



Fifth Technical Meeting on Divertor Concepts

IAEA Headquarters, Vienna, Austria

28-31 October 2025

Ref. No.: EVT2405026

Information Sheet

Introduction

Located at the very bottom of a magnetic fusion device in most designs, where impurities such as helium ‘ash’ are diverted, the divertor acts as the ‘exhaust pipe’ of the fusion machine and is where any excessive heat is channelled to. This configuration helps to produce ‘purer’ plasmas with better energy confinement — a critical parameter for the performance of a fusion device — ensuring the plasma is hot enough for long enough so that sustained fusion reactions can take place.

In ITER, the divertor will be made up of 54 ‘cassettes’, each weighing 10 tonnes. The conditions placed on the cassettes will be very demanding; facing steady heat fluxes of 10 to 20 megawatts per square metre, with parts exposed to temperatures of between 1000°C and 2000°C, the cassettes will need to be replaced by remote handling at least once during the machine’s lifetime. To deal with the extreme heat and damaging particles, the components facing the plasma will be armoured with tungsten, a material that has both low tritium absorption and the highest melting temperature of any natural element. Although ITER’s divertor design reflects the state of the art of our current understanding and capabilities from a physics and technology point of view, further developments will be required for fusion plants.

Objectives

The event aims to provide a forum for discussion and analysis of the latest findings and open issues related to divertors in fusion devices in the context of ITER, demonstration fusion power plants and next-step facilities.

Target Audience

The event aims to bring together junior and senior scientific fusion project leaders, plasma physicists, including theoreticians and experimentalists, and experts (researchers and engineers) in the physics and technology of the divertor.

Working Language

The working language of the event will be English. All communication and papers must be sent to the IAEA in English. No simultaneous interpretation will be provided.

Structure and Topics

The programme will consist of sessions dedicated to invited and contributed talks (oral and poster presentations). A Programme Committee made up of a representative international membership will be responsible for selecting the talks and arranging the technical and discussion sessions, as well as for the overall scientific content of the event.

The technical and discussion sessions will be focusing on the following topics:

- **Towards Integrated Scenarios for Exhaust**
Keywords: compatibility of exhaust with ELM-free pedestal regimes, divertor volume impact on confinement, constraints governed by core performance for reactor relevant geometries, control and optimisation of radiation fronts, mid-plane power decay length, transient heat and particle fluxes and their mitigation, radiative power exhaust, experiments and simulations of in core-edge integration, virtual twins.
- **Divertors for Next-Generation Devices**
Keywords: safe operation, control diagnostics, protection from neutron flux, component lifetime, cassette design for remote maintenance.
- **Divertor Engineering and Materials**
Keywords: armor materials, target geometry, cooling system design, cooling channel arrangement, heat sink activation, thermal conductivity and ageing, lessons learned from previous engineering changes and machine upgrades, divertor design workflows.
- **Scrape-off-Layer and Divertor Physics**
Keywords: experiments and modelling for reactor-relevant and advanced geometries, main chamber interactions, particle exhaust.
- **X-point Radiator Regimes**
Keywords: experiments and modelling of regimes where a significant proportion of the heating power is radiated in the mantle and vicinity of the primary x-point(s).

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 **30 May 2025**, 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 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 **30 May 2025**.

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.

Abstracts and Presentations

Anyone presenting a contribution at the event is requested to submit an abstract of not more than 500 words through IAEA-INDICO by **30 May 2025**. Abstracts may contain figures and graphics. Instructions on how to upload the abstracts will be available on the IAEA-INDICO website.

Submissions must contain the author's name, email address, country, organization and topic. Authors are encouraged to flag their proposals as an oral or poster presentation. However, the Programme Committee will evaluate all submissions and decide on the final presentation format.

Authors will be notified by email by **11 July 2025** as to whether their abstracts have been accepted.

An electronic copy of the abstracts, presentation slides and posters will be made available to all participants on the IAEA Fusion Portal.

Under the coordination of the Chair of the Programme Committee, a summary paper will be published in the IAEA journal *Nuclear Fusion*.

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 **30 May 2025**.

Grant awards will be announced by **11 July 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:

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.

Key Deadlines and Dates

30 May 2025	Deadline for submission of abstracts through IAEA-INDICO
30 May 2025	Deadline for submission of Participation Form (Form A), Form for Submission of a Paper (Form B) and Grant Application Form (Form C) (if applicable) through the official channels
11 July 2025	Notification of acceptance of abstracts and of assigned awards

Programme Committee

The Programme Committee is composed of the following members:

Mr James Harrison (Chair)	United Kingdom
Mr Marco Wischmeier	Germany
Mr Gakushi Nakamura	Japan
Mr Suk-Ho Hong	United States of America
Mr Yongkyoon In	Republic of Korea
Mr Felix Reimold	Germany
Mr Matthijs van Berkel	Netherlands
Mr Anthony Leonard	United States of America
Mr Rudolf Neu	Germany
Mr Richard Pitts	ITER Organization
Mr Thomas Eich	United States of America
Mr Emmanuelle Tsitrone	France
Mr Liang Wang	China
Mr Guoyao Zheng	China

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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

Participants are encouraged to visit this web page regularly to check for new or updated information regarding the meeting: <https://conferences.iaea.org/event/394/>