

**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 recognised as a long-term energy source. The IAEA plays an important role in nurturing the research and development (R&D) on this future energy source 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. As in other tokamaks, also in ITER instabilities can develop under certain operational conditions and in case of loss of plasma control, that eventually lead to the fast loss of thermal and magnetic energy, called a plasma disruption.

Disruptions cause thermal and mechanical loading to tokamak components. Due to the high stored thermal and magnetic energies in ITER, significant thermal loads have to be expected for in-vessel components, like first wall panels and the divertor. In addition, mechanical loads to the in-vessel components, the vacuum vessel and the coils in the tokamak are substantial.

The Technical Meeting on Plasma Disruptions and their Mitigation (PDM 2020) aims to provide 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. The objective of the event will be to discuss experimental, theorical and modelling strategies for trying to predict, mitigate and ultimately avoid disruptions in the first place.

The PDM 2020 is being organized by the IAEA and hosted by the ITER Organization through the Government of France.

**Structure, Themes and Topics**

The event will include invited and contributed papers (oral and poster presentations) presented in sessions devoted to the following topics:

* **Mitigation:**
* Shattered Pellet Injection;
* Alternative Techniques.
* **Prediction and Avoidance:**
* Machine Learning and Physics Approaches;
* Avoidance: Control Aspects.
* **Consequences:**
* Electro-magnetic Loads;
* Heat Loads;
* Runaway Electrons.

Oral presentations will be followed by poster presentations to enhance topical discussions. It is expected that all talks will be approximately 20 minutes with around ten minutes for discussion. An International Programme Advisory Committee consisting of a representative international membership will be responsible for the selection of papers, arrangements of technical sessions and the overall scientific content of the event.

**Abstracts, Papers and Proceedings**

Concise papers on issues falling within the topics outlined above may be submitted as contributions to the event. All papers, apart from invited papers, must present original work and should not have been published elsewhere.

Anyone wishing to present a paper at the meeting is requested to submit an abstract of not more than 500 words through IAEA-INDICO by **3 April 2020**. Abstracts may contain figures and graphics. Instructions on how to upload the abstracts to IAEA-INDICO will be available on the 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 International Programme Advisory Committee will evaluate all submissions and decide on the final presentation format.

Authors will be notified by email by **30 April 2020** as to whether their papers have been accepted.

An electronic copy of the proceedings consisting of abstracts, presentation slides and posters abstracts will be made available to all participants on the IAEA-INDICO website.

Under the coordination of the Chair of the International Programme Advisory Committee, a summary paper and a selection of papers from the meeting will be published in a special issue of *Nuclear Fusion*.

**Working Language(s)**

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

**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 **17 April 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 paper at the meeting are requested to send the **Participation Form (Form A)** and **Form for Submission of a Paper (Form B)** through the established official channels to the IAEAby 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.

**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 **17 April 2020**.

Grant awards will be announced by **30 April 2020**.

**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.

**Event Venue and Accommodation**

The event will be held at the ITER Organization, Headquarters, France. Participants must make their own travel and accommodation arrangements.

Local organizer contact: ITERmeeting@iter.org

**How to find us?**

The ITER site is located off the A51 motorway that links Aix-en-Provence and the French Alps —approximately 35 km north of Aix-en-Provence and 20 km south of Manosque.

Heading north from Aix in the direction of Sisteron, take exit 17 (Vinon/St-Paul-lez-Durance). At the first roundabout after the toll, turn left (**past the CEA entrance**) and continue along the D952 roadway towards Vinon-sur-Verdon. You will need to drive several kilometres to reach the ITER worksite entrance (for site visits) or ITER Headquarters.

After 2.2 km, at the second roundabout, continue straight and follow the sign to **ITER Headquarters**.

* the entrance to ITER Headquarters (second right off the roundabout, **Entrance C**)

See map: [Link to ITER Access Plan](https://static.iter.org/all/visit/ITER-AcessPlan-A4-EN.pdf?date=20160308)

**Where to stay?**

We recommend the participants to stay in the City Center of Aix-en-Provence as it offers a wider range of accommodations and restaurants/shops. Additionally, the ITER Organization can only provide transportation from Aix-en-Provence to ITER daily to the participants (upon registration). This service will have to be reserved via a Registration form provided by ITER at a later stage.

Here is a list of recommended accommodation:

**Hotels:**

Hotel Rotonde: [Link to Hotel Rotonde](http://www.hotel-rotonde.com/)

Hotel St Christophe: [Link to Hotel St-Christophe](http://www.hotel-saintchristophe.com/en/index.php)

Hotel Aquabella: [Link to Hotel Aquabella](http://www.aquabella.fr/en/)

Hotel des Augustins: [Link to Hotel des Augustins](https://hotel-augustins.com/)

Hotel du Globe: [Link to Hotel du Globe](http://hotelduglobe.com/)

Hotel des Quatre Dauphins: [Link to Hotel des Quatre Dauphins](https://www.hotel-aix-lesquatredauphins.fr/chambres-hotel-aix-en-provence.html)

**Apartment hotels:**

Aparthotel Adagio Aix-En-Provence Center: [Link to Aparthotel Adagio](http://www.adagio-city.com/gb/hotel-6796-aparthotel-adagio-aix-en-provence-centre/index.shtml)

Séjours & Affaires Mirabeau: [Link to Séjours&Affaires](http://www.sejours-affaires.com/residence-hoteliere-aparthotel-aix-26.html)

Appart’hôtel Odalys Les Floridianes: [Link to Odalys Floridianes](https://www.odalys-vacances.com/location-campagne/provence-et-luberon/aix-en-provence/les-floridianes.html?idprestation=7546&idtypeprestation=1&tab=1&saison_b=h&datedebut=24/12/2019&duree=7)

**Key Deadlines and Dates**

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| **3 April 2020** | Deadline for submission of abstracts through IAEA-INDICO |
| **17 April 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 |
| **30 April 2020** | Notification of acceptance of abstracts and of assigned awards |
| **20 July 2020** | Event begins |
| **23 July 2020** | Event ends |

**International Programme Advisory Committee**

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

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

**IAEA Contacts**

**Scientific Secretary:**

**Mr Matteo Barbarino**

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**Administrative Secretary:**

**Ms Charisse Monfero**

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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

St Paul Lez Durance Cedex

FRANCE

Email: ITERmeeting@iter.org