

## PROGRAMME COMMITTEE

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Kaw, P. K. (India) (chair)	Van Dam, J. (USA)

Day	Sunday 31 October 2004	Monday 1 November 2004	Tuesday 2 November 2004	Wednesday 3 November 2004	Thursday 4 November 2004	Friday 5 November 2004	Saturday 6 November 2004
8:30-10:20		WELCOME Fusion Pioneers Memorial Session (Chair: Kaw, P., India)	OV/4 (Matsuda, S., Japan)	TH/1 (Kishimoto, Y., Japan)	EX/5, TH/3 (Sautouic, B., France)	EX/8, TH/7 (Ohyabu, N., Japan)	EX/9 (Sanchez, J., Spain)
10:40-12:50	IFRC Meeting	OV/1 (Romanelli, F., Italy)	OV/5, EX/1 (Pan, C.H., China)	TH/2, EX/3 (Strait, E.J., USA)	EX/6, TH/4 (Marmar, E.S., USA)	TH/8, PD/1 (Lackner, K., Germany)	EX/10 (Singh, R., India)
14:15-16:10	IFRC Meeting	OV/2 (Sauthoff, N.R., USA)	EX/2 (Takamura, S., Japan)	EX/4 (Klinger, Th., Germany)	TH/5 (Chan, V. S., USA)	IF/1, FT/2 (Mima, K., Japan)	S/1 (Varandas, C., Portugal)
16:30-18:30	Registration (16:30-20:00)	OV/3 (Pellado, J.M., Spain)	FT/1 (Tran, M.Q., Switzerland)	IT/1 (Lee, G.S., Korea Rep.)	EX/7, TH/6 (Razumova, K., Russia)	FT/3 (Smirnov, V., Russia)	S/1 (cont.) Closing
		Reception	Social Programme	ITER Evening Session	Conference Dinner		
				Break			
				Coffee Break			
				Lunch			
				Coffee Break			

N

#### IAEA SECRETARIAT:

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#### LOCAL ORGANIZATION:

C. Varandas Host Government Liaison Officer  
M.F. Pinto Conference Site Issues  
C. Silva Satellite Meetings

#### WORKING LANGUAGE: English

**RESOLUTIONS:** No resolutions may be submitted for consideration on any subject; no votes will be taken.

## TIMETABLE

<b>SUNDAY, 31 October 2004</b>		<b>Page</b>
16:30	Registration	8
20:00	Close	
<b>MONDAY, 1 November 2004</b>		
08:30	Welcome	8
	Fusion Pioneers Memorial Session	8
10:40	Session OV/1 Magnetic Fusion Overview 1	8
14:15	Session OV/2 Magnetic Fusion Overview 2	10
16:30	Session OV/3 Magnetic Fusion Overview 3	10
<b>TUESDAY, 2 November 2004</b>		
08:30	Session OV/4 Magnetic Fusion Overview 4	12
	Poster Session Overview 1, 2, 3, 4, 5	8-14
10:40	Session OV/5, Inertial Fusion Overview 5, EX/1 Advanced Scenarios and Steady State	14
14:15	Session EX/2 Edge Localized Modes	16
16:30	Session FT/1 Fusion Technology	18
<b>WEDNESDAY, 3 November 2004</b>		
08:30	Session TH/1 Transport Theory	20
	Poster Session ELMs, Fusion Technology and Power Plant Design 1	28
10:40	Session EX/3, TH/2 Beta Limits	22
14:15	Session EX/4 Hybrid Scenarios, H-mode and Transport	24
	Poster Session Beta Limits, Advanced Scenarios, Configurational Effects on Transport	32
16:30	Session IT/1 ITER	26
<b>THURSDAY, 4 November 2004</b>		
08:30	Session EX/5, Alfvén Modes and Wave Heating TH/3	36
	Poster Session Hybrid Scenarios, ITER Activities, Safety, Environmental and Economic Aspects of Fusion	44
10:40	Session EX/6, Operational Limits and Momentum Transport TH/4	38
14:15	Session TH/5 Energetic Particles and Stability	40
	Poster Session Operational Limits, Heating and Current Drive, Fast Particles	50
16:30	Session EX/7, Neoclassical Tearing Modes TH/6	42

<b>FRIDAY, 5 November 2004</b>		<b>Page</b>
08:30	Session EX/8, Transport and Turbulence TH/7	56
	Poster Session Tearing Modes, Plasma Wall Interaction	64
10:40	Session TH/8, Turbulence Modelling PD/1	58
14:15	Session IF/1, Inertial Fusion FT/2	60
	Poster Session Turbulent Transport Theory, Turbulent Transport Experiment, Innovative Concepts	68
16:30	Session FT/3 Fusion Technology	62
<b>SATURDAY, 6 November 2004</b>		
08:30	Session EX/9 Configuration Effects and Transport	76
	Poster Session Fusion Technology and Power Plant Design 2, Inertial Fusion Exp. and Theory	82
10:40	Session EX/10 Plasma-wall Interaction	78
14:15	Session S/1 Summary	80
16:30	Session S/1 Summary	80
17:30	CLOSING	

### EXPLANATION OF SESSION ABBREVIATIONS

OV	Overview
EX	Magnetic Confinement Experiments
TH	Magnetic Confinement Theory and Modelling
IT	ITER Activities
IF	Inertial Fusion Experiments and Theory
IC	Innovative Confinement Concepts
FT	Fusion Technology and Power Plant Design
SE	Safety, Environmental and Economic Aspects of Fusion
PD	Post-deadline

## LIST OF CONTRIBUTIONS

- 3 special lectures
- 23 overview talks (with 3 rapporteured papers)
- 103 oral presentations (with 29 rapporteured papers)
- 288 regular poster presentations
- 158 additional posters from overview and oral presentations (including rapporteured papers)
- 5 summary talks

## EXPLANATIONS/REQUESTS

Overview posters will be exhibit during all meeting in a dedicated room.

