

Twelfth Meeting of the ITPA Topical Group on Diagnostics Princeton, 26 – 30 March 2007

A G E N D A

Monday 26 March

Progress Meeting on ITER relevant diagnostic developments in the USA

09:00	Welcome	R. Goldston
09:10	Overview of US ITER Project Efforts and Plans (15'+5')	D. Johnson
09:30	Review of Reference ITER ECE System Design (20'+10')	R. Ellis
10:00	The Utility of an Oblique ECE View on ITER (20'+10')	G. Taylor
10:30	<i>Coffee/Tea Break</i>	
11:00	Optimization of ITER Reflectometer Design (20'+10')	T. Peebles
11:30	Upper IR/Visible Endoscope Design (20'+10')	C. Lasnier
12:00	ITER Residual Gas Analyzer System (20'+10')	W. Gardner
12:30	<i>Lunch</i>	
13:30	Performance Simulation of ITER MSE Polarimetry (20'+10')	S. Scott
14:00	Revised Optical Design for ITER MSE System (20'+10')	S. Lerner/ K. Morris
14:30	MSE Using Precision Spectroscopy (20'+10')	H. Yuh/ J. Foley
15:00	Review and Revision of ITER Toroidal Interferometer Design Concepts (20'+10')	D. Brower
15:30	<i>Coffee/Tea Break</i>	
16:00	ITER Divertor Interferometer Design (20'+10')	D. Brower
16:30	CO ₂ Scattering on a Burning Plasma Device (20'+10')	E. Mazzucato
17:00	Update on ATTLA Benchmarking (20'+10')	R. Feder
17:30	Imaging X-Ray Crystal Spectrometer Developments (15'+5')	K. Hill
17:50	<i>Adjourn</i>	
18:30	<i>Reception at Dave Johnson's</i>	

Tuesday 27 March

Progress Meeting on ITER relevant diagnostic developments in the USA

09:00	SXR Arrays (15'+5')	D. Stutman
09:20	Plasma Wall Issues on ITER – Diagnostic Impacts (15'+5')	C. Skinner
09:40	US Burning Plasma Organization Diagnostic Activities (15'+5')	R. Boivin

12th Meeting of the ITPA Topical Group on Diagnostics

10:00	Welcome on behalf of ITPA, participants, meeting logistics (5')	A. Donné
	General introductory presentations	
10:05	Update of status of ITER and ITER Diagnostics (35'+15')	A. Costley
10:55	<i>Coffee/Tea Break</i>	
11:15	Update of status of diagnostic engineering (40'+5')	C. Walker
12:00	Report on the meeting of ITPA TG Steady-State Operations Chengdu Oct'06 (15'+5')	F. Orsitto
12:20	<i>Lunch</i>	

	HP: Development of methods of measuring the energy and density distribution of confined and escaping α's	
13:20	CXRS Diagnostics of Thermalised and Slowing-down Alphas making use of the HNB and DNB (25'+5')	M. von Hellermann
13:50	ITER Alpha Knock-On Tail Measurements Using Neutron Activation Techniques (25'+5')	R. Fisher
14:20	Collective Scattering (US Contributions) (25'+5')	P. Woskov
14:50	Fast ion collective Thomson scattering diagnostic for ITER (25' + 5')	S. Korsholm
15:20	Coffee/tea break – Break Out Session	
16:20	The feasibility of a lost alpha diagnostic (25' + 5')	R. Boivin
16:50	Lost Alpha Design Concepts (15' + 5')	E. Cecil/ D. Darrow
17:10	ICE as a Qualitative Alpha Loss Diagnostic (15' + 5')	W. Heidbrink
17:30	Discussion on Alpha Particle Diagnostics	
	HP: Assessment of the various options for the Vertical Neutron Camera to measure the 2D n/α source profile and asymmetries in this quantity, and assessment of the calibration strategy and calibration source strength needed	
18:00	Status of the integration of the Vertical Neutron Camera (15' + 5')	A.Krasilnikov
18:30	Adjourn	

