

*Fourth IAEA Technical Meeting on
“Steady State Operation of Magnetic Fusion
Devices and
MHD of Advanced Scenarios”*

1 February – 5 February 2005

Institute for Plasma Research
Gandhinagar, India



IAEA
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 Energia Atómica

INTRODUCTION

The Fourth IAEA Technical Meeting (IAEA-TM) on Steady State Operation of Fusion Devices and MHD of advanced scenarios will take place from 1 February to 5 February 2005 and will be hosted by the **Institute for Plasma Research, Gandhinagar, India** (*The previous meetings were held in Greifswald (Germany) and Arles (France), Kyushu (Japan) and Hefei (China)*)

OBJECTIVES

The IAEA Technical Meeting on Steady State Operation of Magnetic Fusion Devices is a workshop for open discussions of the issues on physics and technology of steady state operation of magnetic fusion devices. The specific requirements associated with the construction and steady state operation of new machines, in particular ITER shall be addressed. The scope of this meeting is to bring experts on the field of steady state operation together to present results obtained from the operation of existing long-pulse machines, and report about physical and technological aspects of new long-pulse machines.

The Technical Meeting will include invited and contributed papers. The topics to be covered are:

1. Overview, status and performance of long pulse steady-state operation
2. Superconducting magnets and cryogenic systems
3. Long-pulse heating and current drive systems
4. Plasma-facing components and materials
5. Particle control and power exhaust
6. Feedback control of steady-state plasma scenarios
7. MHD of advanced scenarios
8. Theory and modelling of long-pulse operation

The topic list is provisory and may be updated.

MEETING FORMAT

The format of the meeting will be invited and contributed papers (orals and posters) presented in sessions devoted to special topics with subsequent discussions. Plenary sessions will be followed by poster sessions to enhance topical discussions. It is expected that all talks will be ~20 minutes with ~5 minutes for discussion. An overhead projector for transparencies and an electronic projector with a computer capable of reading CD's and memory sticks will be available (Power Point recommended).

The official language of the meeting is English (no interpretation will be provided). It is expected that the meeting will start at 09:00 on 1 February 2005 and end by 17:30 on 5 February 2005.

ABSTRACT

Anyone wishing to present a paper or poster during this meeting must submit an abstract, in electronic format (WORD, preferred) directly to physics@iaea.org.

The email subject for abstract submission shall include IAEA-TM on SSO + **topic**.

Topics include:

- OV: Overview, status and performance of long pulse steady-state operation
- SC: Superconducting magnets and cryogenic systems
- LP: Long-pulse heating and current drive systems
- PFC: Plasma-facing components and materials
- PC: Particle control and power exhaust
- SS: Feedback control of steady-state plasma scenarios
- MHD: MHD of advanced scenarios
- TH: Theory and modelling of long-pulse operation

The abstracts shall be prepared as for the last meeting according to the instructions:

- 1) Page size: A\$ (297mm by 210 mm) – vertical orientation
- 2) Margins 25mm all around
- 3) Layout:

Title: single-spaced, 14-point size, Times New Roman Font, **bold**
Authors: single-spaced, 12-point size, Times New Roman Font
Affiliation: single-spaced, 12-point size, Times New Roman Font, *italic*
Text: 1.5 spaced, 12-point size, Times New Roman Font
Length: one page

A Book of Abstracts will be compiled for distribution at the meeting to every participant.

PAPERS

Electronic versions of papers must be sent to physics@iaea.org by **14 January 2005**. A CD-ROM with a summary of the un-edited, non-refereed papers will be prepared for distribution at the meeting. The paper submission form ([PDF](#), [Microsoft word](#)) must be sent to the scientific secretary. The papers should be sent as a single pdf format file, including figures, not exceeding 2 MB. The layout of the papers should follow the abstract layout. A summary report will be published in the “Nuclear Fusion” journal. Authors are encouraged to submit their papers to “Nuclear Fusion” for publication following the submission rules of the journal.

PARTICIPATION

About sixty persons from IAEA Member States or international organizations are expected to attend. Participants should be persons actively involved in the topics of the meeting.

Following the standard IAEA procedure, official participants of the meeting must be nominated through their national authorities (Ministry of Foreign Affairs or National Atomic Energy Authority).