The posters of the oral sessions are to be presented in the following day poster sessions (except for the Saturday oral presentation posters which are presented during session P5 & P6):

Session → Topics:

P1, P2 → EX/1, EX/2, FT/1

P3, P4 → EX/3, EX/4, TH/1, TH/2, TH/3, TH/4, IT/1,

P5, P6 → EX/5, EX/6, EX/7, EX/9, EX/10, TH/5, TH/6

P7 → EX/8, Th/7, Th/8, PD/1, IF/1, FT/2, FT/3

The duration of the oral presentation indicated in the programme includes already the estimated discussion time. The speakers are requested to make available the following times for discussions:

25' presentation includes 4' discussion time

18' presentation includes 3' discussion time

**Sunday, 31 October 2004**

**16:30 – 20:00 Registration**

**Monday, 1 November 2004**

**MORNING SESSIONS**

**08:30-10:20 Welcome/Fusion Pioneers Memorial Session  
Chair: P.K. Kaw, India**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
Welcome	Burkart, W.	IAEA		
FPM/1	Ferreira, C.M.	Portugal	20	ITER in the Route for Fusion Energy
FPM/2	Llewellyn Smith, C.	U.K.	30	The Fast Track to Fusion Power
FPM/3	Shimomura, Y.	ITER	30	ITER Towards the construction

**10:40-12:50 Session OV/1: Overview Magnetic Fusion  
Chair: F. Romanelli, Italy**

OV/1-1	Ide, S.	Japan	25	Overview of JT-60U Progress Towards Steady-state Advanced Tokamak
OV/1-2	Pamela, J.	EC / U.K.	25	Overview of JET results
OV/1-3	Luce, T.C.	USA	25	Development of Burning Plasma and Advanced Scenarios in the DIII-D Tokamak
OV/1-4	Motojima, O.	Japan	25	Confinement and MHD stability in the Large Helical Device
OV/1-5	Guenter, S.	Germany	25	Overview of ASDEX Upgrade Results

**Monday, 1 November 2004**

**AFTERNOON SESSIONS**

**14:15-16:10      Session OV/2: Overview Magnetic Fusion**  
**Chair: N.R. Sauthoff, USA**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
OV/2-1	Diamond, P.H.	USA	25	Overview of Zonal Flow Physics
OV/2-2	Jacquinet, J.	France	25	Steady-state operation of Tokamaks: key physics and technology developments on Tore Supra
OV/2-3	Kaye, S.M.	USA	25	Progress Towards High Performance Plasmas in the National Spherical Torus Experiment (NSTX)
OV/2-4	Counsell, G.F.	U.K.	25	Overview of MAST results
OV/2-5	Greenwald, M.J.	USA	25	Overview of Alcator C-Mod Research Program

**16:30-18:30      Session OV/3: Overview Inertial Fusion**  
**Chair: J. M. Perlado, Spain**

OV/3-1	Lindl, J.D.	USA	25	Recent Advances in Indirect Drive ICF Target Physics
OV/3-2	Izawa, Y.	Japan	25	Laser Fusion research with GEKKO XII and PW laser system at Osaka
OV/3-3	(McCrorry, R.L.), <u>Regan, S.P.</u>	USA	25	Direct-Drive Inertial Confinement Fusion Research at the Laboratory for Laser Energetics: Charting the Path to Thermonuclear Ignition
OV/3-4	Sharkov, B.Y.	Russian Federation	25	Acceleration Technology and Power Plant Design for Fast Ignition Heavy Ion Inertial Fusion Energy
OV/3-5Ra	<u>Olson, C.L.</u>	USA	25	Progress on Z-Pinch Inertial Fusion Energy
OV/3-5Rb	Haines, M.G.	U.K.		Wire Array Z pinch precursors, implosions and stagnation
OV/3-5Rc	Grabovski, E.V.	Russian Federation		The Research of Radiating Z Pinches for the Purposes of ICF

Tuesday, 2 November 2004

**MORNING SESSIONS**

**8:30-10:20**    **Session OV/4: Overview Magnetic Fusion**  
**Chair: S. Matsuda, Japan**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
OV/4-1	Stork, D.	U.K.	18	Overview of Transport, Fast Particle and Heating and Current Drive Physics using Tritium in JET plasmas
OV/4-2	Prager, S.C.	USA	18	Overview of Results in the MST Reversed Field Pinch Experiment
OV/4-3	(Alejaldre, C.), <u>Hidalgo, C.</u>	Spain	18	Overview of TJ-II experiments
OV/4-4	Vershkov, V.A.	Russian Federation	18	Summary of Experimental Core Turbulence Characteristics in OH and ECRH T-10 Tokamak Plasmas
OV/4-5	Moret, J.-M.	Switzerland	18	Progress in the understanding and the performance of ECH and plasma shaping on TCV
OV/4-6	Gomezano, C.	Italy	18	Overview of FTU results

**MORNING SESSIONS (continued)**

**10:40-12:50 Session OV/5, EX/1: Advanced Scenarios and Steady State**  
**Chair: Pan Chuanhong, China**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
OV/5-1Ra	<u>Liu, Y</u>	China	18	Recent Advances on the HL-2A Tokamak Experiments
OV/5-1Rb	Wan, B.N.	China		Overview of the last HT-7 experiments
OV/5-2	Zushi, H.	Japan	18	Overview of steady-state tokamak operation in TRIAM-1M
EX/1-1	Tuccillo, A. A.	Italy	18	Development on JET of Advanced Tokamak operations for ITER
EX/1-2	Murakami, M.	USA	18	100 Percent Non-inductive Operation at High Beta Using Off-axis ECCD
EX/1-3	Suzuki, T.	Japan	18	Steady State High betaN Discharges and Real-Time Control of Current Profile in JT-60U
EX/1-4	Suttrop, W.A.	Germany	18	Studies of the "Quiescent H-mode" regime in ASDEX Upgrade and JET
EX/1-5	(Harris, J. H.), <u>Yamada, H.</u>	Australia	18	Confinement Study of Net-Current Free Toroidal Plasmas Based on the Extended International Stellarator Database

Tuesday, 2 November 2004

**AFTERNOON SESSIONS**

**14:15-16:10** Session EX/2: Edge localized modes  
Chair: S. Takamura, Japan

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/2-1	Oyama, N.	Japan	18	Energy loss for grassy ELMs and effect of plasma rotation on the ELM characteristics in JT-60U
EX/2-2	Maingi, R.	USA	18	H-mode pedestal, ELM, and power threshold studies in NSTX
EX/2-3	Kirk, A.	U.K.	18	The structure of ELMs and the distribution of transient power loads in MAST
EX/2-4Ra	<u>Fundamenski, W.</u>	U.K.	18	Power Exhaust on JET: an Overview of Dedicated Experiments
EX/2-4Rb	Herrmann, A.	Germany		Wall and divertor heat load during ELMy H-mode and Disruptions in ASDEX Upgrade
EX/2-5Ra	<u>Evans, T.E.</u>	USA	18	Suppression of Large Edge Localized Modes With a Resonant Magnetic Perturbation in High Confinement DIII-D Plasmas
EX/2-5Rb	Fenstermacher, M. E.	USA		Structure, Stability and ELM Dynamics of the H-mode Pedestal in DIII-D
EX/2-6	Lang, P.T.	Germany	18	Integrated exhaust scenarios with actively controlled ELMs

