



IAEA

原子用于和平与发展

الوكالة الدولية للطاقة الذرية

国际原子能机构

International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

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复函请援引: EVT1905325

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国际原子能机构（原子能机构）秘书处向原子能机构各成员国致意，并荣幸地提请注意因 2019 冠状病毒病暴发而不得不推迟的**激光驱动中子和 X 射线源及其应用的进步技术会议**（以下称“活动”）现定于 **2021 年 2 月 8 日至 11 日**通过思科网讯（Cisco Webex）以虚拟方式举行。

这次活动的目的是审查在高功率激光产生的强中子和 X 射线束方面取得的进展，并讨论未来紧凑型激光系统的前景以及从无损检验到核材料探询的可能核应用。

随附“资料单”提供了这次活动的进一步详情。

这次活动将使用英文。

谨此通知各成员国，业已收到的这次活动的指派名单将继续有效。如有成员国尚未提交任何指派名单或希望变更其指派名单，则请指派一名或几名参加者代表政府参加这次活动。大力鼓励各成员国确定合适的女性参加者。

应不迟于 **2021 年 1 月 8 日**用随附“参加申请表”（A 表）将指派名单通过国家主管当局（外交部、常驻原子能机构代表团或国家原子能机构）提交原子能机构。填写完成并获得批准的“参加申请表”应通过电子邮件发送至: Official.Mail@iaea.org，或通过传真发送至: +43 1 26007（无需硬拷贝）。副本应通过电子邮件发送至这次活动的科学秘书核科学和应用司物理学和化学科学处 Sotirios Charisopoulos 先生（电子信箱: S.Charisopoulos@iaea.org）和行政秘书 Marion Linter 女士（电子信箱: M.Linter@iaea.org）。一俟收到正式指派名单，这次活动的科学秘书将酌情就进一步的安排与参加者直接联系。

此外，若各国政府还希望指派一名或几名观察员协助所指派的参加者并向其提供咨询，则诚请在上述日期之前将任何此类观察员的姓名和详细联系资料通知原子能机构。

原子能机构对可能或旨在允许任何人访问或自行访问、删除或以其他方式损害或修改任何终端用户的任何数据或任何系统、服务器、设施或其他基础设施的任何病毒、蠕虫、陷阱门、后门、计时器、时钟、计数器或其他限制性程序、指令或设计，或其他恶意、非法或类似的未请求代码，包括监视软件或例行程序（统称“禁用代码”），均不承担任何责任，而且虚拟会议服务提供商已声明并担保，这些服务不会包含且任何终端用户也不会从用于举行虚拟会议的软件收到这些“禁用代码”。

国际原子能机构秘书处借此机会再次向原子能机构各成员国致以最崇高的敬意。



2020 年 12 月 3 日

附件（仅以英文印发）：资料单
参加申请表（A 表）
论文提交表（B 表）



Technical Meeting on Advances in Laser Driven Neutron and X-ray Sources and their Applications

Virtual Event

8–11 February 2021

Ref. No.: EVT1905325

Information Sheet

Introduction

In recent years, significant progress has been made in generating intense ion beams from relativistic laser-plasmas (RLP). Laser-driven ion beams are born in sub-picosecond timescales and micron spatial scales. Thus, they can deliver unprecedented power densities and neutron-beam fluences exceeding 10^{10} neutrons/sr in approximately ns-long pulses and to date the prospects of significantly improved performance of Laser-Driven Neutron Sources (LDNS) are excellent.

These developments have prompted many discussions on the compelling applications for such intense neutron beams that include, among many others, non-destructive testing and evaluation, active interrogation for nuclear safeguards and volumetric dynamic thermometry for macroscopic samples in shock physics and warm-dense-matter research.

Due to these features, Laser-Driven Neutron and X-ray sources may have a large potential for contributing to the socio-economic development of IAEA Member States. To assess this potential and propagate further the advantages in using these technologies in the interest of IAEA's Member States a Technical Meeting on Advances in Laser-Driven Neutron and X-ray Sources and their applications is necessary.

Objectives

The purpose of the event is to:

1. Review progress made on the production of intense neutron and X-ray beams generated by high-power lasers and associated technologies
2. Discuss the prospects of future compact laser systems and their possible nuclear applications
3. Record training needs in the field addressed by the Technical Meeting, especially for scientists from developing countries
4. Collect and evaluate scientific information for the preparation of an IAEA TECDOC.

Target Audience

This technical meeting is addressed to experts and stakeholders from IAEA Member States including regulators, as well as scientists from industry

Working Language

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

Expected Outputs

1. Meeting report including recommendations on the meeting objectives.
2. Layout of an IAEA TECDOC tentatively entitled “Advances in Laser Driven Neutron and X-ray Sources and their Applications” with draft scientific contributions by the meeting participants.

