

"Active Control of MHD Stability: Extension to the Burning Plasma Regime "
University of Texas-Austin, November 3rd-5th
Agenda

Monday: November 3rd

Session: Active MHD control issues in various devices (Chair: Francois Waelbroeck)

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| 1.01 | Ted Stait | ITPA MHD issues |
| 1.02 | J. Wesley (Invited) | <u>ITER</u> issues |
| 1.03x | Richard Buttery | Mitigation of sawteeth and NTMs - new results from <u>JET</u> |
| 1.04 | Sibylle Guenter | Recent work on the control of MHD instabilities at ASDEX Upgrade |
| 1.05 | Shinichi Ishida (Invited) | Active MHD control by various approaches in <u>JT-60U</u> and <u>JT60SC</u> |
| 1.06 | Joseph Snipes | Active MHD Experiments on <u>Alcator C-Mod</u> |
| 1.07 | Charles Kessel (Invited) | Active MHD control in <u>FIRE</u> and <u>AT-FIRE</u> |
| 1.08 | J. Menard | MARS analysis of rotational stabilization of the RWM in <u>NSTX</u> plasmas. |
| 1.09x | Piero Martin(Invited) | <u>RFP/RFX</u> active MHD control issues |
| 1.10 | Rob. La Haye | m/n=2/1 NTM control by ECCD in <u>DIID</u> and <u>ITER</u> |
| 1.11 | Brett Chapman(Invited) | Observation of tearing mode deceleration and locking in <u>MST</u> due to eddy currents induced in the conducting shell. |
| 1.12x | A. Hoekzema | ECRH Feedback Control in TEXTOR and ITER |

Tuesday: November 4th

Session: Exploration of Direct MHD Mode Control (Chair: John Sarff)

• RWM

- 2.01 R. Fitzpatrick (Invited) RWM physics and control**
- 2.02 Y. Liu and A. Bondeson (Invited)
Stabilization of the Resistive Wall Mode by Plasma
Rotation and Magnetic Feedback**
- 2.03 Gerry Navratil RWM Feedback issues in ITER and FIRE**
- 2.04 Ming-Sheng Chu Normal Mode Approach to Modelling of
Feedback Stabilization of the Resistive Wall
Mode**
- 2.05 Andrea Garofalo Analysis of stable resistive wall modes in
rotating plasmas**
- 2.06 Holger Reimerdes Active MHD spectroscopy on the stable RWM
in a rotating plasma**
- 2.07x Amiya Sen Need for Advanced Control for Burning
Plasmas - A Few examples
- 2.08x Riccardo Betti Beta limits of the RWM with kinetic effects
- 2.09 John Finn and L. Chacon Control of linear and nonlinear resistive wall
modes**
- 2.10 Kerchung Shaing Island Rotation Frequency In Toroidal Plasmas**
- 2.11x Jim Callen Toroidal Flow Damping Induced By RWMs
- 2.12 Gen-ichi Kurita RWM analyses with ferromagnetic and plasma
flow effects in a tokamak**
- 2.13 Michio Okabayashi Dynamic Stabilization with C - and I- Coils on
DIII-D**
- NTM, Sawtooth, ELM and other MHD control
- 2.14a Sibylle Guenther Ergodic heat transport analysis in non-aligned
coordinate systems**
- 2.14b The influence of non_resonant perpurbed field:
Modelling results of Proposals for TEXTOR
experiments**
- 2.14c FIR_NTMs on ASDEX Upgrade and JET: Active
Control lof (2,1) NTMs on ASDEX Upgrade**
- 2.15 Richard Buttery Direct NTM stabilization attempts on JET**
- 2.15a Control of ELMs with edge resonant perturbation
field**
- 2.16 Todd Evans (Invited) Ergotic limiter impacts on ELMs in DIII-D**

Wednesday: November 5th

C. Innovative concept (Chair: Michio Okabayashi)

- 3.01 Jim Drake (Invited) Feedback experiments on the T2R reversed-field pinch experiment**
- 3.02 Cary Forest (Invited) Stabilizing the Resistive Wall Mode using moving conducting walls**
- 3.03x Vladimir Svidzinski (Invited)
Effects of particles with large gyroradii on resistive MHD stability
- 3.04 Hiro Takahashi Using Actively Driven SOL Current for Controlling Vertical Instability and Other MHD Modes in Tokamaks Bringing back Old Ideas into New Environment"**
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- 3.05x Eric Fredrickson 3-D VMEC calculations for DIII-D
- 3.06 Jim Bialek Time Domain VALEN calculations**
- 3.07x Gerry Navratil Summary Discussion Active MHD control "Issues for next step"