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**AFTERNOON SESSIONS (continued)**

**16:30-18:30 Session FT/1: Fusion Technology**  
**Chair: M.Q.Tran, Switzerland**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
FT/1-1Ra	<u>Litvak, A.G.</u>	Russian Federation	18	New Results in Development of MW Output Power Gyrotrons for Fusion Systems
FT/1-1Rb	Kasugai, A.	Japan		Performance of 170 GHz high-power gyrotron for CW operation
FT/1-1Rc	Piosczyk, B.	Germany		Development of Steady-State 2-MW 170-GHz Gyrotrons for ITER
FT/1-2Ra	<u>Inoue, T.</u>	Japan	18	R&D on a High Energy Accelerator and a Large Negative Ion Source for ITER
FT/1-2Rb	Tsumori, K.	Japan		Improvement of Negative Ion Source with Multi-Slot Grids for LHD-NBI
FT/1-2Rc	Falter, H.D.	Germany		Status and plans for the development of an RF negative ion source for ITER NBI
FT/1-3	Goulding, R.H.	USA	18	Results and Implications of the JET ITER-Like ICRF Antenna High Power Prototype Tests
FT/1-4	Jitsukawa, S.J.	Japan	18	Progress of Reduced Activation Ferritic/Martensitic Steel Development in Japan
FT/1-5	Spätig, P.	Switzerland	18	Assessment of plastic flow and fracture properties with small specimen test techniques for IFMIF-designed specimens

Wednesday, 3 November 2004

**MORNING SESSIONS**

8:30 10:20 Session TH/1: Transport Theory  
Chair: Y. Kishimoto, Japan

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
TH/1-1	Callen, J.D.	USA	18	Paleoclassical Electron Heat Transport
TH/1-2	del-Castillo-Negrete, D.	USA	18	Non-diffusive transport in 3-D pressure driven plasma turbulence
TH/1-3Ra	<u>Ghendrih, Ph.</u>	France	18	Scaling Intermittent Cross-Field Particle Flux to ITER
TH/1-3Rb	Benkadda, S.	France		Non-linear Dynamics of Transport Barrier Relaxations in Fusion Plasmas
TH/1-3Rc	Becoulet, M.	France		Non-linear Heat Transport Modelling with Edge Localized Modes and Plasma Edge Control in Tokamaks
TH/1-3Rd	Falchetto, G.L.	France		Impact of zonal flows on turbulent transport in tokamaks
TH/1-4	Hahn, T.S.	USA	18	Gyrokinetic Studies of Turbulence in Steep Gradient Region: Role of Turbulence Spreading and ExB Shear
TH/1-5	(Xu, X.Q.), <u>T. Rognlien</u>	USA	18	Density effects on tokamak edge turbulence and transport with magnetic X-points
TH/1-6	Hayashi, N.	Japan	18	Profile Formation and Sustainment of Autonomous Tokamak Plasma with Current Hole Configuration

Wednesday, 3 November 2004

**MORNING SESSIONS (continued)**

10:40-12:50 Session TH/2, EX/3: Beta Limits  
Chair: E. J. Strait, USA

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/3-1Ra	<u>Okabayashi, M.</u>	USA	18	Control of the Resistive Wall Mode With Internal Coils in the DIII-D Tokamak
EX/3-1Rb	Reimerdes, H.	USA		Active Measurement of Resistive Wall Mode Stability in Rotating High Beta Plasmas
EX/3-2	Sabbagh, S.A.	USA	18	Wall Stabilized Operation in High Beta NSTX Plasmas
TH/2-1	Liu, Y.Q.	Sweden	18	Feedback and Rotational Stabilization of Resistive Wall Modes in ITER
TH/2-2	Strauss, H. R.	USA	18	Halo Current and Resistive Wall Simulations of ITER
EX/3-3	Watanabe, KY	Japan	18	Effects of global MHD instability on operational high-beta regime in LHD
EX/3-4	Zarnstorff, M.C.	USA	18	Equilibrium and Stability of High-Beta Plasmas in Wendelstein 7-AS
TH/2-3	Miura, H.	Japan	18	Non-disruptive MHD Dynamics in Inward-shifted LHD Configurations

Wednesday, 3 November 2004

**AFTERNOON SESSIONS**

**14:15-16:10 Session EX/4: Hybrid scenarios, H-mode and Transport**  
**Chair: T. Klingner, Germany**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/4-1	Wade, M.R.	USA	18	Development, Physics Basis, and Performance Projections for Hybrid Scenario Operation in ITER on DIII-D
EX/4-2	Joffrin, E. H.	France	18	The "hybrid" scenario in JET: towards its validation for ITER
EX/4-3	Sakamoto, Y	Japan	18	Stationary high confinement plasmas with large bootstrap current fraction in JT-60U
EX/4-4	Akers, R.J.	U.K.	18	Comparison of plasma performance and transport between tangential co- and counter-NBI heated MAST discharges
EX/4-5	Staebler, A.	Germany	18	The Improved H-Mode at ASDEX Upgrade: a Candidate for an ITER Hybrid Scenario
EX/4-6Ra	<u>Kamiya, K.</u>	Japan	18	Studies of HRS H-mode plasma in the JFT-2M tokamak
EX/4-6Rb	Ido, T.	Japan		Electrostatic fluctuation and fluctuation-induced particle flux during formation of the edge transport barrier in the JFT-2M tokamak

Wednesday, 3 November 2004

**AFTERNOON SESSIONS (continued)**

**16:30-18:30**    **Session IT/1: ITER**  
**Chair: G. S. Lee, Republic of Korea**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
IT/1-1	Shimada, M.	ITER/Japan	18	Progress in physics basis and its impact on ITER
IT/1-2	Saibene, G.	EC/Germany	18	Dimensionless identity experiments in JT-60U and JET
IT/1-3	Gordon, C.	ITER/Germany	18	ITER Licensing
IT/1-4	Mitchell, N.	ITER/Germany	18	Design of the ITER Magnets to Provide Plasma Operational Flexibility
IT/1-5	Ioki, K.	ITER/Germany	18	Convergence of Design and Fabrication Methods for ITER Vacuum Vessel and In-vessel Components