VISA

Designated participants who require a visa to enter India should submit the necessary application to the nearest diplomatic or consular representative of India as soon as possible. A letter of invitation, if needed, has to be requested from Prof. Saxena: saxena@ipr.res.in

In order to participate in the meeting, these major steps must be completed:

1) Abstract Submission

A one page abstract must be submitted **before 26 November 2004**. **The abstract may be text only or contain figures and graphics, but must be only one page.** The abstract must contain the authors name, affiliation and email address. **Acceptable file formats are Microsoft Word (preferred), PDF, HTML, or plain text.** The filename should be in the following format: "lastname-firstname.filetype".

Submit the abstract by email to Physics@iaea.org or by post or fax to the IAEA Scientific Secretary (to arrive before 26 November 2004):

Guenter Mank
G.Mank@iaea.org
Section Head, NAPC Physics Section
International Atomic Energy Agency
Office A2375
Wagramer Str. 5, P.O. Box 100, A1400 Vienna, Austria
Tel.: +43 1 2600-21756, FAX: +43 1 26007

The authors must make sure that the files do not include copyrighted fonts or other impediments for reproduction. The abstracts will be selected and classified by the International Advisory Committee. Authors will be informed of the acceptance and placement of their contributions by email, before 10 December 2004.

2) IAEA Participation Form.

Please send a completed Participation Form ([PDF](#), [Microsoft Word](#)) with the abstract of your presentation (if any) to your appropriate authority (Ministry of Foreign Affairs, National Atomic Energy Authority) for subsequent transmission to the IAEA. A participant will be accepted only if the Participation Form is transmitted through the appropriate authority. Please send an additional copy of the Participation Form and abstract by e-mail or fax directly to the IAEA Scientific Secretary.

3) EXPENDITURES AND FINANCIAL SUPPORT

The costs for the organization of the meeting are borne by the host organization and the IAEA. No registration fee will be charged to participants.

As a general rule, the IAEA does not pay the cost for attendance to the meeting (i.e. travel and living expenses) of participants. However, limited funds are available to help meet the cost of attendance of a few selected specialists mainly 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.

If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA Scientific Secretary at the International Atomic Energy Agency to this effect. Governments should ensure that applications for grants:

- a) are received by the IAEA by 26 November 2004,
- b) are accompanied by a duly completed and signed Participation Form (see above), including the abstract of the paper to be presented. And
- c) are accompanied by a duly completed and signed Grant Application Form (see attached Form C) as well as an estimate of a valid travel agent of the flight costs from/to the nearest city or capital in their country and the conference location. The grants awarded will be in the form of lump sums that usually cover only part of the cost of attendance.

Applications that do not comply with the conditions mentioned above cannot be considered. Awards will be announced around 10 December 2004

DEADLINES

26 November 2004 - Submittal of abstracts according to the instructions above for paper selection

10 December 2004 - The International Advisory Committee will inform Participants of the acceptance of their papers

10 December 2004 - Request to the IAEA for financial support

14 January 2005 – Submission of papers

1 February 2005 - Meeting begins

INTERNATIONAL ADVISORY COMMITTEE

Manfred Wanner (IPP,MPG), Manfred.Wanner@ipp.mpg.de

Didier Van Houtte (CEA), van-houtte@cea.fr

V.P. Smirnov (KIAE), vsmirnov@nfi.kiae.ru

Hideki Zushi (AFRC), zushi@triam.kyushu-u.ac.jp

Francesco Romanelli (ENEA), romanelli@frascati.enea.it

J. Li (IPP), j_li@ipp.ac.cn

Osamu Motojima (NIFS), motojima@lhd.nifs.ac.jp

G.S. Lee (KBSI), gslee@kbsi.re.kr

Peter K. Mioduszewski (ORNL), mioduszewspk@ornl.gov

Y.C. Saxena (IPR), saxena@ipr.res.in

CONTACTS

Chairman:

Prof. Y.C. Saxena

Institute of Plasma Research

Bhat, Gandhinagar, Gujarat 382428

India

Phone: +91-79- 23969029

FAX: +91-79-23969017

E-mail: saxena@ipr.res.in

IAEA:

Guenter Mank - **IAEA Scientific Secretary**

IAEA, Section Head, Physics Section

Wagramer Str. 5

A-1400 Vienna, Austria

Phone: +43-1-2600-21756

FAX: +43-1-26007

E-mail: physics@iaea.org