



Technical Meeting on Advances in Compact Accelerator Based Neutron Sources and Their Applications

IAEA Headquarters, Vienna, Austria

30 November – 3 December 2026

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Information Sheet

Introduction

Neutron sources play a pivotal role in society by providing neutrons as a powerful tool for scientific research and a broad range of applications. In recent years, a new generation of low-energy neutron sources, collectively known as Compact Accelerator-Based Neutron Sources (CANS), has emerged. This development has been enabled by significant advances in low-energy accelerator technologies as well as in neutron production targets. Notable examples include the renewed interest in accelerator-based Boron Neutron Capture Therapy (BNCT), as well as in-situ non-destructive testing using portable accelerator-based neutron sources. These developments highlight the growing relevance of CANS across medicine, industry, and applied research.

Latest developments in CANS technologies now offer neutron intensities comparable to those of low- and medium-flux research reactors. In addition, CANS are attractive in terms of both capital and operational costs and well as safety and security challenges, as they are free from criticality accidents and do not require nuclear fuel – what makes them also neutral with respect to nuclear proliferation concerns. This characteristic significantly lowers institutional and regulatory barriers and opens new opportunities for neutron-based research and a wide range of applications.

These sources are versatile, flexible, and upgradable, and can operate in both steady-state and pulsed modes. New methods, including modern instrumentation, data processing and analysis techniques, using

both continuous and pulsed structure of the neutron sources opens up new fields of research opportunities and applications.

The IAEA Physics Section supports Member States in the development and promotion of nuclear applications and related capacity-building activities in areas such as materials research, energy R&D, environment, medicine, cultural heritage, forensics, and controlled fusion. In this context, the Section has organized numerous activities also related to CANS technologies and their applications and has made available a variety of resources, including publications, databases, and guidance documents.

In addition, the Section operates the Nuclear Science and Instrumentation Laboratory (NSIL) in Seibersdorf, Austria. NSIL is expanding its neutron research, application demonstration, and capacity-building capabilities through the operation of the recently established Neutron Science Facility (NSF) and the planned Ion Beam Facility (IBF), including neutron production capability. The NSF is based on deuterium–deuterium and deuterium–tritium neutron generators and supports, among other activities, instrumentation development and hands-on training opportunities for interested users.

Objectives

The purpose of the event is to provide a platform for Member States to share recent developments, experiences and best practices related to novel and emerging uses of compact accelerator-based neutron sources (CANS), including technological developments in accelerator physics, neutron target and neutron moderator technology, neutron beam delivery systems, state-of-the-art instrument developments, advanced data processing and analysis. The meeting will also explore innovative applications that go beyond traditional areas and will include advanced materials research, the provision of support to clean energy systems and other modern industries. Its overarching objective is to enhance the contribution of CANS to the socioeconomic development of Member States by expanding opportunities for neutron beam applications.

Target Audience

The meeting is intended for managers, researchers and users of both operating and planned accelerator-based neutron sources, including technology developers and providers representing both public and private sectors.

Member States are invited to designate one or more participants for this meeting. Member States are strongly encouraged to identify suitable women participants.

Working Language(s)

The working language of the meeting will be English.

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 (<https://intouchplus.iaea.org>) 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 **7 August 2026**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - 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 [here](#).
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 InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether a paper is being submitted and complete the relevant information;
 - 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 **7 August 2026**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

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 [Agency’s Personal Data and Privacy Policy](#) 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 [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Papers and Presentations

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

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 and also will be used as one of the criteria in grant allocation process for eligible participants. The abstract should be in A4 page format, should extend to no more than 1 pages (including figures and tables) and should not exceed 400 words. It should be uploaded under “Supporting Documents” in the InTouch+ Application Form tab and sent electronically to Valentina Semkova, the Scientific Secretary of the event (see contact details below), not later than **7 August 2026**. Authors will be notified of the acceptance of their proposed presentations by **21 August 2026**.

Submission of a paper should be confirmed, together with the submission of the main application via the InTouch+ platform, by **7 August 2026**.

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, with the priority given to those with accepted contributions. 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 by submitting an abstract and delivering an oral presentation during the event.

The application for financial support should be made, together with the submission of the application, by **7 August 2026**.

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:

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.

IAEA Contacts

Scientific Secretary:

Ms Valentina Semkova

Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 24215

Fax: +43 1 26007

Email: v.semkova@iaea.org

Administrative Secretary:

Ruben GOMEZ ZARAGOZA

Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 26393

Fax: +43 1 26007

Email: R.Gomez-Zaragoza@iaea.org

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

Event Web Page

Please visit the following IAEA web page regularly for new information regarding this event:

www.iaea.org/events/EVT2504021