics in Astrophysics”

On the occasion of the conference, the European Physical Journal A will open a Topical Collection called “Nuclear Physics in Astrophysics”, lead editor David Blaschke (University of Wroclaw), under a closed call for contributions. Selected conference participants and other eminent scientists will be invited by the Topical Collection editor to contribute.

We look forward to welcoming you to Dresden!

26.01.2024

Local Organizing Committee

Daniel Bemmerer, Axel Boeltzig, Eliana Masha, Konrad Schmidt, Anton Wallner (Helmholtz-Zentrum Dresden-Rossendorf / HZDR, Germany)
Marie Pichotta, Kai Zuber (TU Dresden, Germany)
David Blaschke, Oleksii Ivanytskyi (University of Wroclaw, Poland)
Cristina Chiappini, Matthias Steffen (Leibniz-Institut für Astrophysik Potsdam, Germany)
Jenny Feige (Museum für Naturkunde Berlin, Germany)
Günther Hasinger, Maël Gonin (Deutsches Zentrum für Astrophysik Görlitz, Germany)

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Conference web page: https://events.hifis.net/e/NPA-XI