Wednesday, 3 November 2004

**MORNING POSTER SESSIONS**

**8:30-12:50**    **Poster Session EX/P1, TH/P1, FT/P1:**  
**ELMs, Fusion Technology and Power**  
**Plant Design 1**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P1-2	P. Monier-Garbet	France	Impurity-seeded ELMy H-modes in JET, with high density and sustainable heat load
EX/P1-3	E.R. Solano	Spain	ELMs, strike point jumps and SOL currents
EX/P1-4	J. Stober	Germany	Small ELM regimes with good confinement on JET and comparison to those on ASDEX Upgrade, Alcator C-mod, and JT-60U
TH/P1-1	M. Furukawa	Japan	Mechanism of stabilization of ballooning modes by toroidal rotation shear in tokamaks
TH/P1-5	H.R. Wilson	U.K.	Theory of Plasma Eruptions
FT/P1-6	K. Kizu	Japan	Development of advanced superconducting coil technologies for the National Centralized Tokamak
FT/P1-7	N. Koizumi	Japan	Development of advanced Nb3Al superconductors for a fusion demo plant
FT/P1-8	J.D. Jordanova	Bulgaria	Evaluation of Tritium Breeding and Irradiation Damage for the EU Water Cooled Lithium-Lead Blanket Module in ITER-FEAT
FT/P1-9	S.S. Suzuki	Japan	Key achievements in elementary R&Ds on water-cooled solid breeder blanket for ITER Test Blanket Module in JAERI
FT/P1-10	G. Kizane	Latvia	Operation problems of the blanket zone materials in an intense magnetic field
FT/P1-11	T. Nagasaka	Japan	Development of fabrication technology for low activation vanadium alloys as fusion blanket structural materials
FT/P1-12	S.S. Pinaev	Russian Federation	Basic Principles of Lead and Lead-Bismuth Eutectic Application in Blanket of Fusion Reactors
FT/P1-13	S. Sato	Japan	Experimental Studies on Tungsten-armour Impact on Nuclear Responses of Solid Breeding Blanket
FT/P1-15	R.B. Gomes	Portugal	Testing on ISTTOK of the liquid metal limiter concept

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**MORNING POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
FT/P1-16	Y. Hirooka	Japan	Steady state hydrogen plasma interactions with solid and liquid lithium
FT/P1-17	N. Ohno	Japan	Blister and Bubble Formation Mechanism on Tungsten Irradiated by High Flux Hydrogen / Deuterium and Helium Plasmas
FT/P1-18	B. Constantinescu	Romania	Studies On High Energy Proton Degradation In Optical Transmission Materials
FT/P1-19	T. Hino	Japan	In-vessel Tritium Inventory in ITER Evaluated by Deuterium Retention of Carbon Dust
FT/P1-20	T. Hirai	Germany	Dynamic erosion of plasma facing materials under ITER relevant thermal shock loads in electron beam facility JUDITH
FT/P1-21	A. Moeslang	Germany	Towards a Reduced Activation Structural Materials Database for Fusion Reactors
FT/P1-22	T. Nishitani	Japan	Integral Benchmark Experiments of the Japanese Evaluated Nuclear Data Library (JENDL)- 3.3 for the Fusion Reactor Design
FT/P1-23	J. Schlosser	France	Technologies for the ITER divertor vertical target Plasma Facing Components
FT/P1-24	T.T. Shikama	Japan	Development of optical diagnostic system for burning plasma machine
FT/P1-25	V. Slugen	Slovakia	Investigation of radiation damage in copper using MCNP4C2 and TRIM98.01 simulation codes
FT/P1-26	A. Voronin	Russian Federation	Plasma jet source parameters optimisation and experiments on injection into Globus-M spherical tokamak
FT/P1-27	Zengyu Xu	China	Recent Results in Plasma Facing Materials Studied at SWIP
FT/P1-28	W.H. Fietz	Germany	Use of High Temperature Superconductors for Future Fusion Magnet Systems
FT/P1-29	C. Tomastik	Austria	Oxidation of Beryllium – a Scanning Auger Investigation
FT/P1-30	B. Coppi	Italy	Advances in the Ignitor Program

Wednesday, 3 November 2004

**AFTERNOON POSTER SESSIONS**

**14:15-18:30** Poster Session EX/P2, TH/P2: Beta Limits, Advanced Scenarios, Configurational Effects on Transport

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P2-1	F. Crisanti	Italy	JET RF dominated scenarios and Ion ITB experiments with no external momentum input
EX/P2-5	D. Moreau	European Commission	Development of Integrated Real-Time Control of Internal Transport Barriers in Advanced Operation Scenarios on JET
EX/P2-7	P.A. Politzer	USA	Stationary, High Bootstrap Fraction Plasmas in DIII-D Without Inductive Current Control
EX/P2-8	D. Stutman	USA	Improved electron confinement in negative magnetic shear NSTX plasmas
EX/P2-11	A.R. Field	U.K.	Core Heat Transport in the MAST Spherical Tokamak
EX/P2-12	S. Inagaki	Japan	Comparison of Transient Electron Heat Transport in LHD Helical and JT-60U Tokamak Plasmas
EX/P2-14	S.V. Lebedev	Russian Federation	Neutral Beam Injection Heating in the TUMAN-3M
EX/P2-15	M. Nagata	Japan	Investigation of the Dynamics of Accelerated Compact Toroid Injected into the JFT-2M Tokamak Plasmas
EX/P2-16	I.C. Nascimento	Brazil	Influence Of Electrode Biasing On Plasma Parameters In The TCABR Tokamak
EX/P2-17	H. Sakakita	Japan	Characteristics of the TPE Reversed-Field Pinch Plasmas in Conventional and Improved Confinement Regimes
EX/P2-20	J.R. Drake	Sweden	Experimental and theoretical studies of active control of resistive wall mode growth in the EXTRAP T2R reversed- field pinch
EX/P2-21	J.R. Ferron	USA	Optimizing the Beta Limit in DIII-D Advanced Tokamak Discharges
EX/P2-22	T.C. Hender	U.K.	Resistive Wall Mode Studies in JET
EX/P2-26	J.E. Menard	USA	The role of flow and q profile in internal kink saturation in NSTX
EX/P2-27	V.V. Plyusnin	Portugal	Study of runaway electron generation process during major disruptions in JET

