



Technical Meeting on Plasma Disruptions and their Mitigation

**Hosted by the
Government of France**

**through the
ITER Organization**

**ITER Headquarters
Saint-Paul-lez-Durance, France**

20–23 July 2020

Ref. No.: EVT1904274

Information Sheet

Introduction

Nuclear fusion is recognized as a long-term energy source. The IAEA plays an important role in nurturing research and development (R&D) on nuclear fusion by: (i) fostering and coordinating the exchange of scientific and technical information on nuclear fusion through conferences, meetings and projects; and (ii) establishing and maintaining internationally recommended numerical databases of fundamental atomic and molecular data for nuclear fusion.

The most important initiative on fusion R&D is currently ITER: the international tokamak reactor scale experiment being assembled in France. In tokamaks, instabilities can develop under certain operational conditions or as a consequence of a loss of plasma control. These instabilities eventually lead to the rapid loss of thermal and magnetic energy, a phenomenon known as plasma disruption.

Plasma disruptions cause thermal and mechanical loading to the tokamak components. Due to the high amounts of stored thermal and magnetic energies in ITER, the in-vessel components, such as the first wall panels and the divertor, will receive significant thermal loads. Furthermore, the in-vessel components, the vacuum vessel and the coils in the tokamak must also bear substantial mechanical loads. Disruption mitigation will be essential to reducing thermal and mechanical loading in order to guarantee the lifetime of these components.

Objectives

The event aims to serve as a forum to help coordinate experimental, theoretical and modelling work in the field of plasma disruptions with special emphasis on developing a solid basis for possible mitigation strategies in ITER and next generation fusion devices.

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 field of plasma disruptions.

Working Language(s)

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 mainly consist of sessions dedicated to invited talks and discussions. 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.

In addition, several regular contributions (see below for further information) will be presented on the following topics:

- **Mitigation:**
 - Shattered pellet injection;
 - Alternative techniques.
- **Prediction and Avoidance:**
 - Machine learning and physics approaches;
 - Avoidance: control aspects.
- **Consequences:**
 - Electromagnetic loads;
 - Heat loads;
 - Runaway electrons.

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 **4 May 2020**. 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 the above deadline.

All persons wishing to present a contribution at the event are requested to send the **Participation Form (Form A)** together with **Form for Submission of a Paper (Form B)** through the established official channels to the IAEA by the above deadline.

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

Please note that the IAEA is in a transition phase to manage the entire registration process for all regular programme events electronically through the new InTouch+ (<https://intouchplus.iaea.org>) facility, which is the improved and expanded successor to the InTouch platform that has been used in recent years for the IAEA's technical cooperation events. Through InTouch+, prospective participants will be able to apply for events and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to: InTouchPlus.Contact-Point@iaea.org.

Abstracts and Proceedings

Concise regular contributions (oral and poster presentations) that fall within the topics outlined above may be submitted to the event. Anyone wishing to present a regular contribution at the event is requested to submit an abstract of not more than 500 words through IAEA-INDICO by **27 April 2020**. 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 **22 May 2020** as to whether their abstracts have been accepted.

An electronic copy of the proceedings, consisting of 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 using the **Grant Application Form (Form C)** which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **4 May 2020**.

Grant awards will be announced by **22 May 2020**.

Event Venue and Accommodation

The event will be held at the ITER Organization's headquarters, Route de Vinon-sur-Verdon, 13067 Saint-Paul-lez-Durance, France. Participants must make their own travel and accommodation arrangements.

Local organizer contact: ITERmeeting@iter.org

Recommended accommodation:

Hotels:

Hotel Rotonde: [Hotel Rotonde](#)

Hotel St Christophe: [Hotel St-Christophe](#)

Hotel Aquabella: [Hotel Aquabella](#)

Hotel des Augustins: [Hotel des Augustins](#)

Hotel du Globe: [Hotel du Globe](#)

Hotel des Quatre Dauphins: [Hotel des Quatre Dauphins](#)

Aparthotels:

Aparthotel Adagio Aix-en-Provence Centre: [Aparthotel Adagio](#)

Séjours & Affaires Mirabeau: [Séjours&Affaires](#)

Appart'hôtel Odalys Les Floridiannes: [Odalys Floridiannes](#)

Transportation between Aix-en-Provence and the event venue will be arranged by the local organizer. Participants will have to register for this service using a registration form to be provided by the local organizer in due course.

Visas

Participants who require a visa to enter France should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of France.

Key Deadlines and Dates

27 April 2020	Deadline for submission of abstracts through IAEA-INDICO for regular contributions
4 May 2020	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
22 May 2020	Notification of acceptance of abstracts and of assigned awards
20 July 2020	Event begins
23 July 2020	Event ends

Programme Committee

The International Programme Advisory Committee is composed of the following members:

Mr Michael Lehnen (Chair)	ITER Organization
Mr Indranil Bandyopadhyay	India
Mr Amitava Bhattacharjee	United States of America
Mr Nicholas Eidietis	United States of America
Mr Alexander Huber	Germany
Mr Akihiko Isayama	Japan
Mr Jayhyun Kim	Republic of Korea
Mr Sergey Konovalov	Russian Federation
Mr Eric Nardon	France
Ms Gabriella Pautasso	Germany
Ms Cristina Rea	United States of America
Mr Carlo Sozzi	Italy
Mr Fabio Villone	Italy
Mr Long Zeng	China

IAEA Contacts

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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.

Host Organization Contact Point

Chairperson:

Mr Michael Lehnen

ITER Organization
Saint-Paul-lez-Durance Cedex
FRANCE
Email: ITERmeeting@iter.org

Meeting Web Pages

Participants are encouraged to visit these web pages regularly to check for new or updated information regarding the meeting:

IAEA-INDICO:

<https://conferences.iaea.org/event/217/>

IAEA Fusion Portal:

<https://nucleus.iaea.org/sites/fusionportal/>