

17th Workshop on MHD Stability Control & Joint US-Japan Workshop: Addressing the Disruption Challenge for ITER

Columbia University in the city of New York, USA. Nov 5-7 2012.

Agenda, v2, as of Oct 15.

MONDAY: Room:

From	To	Category	Speaker and title (and proposed chairs, tbc)
8:00	8:30	REGISTRATION	
8:30	8:40	Welcome	
			The Disruption Challenge Chair: Richard Buttery
8:40	9:15	Invited	Masayoshi Sugihara (ITER): "The Disruption Challenge for ITER"
9:15	9:35	Contributed	Allen Boozer (Columbia): Physics of Tokamak Halo Currents
9:35	9:55	Contributed	Ted Strait (GA): Summary of ITPA MHD group activities
9:55	10:15		Disruptions and 3D Chair: Jong-Kyu Park
10:15	10:50	Invited	Stephen Knowlton (Auburn): "The application of 3D fields to avoid major disruptions in tokamaks".
10:50	11:20	COFFEE	
11:20	11:40	Contributed	Kimin KimPPPL): NTV calculation with particle simulation and its validation in NSTX and DIII-D
11:40	12:15	Invited	Matt Lanctot (LLNL): "Tailoring Non-axisymmetric Magnetic Fields in Tokamak Plasmas"
12:15	12:35	Contributed	Carlos Paz Soldan (GA): Assessment of Error Field Control Metrics Using DIII-D Compass Scans
12:35	12:45	Photo	
12:45	14:05	LUNCH	Disruption Avoidance Chair: Rob La Haye
14:05	14:40	Invited	Stefan Gerhardt (PPPL): "Characteristics of disruptions in NSTX: disruptivity, precursors, detection, and halo currents"
14:40	15:00	Contributed	Eugenio Schuster (Lehigh): Model-based Control of Magnetic and Kinetic Plasma Profiles
15:00	15:20	Contributed	Lidia Piron (RFX): 3D magnetic fields and plasma rotation in RFX-mod tokamak plasmas
15:20	15:50	COFFEE	Disruption Mitigation Chair: Masayoshi Sugihara
15:50	16:25	Invited	Bob Granetz (MIT): "Massive Gas - How far can it go to mitigate the disruption?"
16:25	16:45	Contributed	Roger Raman (PPPL): Electromagnetic Particle Injector for NSTX-U
16:45	17:20	Invited	Nick Eidietis (General Atomics): "Mitigating Runaway Electrons"
17:20	17:40	Contributed	Leonid Zakharov (PPPL): Halo currents in disruptions - Is it a reality or a fantasy of interpretations and "first principle" simulation
17:40	18:10	Discussion	Panel discussion: Disruption mitigation strategy for ITER
18:10	18:10		
18:10	19:10		Social time and /or tours
19:10	19:30		travel to dinner
19:30	late		Banquet

Tuesday Room: , includes focus on "Fundamentals of 3D Perturbed Equilibrium Control" 3D Plasmas: Chair: Andrew Cole

8:30	9:05	Invited	Sam Lazerson (PPPL): "3D Equilibrium Reconstruction and ITER"
9:05	9:25	Contributed	Nathaniel Ferraro (GA): Modeling the Effects of 3D Fields on the H-mode Pedestal
9:25	9:45	Contributed	Ben Tobias (PPPL): ECE imaging of the H-mode pedestal
9:45	10:05	Contributed	Brett Chapman (UW) 3D Equilibria in MST
10:05	10:35	COFFEE	

			RWM Physics Chair: Gerald Navratil
10:35	11:10	Invited	Steve Sabbagh (Columbia): "Avoiding RWMs in ITER"
11:10	11:30	Contributed	Francesca Turco (Columbia): RWM stability modelling of DIII-D plasmas
11:30	11:50	Contributed	Michio Okabayashi (PPPL): Density snake associated with Off-axis Fishbone
11:50	12:10	Contributed	Jack Berkery (Columbia): Global Mode Control and Stabilization for Disruption Avoidance in High- β NSTX Plasmas
12:10	13:30	LUNCH	RWM Control: Chair: Matt Lanctot
13:30	14:05	Invited	Akio Sanpei (KIT): "Mode control with external fields in the low-aspect-ratio RFP"
14:05	14:25	Contributed	Karl Sassenberg (Tulsa): Control of MHD Modes in RFPs: Application to RFX-mod
14:25	14:45	Contributed	Jeremy Hanson (Columbia): Feedback control of unstable resistive wall modes
14:45	15:05	Contributed	James Drake (KTH): Overview of Experimental System Identification Results on Extrap T2R
15:05	15:35	COFFEE	Innovative Control and Physics: Chair: David Maurer
15:35	16:10	Invited	Paolo Piovesan (RFX): "Stabilization of $q < 2$ scenarios"
16:10	16:30	Contributed	Lorenzo Frassinetti: Wall diffusion time estimation in EXTRAP T2R and possible application to tokamaks
16:30	17:05	Invited	Amiya Sen (Columbia): Disruption avoidance with non-magnetic sensing
17:05	17:25	Contributed	Nikolaus Rath: Adaptive Control of Rotating Magnetic Perturbations
17:25	18:00	Invited	Y. Narushima (NIFS): "Flow effects on RMP field penetration in the Large Helical Device"
ALTERNATIVE SLOT FOR TOURS			

Wednesday Room:			
			Title: Tearing Challenges Chair: John Sarff
8:30	9:05	Invited	Dylan Brennan (Tulsa): "Understanding tearing mode stability with advanced 3D modeling"
9:05	9:40	Contributed	Jane Pratt (FOM): Simulation of suppression of neoclassical tearing modes with ECCD
9:40	10:00	Contributed	Matteo Baruzzo (JET/CNR): Tearing MHD instabilities in JET with the ITER-like Wall
10:00	10:20	Contributed	Daisuke Shiraki (Columbia) EM torques on locked modes in realistic DIII-D geometries
10:20	10:50	COFFEE	Title: Tearing Control Chair: Stefan Gerhardt
10:50	11:25	Invited	Rick Nebel (Tibbar Technologies) : "Electrostatic Current Drive for Mode Control in RFPs and Tokamaks"
11:25	11:45	Contributed	Egemen Kolemen (PPPL): Suppression of NTMs before full saturation
11:45	12:05	Contributed	Robert La Haye (GA): Electron cyclotron power requirements for $m/n=3/2$ NTM stabilization in DIII-D
12:05	12:35	Discussion	PANEL DISCUSSION on Strategy for Disruption Avoidance by MHD control in ITER
12:35	13:00	Committee & Closing	Including next meeting, and review of MHD WS organization