

Joint IAEA–Consultative Committee for Ionizing Radiation Workshop on Neutron Beams at High Energy: Applications and Metrology

IAEA Headquarters Vienna, Austria

7 - 8 July 2025

Ref. No.: EVT2402522

Information Sheet

Introduction

High energy neutrons are of high relevance in many fields, as they are produced both naturally by galactic cosmic rays and solar particle events interacting with matter such as in spacecraft or the atmosphere, and also in and around man-made high energy accelerator facilities (for therapy and research). The neutron energy spectra in both cases show similar features: lower energy neutrons peaking around 1 MeV as evaporation products; and high energy neutrons peaking around 100 MeV originating as knock-on neutrons in peripheral collisions or in charge exchange reactions. Solar flares can produce neutrons with energies ranging up to several GeV.

Objectives

Any reliable measurement of such fields requires instrumentation which has traceability to internationally recognised reference standards. There are quite a number of facilities worldwide suitable for fast neutron metrology and applications up to around 20 MeV, with well-established reference standards and procedures for metrology and dosimetry. Above 20 MeV only a few facilities exist, and metrology is more challenging as a consequence of both fundamental physics and technological complexity. Nevertheless, there is growing interest and expressed needs for high energy neutron metrology exceeding 100 MeV. This topic will be addressed during this meeting.

Target Audience

The present workshop aims to bring together stakeholders with interests in high energy neutron fields, for example and not limited to, space and aviation applications, radiobiology, high energy accelerator facilities (both hadron therapy and research), fast and high energy neutron facilities, metrology, reference standards, dosimetry, and instrumentation.

Working Language(s)

English

Topics

Day 1:

- Health and Radiation Protection; Science and Technology
- Health and Radiation Protection 1: Aviation and space
- Health and Radiation Protection 2: Accelerator facilities
- Health and Radiation Protection 3: Therapy and radiobiology

Day 2:

- Neutron metrology, high energy neutron facilities, and reference standards
- Neutron metrology
- High energy neutron facilities (present and planned)
- Reference standards (instrumentation and cross sections)

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<u>https://intouchplus.iaea.org</u>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **4 May 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<u>https://intouchplus.iaea.org</u>):

- Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
- Persons without an existing NUCLEUS account can register <u>here.</u>

2. Once signed in, prospective participants can use the InTouch+ platform to:

- Complete or update their personal details under 'Complete Profile' and upload the relevant supporting documents;
- Search for the relevant event under the 'My Eligible Events' tab;
- Select the Member State or invited organization they want to represent from the drop-down menu entitled 'Designating Authority' (if an invited organization is not listed, please contact <u>InTouchPlus.Contact-Point@iaea.org</u>);
- If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
- Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
- Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **4 May 2025**.

For additional information on how to apply for an event, please refer to the <u>InTouch+ Help</u> page. Any other issues or queries related to InTouch+ can be sent to <u>InTouchPlus.Contact-Point@iaea.org</u>.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the <u>Agency's Personal Data and Privacy Policy</u> and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the <u>Data</u> <u>Processing Notice</u> concerning the IAEA InTouch+ platform.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed in above Topics Section.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 1 page (including figures and tables) and should not exceed 500 words. It should be sent electronically to Mr Roberto Mario Capote Noy, the Scientific Secretary of the event (see contact details in below Visas Section), not later than **4 May 2025**. Authors will be notified of the acceptance of their proposed presentations by 4 May 2025.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the abstract, together with the Form for Submission of a Paper (Form B), to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA not later than **4 May 2025**.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **4 May 2025**.

Venue

The event will be held at the Vienna International Centre (VIC) where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page: https://www.iaea.org/events.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

Additional Information

For additional information, abstract submission and registration, please visit the meeting webpage: <u>https://conferences.iaea.org/event/410/</u>

Organization

Scientific Secretary

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.