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P2-28	P.V. Savrukhin	Russian Federation	Non-thermal electrons and small-scale plasma perturbations during density limit disruptions in the T-10 tokamak
EX/P2-32	M. Takechi	Japan	MHD instabilities leading to disruption in JT-60U reversed shear plasmas
EX/P2-33	K. Tsuzuki	Japan	Compatibility of Reduced Activation Ferritic Steel Wall with High Performance Plasma on JFT-2M
TH/P2-2	J. Q. Dong	China	Sheared flow layer formation in tokamak plasmas with reversed magnetic shear
TH/P2-3	A. Fukuyama	Japan	Advanced Transport Modeling of Toroidal Plasmas with Transport Barriers
TH/P2-4	C.E. Kessel	USA	Advanced ST Plasma Scenario Simulations for NSTX
TH/P2-9	T.J.J. Tala	Finland	Progress in Transport Modelling of Internal Transport Barrier and Hybrid Scenario Plasmas in JET
TH/P2-10	T. Tuda	Japan	Pair Vortices Formation near magnetic Axis as an Explanation of the "Current Hole"
TH/P2-13	L.M. Kovrizhnykh	Russian Federation	Steady State Solutions to Neoclassical Transport Equations and Absence of Bifurcate Solutions for the Ambipolar Electric Field
TH/P2-18	S. Satake	Japan	Finite-Orbit-Width Effect and the Radial Electric Field in Neoclassical Transport Phenomena
TH/P2-19	R.B. White	USA	Transport in a small aspect ratio torus
TH/P2-23	J.J.E. Herrera Velazquez	Mexico	Instability Suppression by Sheared Flow in Dense Z-Pinch Devices
TH/P2-24	S.R. Hudson	USA	Influence of pressure-gradient and shear on ballooning stability in stellarators
TH/P2-25	S.E. Kruger	USA	Simulations of the Disruption of a DIII-D Plasma with the NIMROD Code
TH/P2-29	K.C. Shaing	USA	Toroidal Momentum Confinement in Tokamaks and Magnetic Reconnection
TH/P2-30	L.E. Sugiyama	USA	Two- fluid limits on stellarator performance: Explanation of three stellarator puzzles and comparison to axisymmetric plasmas
TH/P2-31	Y. Suzuki	Japan	Theoretical considerations of doublet-like configuration in stellarators

Thursday, 4 November 2004

**MORNING SESSIONS**

8:30-10:20    **Session EX/5, TH/3: Alfvén Modes and Wave Heating**  
Chair: B. Saoutic, France

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/5-1	Nazikian, R.	USA	18	Energetic Particle Driven Modes in Advanced Tokamak Regimes on JET, DIII-D, Alcator C-MOD and TFTR
EX/5-2Ra	<u>Sharapov, S.E.</u>	U.K.	18	Experimental studies of instabilities and confinement of energetic particles on JET and on MAST
EX/5-2Rb	Ishikawa, M.	Japan		Energetic Ion Transport by Alfvén Eigenmode Induced by Negative-Ion-Based Neutral Beam Injection in the JT-60U Reversed Shear and Weak Shear Plasmas
EX/5-3	Fredrickson, E.D.	USA	18	Study of aspect ratio effects on MHD instabilities
TH/3-1Ra	<u>Todo, Y.</u>	Japan	18	Nonperturbative effects of energetic ions on Alfvén eigenmodes
EX/5-4Rb	Yamamoto, S.	Japan		Configuration Dependence of Energetic Ion Driven Alfvén Eigenmodes in the Large Helical Device
EX/5-5	Pericoli Ridolfini, V.	Italy	18	LHCD and Coupling Experiments with an ITER-like PAM launcher on the FTU tokamak
EX/5-6	(Gusev, V.K.), <u>Dyachenko, V. V.</u>	Russian Federation	18	ICRH experiments on the spherical tokamak Globus-M

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**MORNING SESSIONS (continued)**

**10:40-12:50 Session EX/6, TH/4: Operational Limits and Momentum Transport**  
**Chair: E.S. Marmor, USA**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/6-1	Takenaga, H..	Japan	18	Compatibility of advanced tokamak plasma with high density and high radiation loss operation in JT-60U
EX/6-2	Peterson, B. J.	Japan	18	Density Limit Studies in the Large Helical Device
EX/6-3	Sartori, R.	EC/Germany	18	Scaling Study of ELMy H-Mode Global and Pedestal Confinement at high triangularity in JET
EX/6-4Ra	<u>Rice, J.E.</u>	USA	18	The Role of Rotation in the H-mode Transition in Different Magnetic Configurations and Anomalous Momentum Transport in Alcator C-Mod Plasmas with No Momentum In
EX/6-4Rb	deGrassie, J.S.	USA		Plasma Rotation in Electron Cyclotron Heated H-modes in DIII-D
EX/6-5	Wolf, R.C.	Germany	18	Effect of the Dynamic Ergodic Divertor in the TEXTOR Tokamak on MHD Stability, Plasma Rotation and Transport
EX/6-6	McDonald, D. C.	U.K.	18	Particle and Energy Transport in Dedicated rho*, beta and nu* Scans in JET ELMy H-modes
TH/4-1	Ernst, D.R.	USA	18	Mechanisms for ITB Formation and Control in Alcator C-Mod Identified through Gyrokinetic Simulations of TEM Turbulence

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**AFTERNOON SESSIONS**

**14:15-16:10 Session TH/5: Energetic Particles and Stability**  
**Chair: V. S. Chan, USA**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
TH/5-1	Zonca, F.	Italy	18	Transition from weak to strong energetic ion transport in burning plasmas
TH/5-2Ra	<u>Berk, H. L.</u>	USA	18	Theoretical Studies of Alfvén Wave - Energetic Particle Interactions
TH/5-2Rb	Gorelenkov, N. N.	USA		Fast ion effects on fishbones and n=1 kinks in JET simulated by a non-perturbative NOVA-KN code
TH/5-3	Nabais, F. J. R.	Portugal	18	Internal kink mode stability in the presence of ICRH driven fast ions populations
TH/5-4	Guzdar, P. N.	USA	18	Theory and Theory-based Models for the Pedestal, Edge Stability and ELMs in Tokamaks
TH/5-5	Connor, J.W.	U.K.	18	The stability of internal transport barriers to MHD ballooning modes and drift waves: a formalism for low magnetic shear and for velocity shear
TH/5-6	Nakajima, N.	Japan	18	Boundary modulation effects on MHD instabilities in Heliotrons

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**AFTERNOON SESSIONS (continued)**

**16:30-18:30** Session EX/7, TH/6: Neoclassical Tearing Modes  
Chair: K. Razumova, Russian Federation

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/7-1	Buttery, R.	U.K.	18	Cross-machine NTM physics studies and implications for ITER
TH/6-1	Sen, A.	India	18	Effect of sheared flows on neoclassical tearing modes
TH/6-2	Poli, E.	Germany	18	Kinetic Calculations of the NTM Polarisation Current: Reduction for Small Island Widths and Sign Reversal Near the Diamagnetic Frequency
TH/6-3	Pustovitov, V.D.	Russian Federation	18	A Possible Mechanism for the Seed Island Formation
EX/7-2	Maraschek, M.	Germany	18	Active Control of MHD Instabilities by ECCD in ASDEX Upgrade
EX/7-3	Petty, C.C.	USA	18	Onset and Suppression of 2/1 NTM in DIII-D
EX/7-4	Nagasaki, K.	Japan	18	Stabilization of Neoclassical Tearing Mode by Electron Cyclotron Current Drive and Its Evolution Simulation on JT-60U Tokamak

