

AGENDA

Workshop on Active Control of MHD Stability 2005
The Pyle Center, University of Wisconsin, Madison, WI
Monday, October 31 - Wednesday, November 2

Monday

8:30-8:55 Registration The Pyle Center (registration desk located at meeting room)
8:55-9:00 John Sarff Welcome and announcements

Session 1

9:00-9:40 **Chair: Jim Callen**
Marc Maraschek NTM control and tailoring of core MHD activity by ECCD: AUG results and ITER perspectives
9:40-10:20 Enzo Lazzaro Real-time stabilization of tearing modes by means of ECCD/ECRH
10:20-10:40 *Coffee Break*
10:40-11:05 Olgierd Dumbrajs Stochastization as a cause of fast reconnection of neoclassical tearing modes
11:05-11:30 Yunfeng Liang Rotation dependence of tearing mode excitation by external perturbation fields on TEXTOR
11:30-11:55 Rob La Haye Evaluating ECCD stabilization of NTMs in ITER
11:55-12:15 Discussion

Special Announcement

12:15-12:25 Jim Callen Introduction to NRC study *Plasma 2010: An Assessment of and Outlook for Plasma Science*
12:25-1:45 *Lunch (off site)*

Session 2

1:45-2:25 **Chair: Jon Menard**
Roberto Paccagnella First results from RFX-Mod
2:25-3:05 Per Brunzell Feedback control on EXTRAP-T2R with coils covering full surface area of torus
3:05-3:30 Jim Drake Response of RWM perturbations to applied, pre-programmed resonant perturbations
3:30-3:50 *Coffee Break*
3:50-4:15 Steven Sabbagh Resistive Wall Mode stability and plasma rotation damping in NSTX
4:15-4:40 Aaron Sontag Rotation stabilization of the Resistive Wall Mode in NSTX
4:40-5:05 Roberto Paccagnella Mode dynamics and active control studies and experiments on RFX-mod
5:05-5:25 Discussion
5:45-7:00 UW lab tours HSX, Pegasus, MST & RWM (walk directly from Pyle Center to labs)

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8:25-8:30

Announcements

Session 3

Chair: Jim Drake

Resistive Wall Modes (II)

8:30-9:10

Yueqiang Liu

RWM control logic beyond present approaches

9:10-9:50

Gary Jackson

RWM experiments and modeling for feedback system development in DIII-D

9:50-10:15

Zhipeng Sun

Adaptive optimal stochastic feedback control of Resistive Wall Modes in tokamaks

10:15-10:35

Coffee Break

10:35-11:15

Dave Maurer

Controllability, observability, and state feedback of Resistive Wall Modes

11:15-11:40

Alex Klein

High-speed digital mode control feedback on external kink modes in the HBT-EP tokamak

11:40-12:05

Jim Bialek

VALEN 3D modeling of RWM with rotation

12:05-12:25

Discussion

Special Announcement

12:25-12:35

Jerry Navratil

Introduction to US Burning Plasma Workshop, Dec 7-9, Oak Ridge

12:35-1:45

Lunch (off site)

Session 4

Chair: Bill Heidbrink

Tearing and Kink Modes

1:45-2:25

Lionello Marrelli

Progress in understanding and controlling QSH reversed field pinch plasmas

2:25-2:50

Yasuhiro Kagei

Simulation of nonlinear interactions between n=1 internal kink and high-n pressure-driven MHD instabilities

2:50-3:15

Will Bergerson

Onset and saturation of the kink instability in a current-carrying, line-tied plasma

3:15-3:40

Coffee Break

3:40-4:20

Rob O'Connell

Overview of tearing control in MST

4:20-4:55

Paolo Piovesan

Imaging of dynamo mode dynamics during profile control experiments in MST

4:55-5:15

Discussion

6:30

Workshop Dinner, Nadia's Restaurant, 508 State Street (take stairs up to second floor)

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Wednesday

8:25-8:30

Announcements

Session 5

Chair: Ted Strait

8:30-9:10

Bill Heidbrink

9:10-9:50

Dennis Whyte

9:50-10:15

Vallerie Izzo

10:15-10:40

10:40-11:05

Bo Hu

11:05-11:30

Jon Menard

11:30-11:55

Piero Martin

11:55-12:15

MHD in Burning Plasma Conditions

Fast particle instabilities in DIII-D and possible control in ITER

Disruption mitigation by high-pressure gas injection

MHD simulations of high-pressure gas-jet disruption mitigation

Coffee Break

Internal kink stability with kinetic effect for ITER

MARS analysis of $n>1$ RWM stability

Active control of MHD in ASDEX-Upgrade: Status and plans

Discussion

Special Announcements

12:15-12:25

Ted Strait

12:25-12:35

Michio Okabayashi

12:35-12:45

Dave Maurer

Update on ITPA activities

US-Japan Workshop, *MHD Stability Control and Related Confinement of Toroidal Plasmas*

Next MHD Control Workshop, hosted by Columbia University

End