



Technical Meeting on Modern Neutron Detection

**IAEA Headquarters
Vienna, Austria**

4–8 September 2017

Announcement

INTRODUCTION

The International Atomic Energy Agency (IAEA) will organize a Technical Meeting on Modern Neutron Detection from 4 to 8 September 2017 in Vienna, Austria. The meeting will be held at the IAEA's Headquarters in the Vienna International Centre.

BACKGROUND

There have been a number of developments in the field of neutron detection in the last decade, brought about in part by the helium-3 shortage and the growth in demand for neutron detectors for security purposes. The combination of new detector types and non-traditional neutron fields in new facilities (e.g. spallation, fusion) brings new opportunities and challenges for validation and benchmarking, as well as the potential for improved diagnostic instrumentation. Increases in the rates and quantities of data generated have led to greater demands on signal processing and data handling capabilities. Developments in the modelling of detector responses have also improved the ability to design better detector systems. Finally, the field of neutron dosimetry is not uniform internationally, with inconsistent standards for different regulatory frameworks.

OBJECTIVES

The purpose of the meeting is to bring together experts from various fields in which neutron detection is used, and to initiate the development of an IAEA report that will cover the current state of the art in neutron detection and provide a 5–10 year outlook on technologies in this field.

The meeting outputs will include individual papers from the contributors, which will be incorporated into an IAEA report covering the topics discussed.

TOPICS

The meeting will cover the following topics:

1. An overview of the physical fundamentals of materials and detector types for neutron detection.
2. An overview of spectroscopic methods, including the use of detector technologies for the validation and benchmarking of calculations and for improved diagnostics at new facilities. This would include examining the use of current 'unfolding' methods and newly developed codes.
3. An overview of simulations, algorithms and signal handling, their improvement due to advances in microelectronics and computing, and consequent improvement of traditional data processing and handling techniques.
4. An overview of the standards for neutron dosimetry and the opportunity to compare methodologies used for reference doses.

MEETING FORMAT

The meeting will be organized around four topics, listed above, where discussion and action are urgently needed. The agenda will be structured with a balance of invited talks and discussion time sufficient to facilitate reaching conclusions. The meeting will end with summary talks on each of the topics. In preparation for the meeting, it is expected that speakers will target their work and their presentations to address the meeting's aims. The International Programme Advisory Committee is responsible for planning the technical programme and documenting the conclusion.

Language

The working language of the meeting is English; no interpretation will be provided.

Participation

About 25 experts from IAEA Member States and international organizations are expected to attend the meeting. Participants should be actively involved in the topics of the meeting. Participants will be accepted only if their duly completed Participation Form (Form A) is transmitted to the IAEA through their appropriate governmental authority by **10 July 2017**.

ABSTRACTS

Participants wishing to make a contribution at the meeting are requested to submit a one-page electronic abstract.

Abstracts should be submitted to the email address Physics@iaea.org by **10 July 2017**. Abstracts should be prepared according to the following instructions:

- 1) Page size: A4 (297 mm by 210 mm) — vertical orientation
- 2) Margins 25 mm all around
- 3) Layout:
 - Title: single-spaced, 14-point size, Times New Roman Font (TNR), **bold**
 - Authors: single-spaced, 12-point size, TNR Font
 - Affiliation: single-spaced, 12-point size, TNR Font, *italic*
 - Text: 1.5 spaced, 12-point size, TNR Font
 - Length: one page

Abstracts can be text only or contain figures and graphics. The abstracts must contain the authors' names, affiliations and email addresses. Acceptable file formats are Microsoft Word (preferred) or PDF. The filename should be in the following format: "lastname.i.n.i.t.i.a.l.s.-acronym of the topic.filetype". Authors must make sure that the files do not include copyrighted fonts or any other impediments for reproduction. The abstracts will be reviewed and selected by the International Programme Advisory Committee. Authors will be informed of the acceptance of their contributions via email by **24 July 2017**. A Book of Abstracts will be compiled for distribution during the meeting.

PAPERS

It is planned to publish a summary of the meeting together with an overview of the technologies discussed as an IAEA publication.

Electronic Proceedings

Electronic proceedings of the meeting, consisting of slides or posters, will be made available to all participants on an open website.