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**MORNING POSTER SESSIONS**

**8:30-12:50**    **Session EX/P3, TH/P3, IT/P3, SE/P3:  
Hybrid Scenarios, ITER Activities, Safety,  
Environmental and Economic  
Aspects of Fusion**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P3-2	X. Gong	China	Plasma Performance Improvement with Neon Gas Puffing in HT-7
EX/P3-3	M.A. Henderson	Switzerland	Rapid eITB formation during magnetic shear reversal in fully non-inductive TCV discharges
EX/P3-4	L.D. Horton	Germany	Characterisation of the H-mode Edge Barrier at ASDEX Upgrade
EX/P3-8	H. Meyer	U.K.	H-mode transition physics close to DN on MAST and its applications to other tokamaks
EX/P3-10	A.G. Peeters	Germany	Understanding of the density profile shape, electron heat transport and internal transport barriers observed in ASDEX Upgrade
EX/P3-11	F.G. Rimini	France	Development of Internal Transport Barrier scenarios at ITER-relevant high triangularity in JET
EX/P3-12	T. Shimozuma	Japan	Transition Phenomena and Thermal Transport Property in LHD Plasmas with an Electron Internal Transport Barrier
EX/P3-14	W.P. West	USA	Edge Stability and Performance of the ELM-Free Quiescent H-Mode and the Quiescent Double Barrier Mode on DIII-D
TH/P3-1	V.F. Andreev	Russian Federation	The evolution of the transport coefficients for the transient process after the ECRH switching on/off in tokamak T-10
TH/P3-5	W. Horton	USA	Electron Thermal Transport in Tore Supra and NSTX
TH/P3-6	D. Kalupin	Germany	Self-consistent modelling of L-H transition and H-mode pedestal characteristics
TH/P3-7	T.P. Kiviniemi	Finland	Particle simulation of plasma turbulence and neoclassical $E_r$ at tokamak plasma edge
TH/P3-9	P.B. Parks	USA	Recent Advances in the Theory and Simulation of Pellet Ablation and Fast Fuel Relocation in Tokamaks

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**MORNING POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IT/P3-16	W. Bohmeyer	Germany	Transport and Deposition of Hydrocarbons in the Plasma Generator PSI-2: Experiment and Modelling
IT/P3-17	Chr. Day	Germany	Validated Design of the ITER Main Vacuum Pumping Systems
IT/P3-18	R.P. Doerner	USA	Carbon Erosion Mitigation by Beryllium Layer Formation in ITER
IT/P3-19	A.J.H. Donne	Netherlands	Progress with High Priority R&D Topics in Support of ITER/BPX Diagnostic Development
IT/P3-20	L. Giancarli	France	Objectives and Progress of the ITER Test Blanket Working Group Activities
IT/P3-21	A.E. Gorodetsky	Russian Federation	Interaction of atomic hydrogen with charcoal at 77K
IT/P3-22	Y. Gribov	ITER	Study of ITER RWM control with semi-analytical models
IT/P3-23	A.V. Krasilnikov	Russian Federation	Status of ITER Neutron Diagnostic Development
IT/P3-24	A.S. Kukushkin	Russian Federation	Modelling Studies of ITER Divertor Plasma
IT/P3-25	G.W. Pacher	Canada	Modelling of ITER Improved H-mode Operation with the Integrated Core Pedestal SOL Model
IT/P3-26	I.S. Landman	Germany	Numerical simulations for ITER divertor armour erosion and SOL contamination due to disruptions and ELMs
IT/P3-27	D.Kh. Morozov	Russian Federation	Modeling of Noble Gas Injection into Tokamak Plasmas
IT/P3-28	A.R. Polevoi	ITER	Requirements for pellet injection in ITER scenarios with enhanced particle confinement
IT/P3-29	M. Sugihara	ITER	Analysis of Disruption Scenarios and Their Mitigation in ITER
IT/P3-30	A.M. Zhitlukhin	Russian Federation	Experimental assessment of the effects of ELMs and disruptions on ITER divertor armour materials
IT/P3-31	G. Vlad	Italy	Effects of Alpha Particle Transport Driven by Alfvénic Instabilities on Proposed Burning Plasma Scenarios on ITER
IT/P3-32	J.G. Cordey	U.K.	The scaling of confinement in ITER with $\beta$ and collisionality
IT/P3-33	W.A. Houlberg	USA	Integrated modelling of the current profile in steady-state and hybrid ITER scenarios
IT/P3-34	A. Loarte	European Commission	Expected energy fluxes onto ITER Plasma Facing Components during disruption thermal quenches from multi-machine data comparisons

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**MORNING POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IT/P3-35	Y.R. Martin	Switzerland	H-mode threshold power dependences in ITPA threshold database
IT/P3-36	A.C.C. Sips	Germany	Study of advanced tokamak performance using the International Tokamak Physics Activity database
IT/P3-37	J.E. Kinsey	USA	Transport Modeling and Gyrokinetic Analysis of Advanced High Performance Tokamak Discharges
IT/P3-42	J. Kallne	Sweden	Advanced neutron diagnostics for ITER fusion experiments
SE/P3-15	M.T. Porfiri	Italy	Benchmark calculation for spills of cryogenic He into the ITER VV used as basis for an experimental
SE/P3-38	I. Cook	U.K.	Fusion power in a sustainable future
SE/P3-39	C. Eherer	Austria	Nuclear Fusion as New Energy Option in a Global Single-Regional Energy System Model
SE/P3-40	R. Hiwatari	Japan	Introduction condition of a tokamak fusion power plant as an advanced technology in world energy scenario
SE/P3-41	J.A. Schmidt	USA	Socio-economic Aspects of Fusion

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**AFTERNOON POSTER SESSIONS**