Meeting Structure

The meeting will start at 09:30 on **8 February 2021** and end by 16:30 on **11 February 2021**. It will feature invited and contributed oral papers presented in sessions devoted to special topics. At the beginning of the meeting, participants will elect a chairperson and a few rapporteurs who will take notes and coordinate the preparation of the draft meeting report.

Invited talks will be 35 minutes long followed by 5 minutes for discussion; contributed oral presentations will be 20 minutes long including 5 minutes for discussion. A summary session will provide the opportunity to review the progress reported at the meeting. Participants will then form working groups focusing on particular cases of interest and topics covered in order to prepare the draft meeting report, which will be jointly reviewed and finalized by all participants before meeting closure.

Participants will be asked to contribute on voluntary basis to the publication of an IAEA TECDOC. For the preparation of the TECDOC, an editing committee to be coordinated by the Scientific Secretary of the meeting will be assigned by the participants. If agreed by the participants, a summary report of the meeting will be prepared by the International Programme Advisory Committee of the meeting (see below), for submission to a scientific journal.

An electronic projector connected to a computer capable of reading CDs and memory sticks will be available for the presentations (PowerPoint recommended).

Topics

A non-exhaustive list of topics to be covered by the Technical Meeting is given below:

- Laser-based neutron and X-ray production schemes
- Measurements of matter properties with short pulsed neutron and X-rays sources
- Neutron scattering and isotope selective imaging
- Development of compact and deployable systems
- Applications with societal impact
- Analytical capacity in challenging environments and proliferation to developing countries.
- Innovative solutions for nuclear safeguards and non-proliferation
- Industry-related applications, including a) Non-destructive testing and evaluation, b) Inspection techniques, and c) Techniques to identify small quantities of materials/contaminants
- Priority research needs and instrumentation R&D
- Training in in Laser Driven Neutron and X-ray Sources and their Applications.

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, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **8 January 2021**. Participants who are members of an organization invited to attend are requested to send the Participation Form (Form A) through their organization to the IAEA by above deadline.

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

Papers and Presentations

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 2 pages (including figures and tables) and should not exceed 1000 words (including author names, affiliations and acknowledgments, if necessary). It should be sent electronically to Mr Sotirios Charisopoulos, Scientific Secretary of the event (see contact details below), not later than **8 January 2021**. Authors will be notified of the acceptance of their proposed presentations by **15 January 2021**.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** and the attached **Form for Submission of a Paper (Form B)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than **8 January 2021**.

Additional Information

An **International Programme Advisory Committee (IPAC)** is established for the Technical Meeting composed by the following members:

Name	Affiliation
Mr. Markus Roth	Institut für Kernphysik, Technische Universität Darmstadt, Darmstadt, Germany
Ms. Ceri Brenner	STFC Rutherford Appleton Laboratory, Didcot, Oxford, UK
Mr. Ishay Pomerantz	School of Physics and Astronomy, Tel-Aviv University, Tel Aviv, Israel
Mr. Akifumi Yogo	Institute of Laser Engineering, Osaka University, Osaka, Japan
Mr. Sven Vogel	Los Alamos Neutron Science Center, LANL, Los Alamos, NM 87545, USA

Deadlines

8 January 2021	Deadline for submission of abstracts according to the instructions given above for paper selection
8 January 2021	Submission of Form A and Form B (if an abstract is to be presented) by the participant's Member State to the IAEA
15 January 2021	Notification of acceptance of contribution to participants sent by email
25 January 2021	Submission, by email, of invitation letters / grant awards to participants
8 February 2021	Start of the Technical Meeting.

IAEA Contacts

Scientific Secretaries:

Mr Sotirios Charisopoulos

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries 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/EVT1905325

Participation Form

Technical Meeting on Advances in Laser Driven Neutron and X-ray Sources and their Applications

Virtual Event

8–11 February 2021

To be completed by the participant and sent to the competent national 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) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary S.Charisopoulos@iaea.org and to the Administrative Secretary M.Linter@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: 8 January 2021

Family name(s): (same as in passport)		First name(s): (same as in passport)	Mr/Ms
Institution:			
Full address:			
Tel. (Fax):			
Email:			
Nationality:	Representing following Member State/non-Member State/entity or invited organization:		
If/as applicable: Do you intend to submit a paper? Yes ☐ No ☐ Would you prefer to present your paper as a poster? Yes ☐ No ☐ Title:			

Form for Submission of a Paper

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Title of the paper:		
If applicable: Abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s) (same as in passport(s):	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name(s) and first name(s) of author presenting the paper (same as in passport):	Mr/Ms:	
Mailing address:		
Tel. (Fax):		
Email:		

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Date:

Signature of main author: