

Draft Agenda for the 9<sup>th</sup> ITPA MHD Topical Group Meeting  
at GA 21<sup>st</sup> -24<sup>th</sup> May 2007

*(Preliminary timings and scheduling -comments and suggestions for additional presentations to  
tim.hender @ ukaea.org.uk)*

**Monday 21 May**

- 8.00 Registration
- 8:30 Introduction - news on ITPA T Hender

**Issues related to ITER Design Review**

- 8.45 ITER Design Review T Hender
- 9.00 MHD issues arising in ITER Design Review A Sen
- 9.30 Short summary Pedestal Group consideration of ELM control coils T Osborne
- 9.45 Overview of USBPO analysis of integrated ELM/RWM/EF control coils for ITER J Menard
- 10.30 **Coffee**
- 10.50 RWM/ELM/EF control coil evaluation studies M Schaffer/  
J Bialek
- 11.30 Evaluation of ITER vertical stability during start-up A Portone
- 12.00 **Lunch**
- 13.00 Recent DIII-D Experiments Simulating the ITER Startup Scenario And Their Implications For Axisymmetric Control E Lazarus
- 13.30 ITER Disruption Guidelines M Sugihara
- 14.00 Requirements on a massive gas injection system in ITER J Welsey
- 14.30 **Coffee**
- 15.00 Discussion on other ITER Design Review items (e.g. rotation requirements in view of possible lower NBI energies ....) All

**Locked modes and neo-classical toroidal viscosity**

- 16.30 Scaling of Ohmic Tokamak Error-Field Penetration Thresholds in the Presence of Neoclassical Toroidal Viscosity C Hegna

16.50	Improved modelling of plasma response to error fields in NSTX and DIII-D	J Menard
17.10	Error sources and correction in DIII-D	M Schaffer
17.30	<b>Close</b>	

18.00-20.00     **Reception in GA cafeteria**     All

**Tuesday 22 May**

**Issues related to ITER Design Review**

8.30	Progress on the ITER Design Review	D Campbell (remote from Cadarache)
9.00	Short summaries of work and plans on issues related to design review	J Menard, and others (TBD)
9.30	Discussion on Design Review Issues	All (including D Campbell)
10.30	<b>Coffee</b>	

**NTMs**

11.00	NTM beta scaling in the hybrid regime	R La Haye
11.20	Effect of rotation on NTMs	R Buttery
11.40	Flow effects on NTMs	A Sen
12.00	<b>Lunch</b>	
13.00	NTMs in JT-60U	A Isayama
13.20	A closure scheme for modeling RF modifications to the fluid equations	C Hegna
13.40	Flow shear and tearing stability in DIII-D	R La Haye

**RWMs**

14.00	RWM stability and feedback with low momentum input in DIII-D	A Garofalo
14.40	RWM stability in JT-60U	G. Matsunaga
15.10	<b>Coffee</b>	
15.50	Recent error field and RWM physics results from NSTX	J Menard/ S Sabbagh

16.10	Effect of velocity profile on RWM stability	Y Liu
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### **Disruptions**

16.30	MHD simulations of disruption mitigation on DIII-D and Alcator C-Mod	V Izzo
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17.00	Disruption Database status and future plans	J Wesley/ A Hyatt
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17.30	<b>Close</b>	
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## **Wednesday 23 May**

### **Disruptions - Contd**

8.30	Disruption Database status and future plans -contd	J Wesley/ A Hyatt
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9.15	Guidelines for pre-disruption energy loss	V Riccardo
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9.30	MGI studies in DIII-D	T Jernigan
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9.50	Disruption discussion	All
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10.10	<b>Coffee</b>	
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### **RWMs - contd**

10.40	RWM code development and AUG RWM stabilisation plans	S Guenter
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11.00	Update on benchmarking of VALEN, MARS-F etc	J Bialek/Y Liu
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11.20	RWM rotation modelling in ITER	J Bialek
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11.40	RWM stabilization with 3D structures in ITER	A Portone
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12.00	Change in Mode Pattern Induced by Magnetic Feedback to the RWM	M Chu
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12.20	<b>Lunch</b>	
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13.20	Discussion on RWMs	All
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### **Sawteeth and fast particle**

14.00	Role of interchange and internal kink modes in the sawtooth	Ed Lazarus
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14.40	Giant sawteeth and their interaction with fast ions	B Heidbrink
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15.30	<b>Coffee</b>	
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16.00	MHD instabilities and fast ions losses in AUG	P Martin
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16.20	Fast particle stabilisation of sawteeth	T Hender (for I Chapman)
16.40	Discussion on joint ITPA/IEA experiments MDC-10 and 11	
17.00	<b>Close</b>	

#### Thursday 24 May

9.00	KSTAR and MHD Issues	OJ Kwon
9.20	ITER issues related to MHG Topical Group	Y Gribov
9.40	<b>Final discussion status of ITER Design Review Work</b>	All
10.40	<b>Coffee</b>	

#### 11.00 Joint ITPA/IEA expts – status

MDC-1	Disruption mitigation by massive gas jets	
MDC-2	Joint experiments on resistive wall mode physics	T Hender
MDC-3	Joint experiments on neoclassical tearing modes (including error field effects)	R Buttery
MDC-4	Neoclassical tearing mode physics – aspect ratio comparison	T Hender
MDC-5	Comparison of sawtooth control methods for neoclassical tearing mode suppression	T Hender
MDC-8	Current drive prevention/stabilisation of NTMs	
MDC-10	Measurement of damping rate of intermediate toroidal mode number Alfvén Eigenmodes	A Fasoli (presented by Hender)
MDC-11	Fast Ion Losses and redistribution from local AEs	
MDC-12	Non-resonant Magnetic Braking	T Hender

#### Closing session

Discuss Research Plan  
Next meetings  
AOB  
**End of meeting**