**14:15-18:30 Session OV/P4 EX/P4, TH/P4: Operational Limits, Heating and Current Drive, Fast Particles**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
OV/P4-9	A. Murari	Italy	New developments in JET Neutron, Alpha Particle and Fuel Mixture Diagnostics with potential relevance to ITER
EX/P4-1	P. K. Atrey	India	Experiments on tokamak ADITYA
EX/P4-3	T. Fujita	Japan	Stiffness of Central Current and Temperature Profiles in JT-60U Current Hole Plasmas
EX/P4-4	E. Giovannozzi	Italy	Pellet Ablation in FTU discharges
EX/P4-5	B. Gonçalves	Portugal	On the momentum re-distribution via turbulence in fusion plasmas: experiments in JET and TJ-II
EX/P4-6	K. Ida	Japan	Control of the radial electric field shear by modification of the magnetic field configuration in LHD
EX/P4-8	A.V. Melnikov	Russian Federation	Investigation of the Specific Plasma Potential Oscillations with Frequencies near 20KHz by Heavy Ion Beam Probing in T-10
EX/P4-10	W.M. Solomon	USA	Experimental Test of Neoclassical Theory of Poloidal Rotation in Tokamaks
EX/P4-11	Y. Takeiri	Japan	High-ion temperature experiments with negative-ion-based NBI in LHD
EX/P4-12	J.L. Terry	USA	Transport Phenomena In The Edge Of Alcator C-Mod Plasmas
EX/P4-13	M. Valisa	Italy	The Greenwald density limit in the Reverse Field Pinch
EX/P4-14	D. van Houtte	France	1 GJ long pulse control on Tore Supra
EX/P4-15	J. K. Xie	China	Investigation of plasma performance in high $I_p$ scenario in HT-7
EX/P4-17	S. Alberti	Switzerland	Third-harmonic, top-launch, ECRH experiments on TCV Tokamak
EX/P4-19	B.J. Ding	China	Experimental study of a lower hybrid wave multi-junction coupler in the HT-7 tokamak
EX/P4-21	(Qingdi Gao), <u>Aike Wang</u>	China	Modelling of Profile Control with LH Wave Injection in the HL-2A Single- null Divertor
EX/P4-22	G. Giruzzi	France	Synergy between Electron Cyclotron and Lower Hybrid current drive on Tore Supra

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P4-23	E.Z. Gusakov	Russian Federation	Upper Hybrid Resonance back scattering Enhanced Doppler Effect and plasma rotation diagnostics at FT-2 tokamak
EX/P4-24	V.K. Gusev	Russian Federation	Plasma Heating and Fuelling in the Globus-M spherical Tokamak
EX/P4-25	K. Hanada	Japan	Transport barrier formation and its maintenance by LHCD on TRIAM-1M
EX/P4-26	P.U. Lamalle	Belgium	Expanding the operating space of ICRF on JET with a view to ITER
EX/P4-27	T. Maekawa	Japan	Formation of Spherical Tokamak Equilibria by ECH in the LATE Device
EX/P4-28	J. Mailloux	U.K.	ITER Relevant Coupling of Lower Hybrid Waves in JET
EX/P4-29	S.G. Maltsev	Russian Federation	ICR Heating at the Fundamental Frequency of T-11M Hydrogen Plasma
EX/P4-32	M. Porkolab	USA	Mode Conversion, Current Drive and Flow Drive with High Power ICRF Waves in Alcator C-Mod: Experimental Measurements and Modelling
EX/P4-34	Y. Takase	Japan	Development of a Completely CS-less Tokamak Operation in JT-60U
EX/P4-36	X.D. Zhang	China	Experiments of full non-inductive current drive on HT-7
EX/P4-37	D. Borba	Portugal	Destabilisation of TAE modes using ICRH in ASDEX Upgrade
EX/P4-41	S. Kobayashi	Japan	Studies of high energy ions in Heliotron J
EX/P4-44	M. Osakabe	Japan	Classical and non-classical confinement properties of energetic ions on LHD
EX/P4-45	D.S. Testa	Switzerland	Experimental Studies of Alfvén Mode Stability in the JET Tokamak
EX/P4-47	T. Watanabe	Japan	Magnetic Field Structure and Confinement of Energetic Particles in LHD
TH/P4-2	U. Daybelge	Turkey	Effects of Steep Gradients and Stochasticity on the Rotation Dynamics of Collisional Tokamak
TH/P4-7	G.O. Ludwig	Brazil	Modelling and measurement of eddy currents in the ETE spherical tokamak

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
TH/P4-18	J. Dies	Spain	Importance of Electron Cyclotron Wave Energy Transport in ITER
TH/P4-20	R. Farengo	Argentina	Theoretical Studies of non Inductive Current Drive by Oscillating Magnetic Fields, Neutral Beams and Helicity Injection in High Beta Plasmas
TH/P4-30	S. Murakami	Japan	A Global Simulation of ICRF Heating in a 3D Magnetic Configuration
TH/P4-31	Lj. Nikolic	Serbia and Montenegro	On Electron-Cyclotron Waves In Relativistic Non-Thermal Tokamak Plasmas
TH/P4-33	A.K. Ram	USA	Current Drive by Electron Bernstein Waves in Spherical Tori
TH/P4-35	J.C.W. Wright	U.K.	Non thermal Particle and Full-Wave Diffraction Effects on Heating and Current Drive in the ICRF and LHRF Regimes
TH/P4-38	G.Y. Fu	USA	Global Hybrid Simulations of Energetic Particle-driven Modes in Toroidal Plasmas
TH/P4-39	P. Helander	U.K.	Runaway electron generation in tokamak disruptions
TH/P4-40	T.Ak.K. Hellsten	Sweden	Non-Linear Study of Fast Particle Excitation of Global Alfvén Eigenmodes During ICRH
TH/P4-42	Y.I. Kolesnichenko	Ukraine	Non-conventional fishbone instabilities
TH/P4-43	S.V. Kononov	Russian Federation	Influence Of Anomalous Transport Phenomena On Onset Of Neoclassical Tearing Modes In Tokamaks
TH/P4-46	S. Tokuda	Japan	External mode analysis in a tokamak by the Newcomb equation
TH/P4-48	Y.V. Yakovenko	Ukraine	Confinement Relevant Alfvén Instabilities in Wendelstein 7-AS
TH/P4-49	V. Yavorskij	Austria	Confinement of Charged Fusion Products in Reversed Shear Tokamak Plasmas

Friday, 5 November 2004

**MORNING SESSIONS**

8:30-10:20 Session EX/8, TH/7: Transport and Turbulence  
Chair: N. Ohya, Japan

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/8-1	Castejón, F.	Spain	18	On the influence of the magnetic topology on transport and radial electric fields in the TJ-II stellarator
EX/8-2	Hoang, G.T.	France	18	Turbulent Particle Transport in Tore Supra
EX/8-3	Gerhardt, S.P.	USA	18	Measurement and Modeling of Electrode Biased Discharges in the HSX Stellarator
EX/8-4Ra	<u>Antoni, V.</u>	Italy	18	Turbulent transport and plasma flow in the Reversed Field Pinch
EX/8-4Rb	Xu, G.S.	China		Generation of Sheared Poloidal Flows by Electrostatic and Magnetic Reynolds Stress in the Boundary Plasma of HT-7 Tokamak
EX/8-5Ra	<u>Okamura, S.</u>	Japan	18	Edge and Internal Transport Barrier Formation in CHS
EX/8-5Rb	Fujisawa, A.	Japan		Experimental Studies of Zonal Flows in CHS and JIPPT-IIU
TH/7-1	Scott, B.D.	Germany	18	The Confluence of Edge and Core Turbulence and Zonal Flows in Tokamaks