EXPENDITURES AND FINANCIAL SUPPORT

The costs for the organization of the meeting are borne by the IAEA. No registration fee will be charged to participants. As a general rule, the IAEA does not pay travel and accommodation expenses for meeting participants. However, limited funds are available to help meet the cost of attendance of a few selected specialists, primarily those from developing countries with low economic resources. Generally, not more than one grant will be awarded to any one country. The grants awarded will be in the form of lump sums usually covering part of the cost of attendance.

Governments wishing to apply for a grant on behalf of one of their specialists should address specific requests to the Scientific Secretary responsible for this meeting to this effect. Governments should ensure that applications for grants are:

- 1) received by the IAEA by **10 July 2017**,
- 2) accompanied by a duly completed and signed Grant Application Form (Form C) including the abstract of the paper to be presented; and
- 3) accompanied by an estimate from an official travel agency of the travel cost.

Applications that do not comply with the conditions mentioned above will not be considered. Awards will be announced by **24 July 2017**.

VISAS

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria as soon as possible. An official letter of invitation will be issued to all participants. This letter will be needed for the visa application. In case of special requirements, please contact the Administrative Secretary of the meeting, Ms Emily Slater (E.Slater@iaea.org).

MEETING LOCATION AND TRANSPORTATION

The meeting will take place in Room M0E27 at the **Vienna International Centre**.

Detailed information regarding accommodation and transport in Vienna can be found under the following links:

<http://www-pub.iaea.org/MTCD/Meetings/PDFplus/GuideToVIC.pdf>

<http://www-pub.iaea.org/iaeameetings/2017HotelList.pdf>

DEADLINES

10 April 2017	Beginning of abstract submission
10 July 2017	Deadline for submission of abstracts according to the instructions above for paper selection
10 July 2017	Submission of the Participation Form through the appropriate governmental authority
24 July 2017	Participants will be informed about the acceptance of their papers
24 July 2017	Grant awards announced
4 September 2017	Meeting begins

INTERNATIONAL PROGRAMME ADVISORY COMMITTEE

The International Programme Advisory Committee comprises the following members:

Harry Ing	Canada
Lee Packer	UK
Richard Hall-Wilton	Sweden

IAEA SECRETARIAT

Scientific Secretary

Mr Ian Swainson

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Participation Form

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To be completed by the participant and sent to the competent official authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, either electronically by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Kindly send also a copy to the Scientific Secretary, Mr Ian Swainson (Email: L.Swainson@iaea.org), and to the Administrative Secretary, Ms Emily Slater (Email: E.Slater@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 10 July 2017

Family name: (e.g. Smith)		First name(s): (e.g. John)		Mr/Ms
Institution:				
Full address:				
For urgent communications please indicate:		Tel.:		
		Fax:		
		Email:		
Nationality:		Nominating Government or organization:		
Mailing address (if different from address indicated above):				
Do you intend to submit a paper?		Yes <input type="checkbox"/> No <input type="checkbox"/>		
Would you prefer to present your paper as a poster?		Yes <input type="checkbox"/> No <input type="checkbox"/>		
Title:				

Form for Submission of a Paper

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Title of the paper:		
Abstract id (INDICO):		
Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name and first name(s) of author presenting the paper: e.g. Smith, John	Mailing address:	
Mr/Ms:		
For urgent communications please indicate	Tel.:	
Email:	Fax:	
<p>I hereby agree to assign to the International Atomic Energy Agency (IAEA):</p> <p><input type="checkbox"/> The copyright, or</p> <p><input type="checkbox"/> the non-exclusive, royalty-free licence (this option is only for those authors whose parent institution does not allow them to transfer the copyright for work carried out in that institution) to publish the above-mentioned paper,</p> <p>and certify that no other rights have been granted which could conflict with the right hereby given to the IAEA.</p> <p><input type="checkbox"/> The release of electronic presentations to be included in PDF format in the proceedings and on the IAEA website (if applicable).</p>		
Date:	Signature of main author:	

Grant Application Form

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Family name: (e.g. Smith)	First name(s): (e.g. John)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from to	

2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked from to	

3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of meeting:

Date: Signature of applicant: _____

Date: Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission
to the IAEA or National Atomic Energy Authority _____