Wednesday 28 March

	HP: Progress in the field of first mirrors	
09:00	Report of the First Mirror Working Group (25' + 5')	A. Litnovsky
09:30	Rhodium coated mirrors deposited by magnetron sputtering for fusion applications (25'+5')	L. Marot
10:00	Results of the mirror exposure and protection in HL-2A (15'+5')	Y. Zhou
10:20	Roadmap for the first mirror research (10' + 5')	A.Litnovsky
10:35	Coffee/Tea Break	
10:55	Mirror exposure in PISCES-B: the effect of Be deposition on the reflectivity of first Mirrors (10' + 5')	G. De Temmermann (pres. J. Brooks)
11:10	Simulations of MSE First Mirror Degradation (30'+5')	J. Brooks/ J. P. Allain
11:45	Update of the first mirror table of ITER (10' + 5')	T. Sugie
12:00	Reduction in Optical Reflectivity of Tungsten Mirror by He Irradiation and Its Mitigation (10'+5')	S. Takamura (Pres. T. Sugie)
12:15	Reduction and Recovery of Optical Reflectivity of Mo Mirror Irradiated by Low Energy Helium Ions (10'+5')	N. Yoshida (Pres. T. Sugie)
12:30	Lunch	
	HP: Development of measurement requirements for measurements of dust, and assessment of techniques for measurement of dust and erosion	
13:30	Speckle Interferometry and its potential application as erosion-redeposition diagnostic in ITER (25'+5')	E. Gauthier
14:00	Latest thinking from the IT on dust (15'+5')	A. Costley
14:20	Dust, its definition and detection (25'+5')	C. Skinner
14:50	HP: Review of outstanding radiation effects work for ITER (25'+5')	G. Vayakis
15:20	Coffee/Tea Break – Break Out Session	
16:20	<i>Report of the Specialists Working Group on Radiation Effects (25'+5')</i>	E. Hodgson (pres. B.

		Brichard)
16:50	Some results and aspects on Radiation Effects (25'+5')	K.Vukolov
17:20	Progress in the implementation of fibre-optic technology for ITER: use of hydrogen loading technique, radiation assessment of IR fibres for divertor thermography and integration of fibre optic current sensor for Magnetic Diagnostic (15' + 5')	B. Brichard
17:40	Discussion on high priority topics (20')	
	Party Reports on ITER Relevant Diagnostic Developments	
	<i>Development in China</i>	
18:00	Detailed design of neutron generator for <i>In-situ</i> calibration of NFM on ITER (15'+5')	X. Duan
18:30	Adjourn	
	<i>Meeting dinner at Carucci's Grill (40 \$ p.p.)</i>	

Thursday 29 March

	General Topics, Progress on on-going issues	
09:00	Update of measurement requirements (10' + 5')	A. Costley
09:15	Justifications for the measurement requirements related to fast ions in ITER (20'+5')	F. Orsitto
09:40	Discussion on measurement requirements (20')	
10:00	On-site test bed for ITER port plugs (10' +5')	A. Donné
	Party Reports on ITER Relevant Diagnostic Developments - 2	
10:15	<i>Developments in India (15'+5')</i>	S. Pathak
10:35	Coffee/tea break	
	<i>Developments in Europe</i>	
10:55	Progress on EFDA tasks on ITER diagnostics (25'+5')	L.C. Ingesson
11:25	Development and testing of in-vessel magnetic sensors for ITER (20'+5')	G. Chitarin
11:50	Report on the status of the programme of ITER relevant diagnostics on FTU (15')	F. Orsitto
	<i>Developments in Japan</i>	
12:05	Recent progress in JAEA (15'+5')	Y. Kawano
12:25	Lunch	
13:25	Recent Progress in ITER Diagnostics Development in Japan (15' + 5')	Y. Kusama
13:45	University activities in Japan (15' + 5')	
14:05	<i>Developments in Russia (35'+5')</i>	V.Zaveryaev A.Krasilnikov
14:45	Studies of the most critical elements of the NPA system for ITER (15'+5')	B. Lyublin (pres. V. Zaveryaev)
	Progress and Plans for the Specialist Working Groups	
	Reports from Chairmen and agree next activities (25' + 5') + Additional related reports	
15:05	<i>Thomson Scattering Working Group (25' + 5')</i>	M. Walsh
15:35	<i>Working Group on Beam-Aided Spectroscopy (25' + 5')</i>	M. von Hellermann
16:05	Coffee/Tea Break – break out session	
17:05	Tour to NSTX/NCSX	
18:30	Adjourn	

Friday 30 March

	Progress and Plans for the Specialist Working Groups - II	
09:00	<i>Working Group on Passive Spectroscopy (25' + 5')</i>	R. Barnsley
09:30	<i>Neutron Working Group (25' + 5')</i>	M. Sasao

10:00	<i>Reflectometry Working Group (25' + 5')</i>	G. Conway
10:30	<i>Coffee Break</i>	
10:50	Possibilities for divertor reflectometry (10'+5')	A. Donné
11:05	Review of Action Items	A. Donné
12:05	Forthcoming meetings (Date 13 th meeting, Location 14 th meeting)	A. Donné
12:15	Executive Summary of the Meeting	A. Donné
12:35	<i>Lunch – Meeting end</i>	