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**MORNING SESSIONS (continued)**

10:40-12:50 Session TH/8, PD/1: Turbulence Modelling  
Chair: K. Lackner, Germany

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
TH/8-1	Idomura, Y.	Japan	18	Global Gyrokinetic Simulations of Toroidal Electron Temperature Gradient Driven Mode in Reversed Shear Tokamaks
TH/8-2	Waltz, R.E.	USA	18	Advances in Comprehensive Gyrokinetic Simulations of Transport in Tokamaks
TH/8-3Ra	<u>Hamaguchi, S.</u>	Japan	18	Intermittent Transport and Relaxation Oscillations of Nonlinear Reduced Models for Fusion Plasmas
TH/8-3Rb	Watanabe T.-H.	Japan		Velocity-Space Structures of Distribution Function in Toroidal Ion Temperature Gradient Turbulence
TH/8-4	Lin, Z.	USA	18	Electron Thermal Transport in Tokamak: ETG or TEM Turbulences?
TH/8-5Ra	<u>J. Q. Li</u>	China	18	Dynamics of large-scale structure and electron transport in tokamak microturbulence simulations
TH/8-5Rb	Miyato, N.	Japan		Study of drift wave-zonal mode system based on global electromagnetic Landau-fluid ITG simulation in toroidal plasmas
PD/1-1	(Hastie, R. J.) <u>Porcelli, F.</u>	Italy	18	Non linear stability of tearing mode islands
PD/1-2	<u>Idei, H.</u>	Japan	18	Fundamental X-mode Electron Cyclotron Current Drive using Remote-Steering Symmetric Direction Antenna at Larger Steering Angles

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**AFTERNOON SESSIONS**

**14:15-16:10** Session IF/1, FT/2: Inertial Fusion  
Chair: K. Mima, Japan

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
IF/1-1Ra	<u>Azechi, H.</u>	Japan	18	New Mitigation Schemes of the Ablative Rayleigh-Taylor Instability
IF/1-1Rb	Li, D.	China		Effects of Magnetic Field, Shear Flow and Ablative Flow on the Rayleigh-Taylor Instability
IF/1-2	Logan, B.G.	USA	18	Overview of U.S. Heavy-Ion Fusion Progress
IF/1-3	Holstein, P.A.	France	18	Update on LMJ Target Physics
IF/1-4Ra	<u>Tanaka, K.</u>	Japan	18	Direct Heating and Basic Experiments for Fast Ignition
IF/1-4Rb	Key, M.H.	USA		Comparative Study of Electron and Proton Heating for Fast Ignition
IF/1-5	Nakao, Y.	Japan	18	Two-Dimensional Fokker-Planck Analysis of Core Plasma Heating by Relativistic Electrons
FT/2-1Ra	<u>Kilkenny, J.D.</u>	USA	18	From One-of-a-kind to 500,000 High Quality Ignition Targets Per Day
FT/2-1Rb	Norimatsu, T.	Japan		Development of Key Technologies in DPSSL System for Fast-ignition, Laser Fusion Reactor-FIREX, HALNA, and Protection of Final Optics

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**AFTERNOON SESSIONS (continued)**

**16:30:18:30 Session FT/3: Fusion Technology**  
**Chair: V. Smirnov, Russian Federation**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
FT/3-1Ra	<u>Wilson, H.R.</u>	U.K.	18	The Spherical Tokamak as a Components Test Facility
FT/3-1Rb	Peng, Y.-K.M.	USA		Physics and Engineering Assessments of Spherical Torus Component Test Facility
FT/3-2	Oh, Y.K.	Republic of Korea	18	Result of the KSTAR Superconducting Coil Tests
FT/3-3	(Y. X. Wan), <u>Wu, S. T.</u>	China	18	Progress of the EAST project in China
FT/3-4Ra	<u>Saxena, Y.C.</u>	India	18	First experiments with SST-1 Tokamak
FT/3-4Rb	Pradhan, S.	India		Superconducting Magnets of SST-1 Tokamak
FT/3-5	Wagner, F.	Germany	18	Physics, technologies and status of the Wendelstein 7-X device
FT/3-6	Sagara, A.	Japan	18	Improved Structure and Long-life Blanket Concepts for Heliotron Reactors

Friday, 5 November 2004

**MORNING POSTER SESSIONS**

**8:30-12:50 Session EX/P5, TH/P5, FT/P5: Tearing Modes,  
Plasma Wall Interaction**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P5-1	P. Buratti	Italy	Observation of high-frequency secondary modes during strong tearing mode activity in FTU plasmas without fast ions
EX/P5-3	D. Craig	USA	New observations concerning the origin and consequences of MHD activity in the MST Reversed Field Pinch
EX/P5-4	W.X. Ding	USA	Two-Fluid Hall Effect on Plasma Relaxation in a High-Temperature Plasma
EX/P5-5	A. Kumar Hui	India	Correlation of Electron Super-thermal Activities with Magnetic Turbulence and MHD Processes in SINP Tokamak
EX/P5-6	I.H. Hutchinson	USA	Asymmetric-Field Mode Locking in Alcator C-Mod
EX/P5-7	E. Kawamori	Japan	Ion Kinetic Effect on Bifurcated Relaxation to a Field-Reversed Configuration in TS-4CT experiment
EX/P5-8	P. Khorshid	Iran	Effect of Viscosity on Magnetohydrodynamics Behavior During Limiter Biasing in the CT-6B Tokamak
EX/P5-9	G.S. Kirnev	Russian Federation	Experimental Investigations of Plasma Periphery in the T-10 Tokamak
EX/P5-11	E.A. Lazarus	USA	Sawtooth Physics and Plasma Shapes
EX/P5-12	Yi Liu	China	Snake Perturbations during Pellet injection and LHCD in the HL-1M Tokamak
EX/P5-13	M.E. Mael	USA	Dynamics and Control of Resistive Wall Modes with Magnetic Feedback Control Coils: Experiment and Theory
EX/P5-14	Y. Nagayama	Japan	Experiment of Magnetic Island Formation in LHD
EX/P5-15	T. Oikawa	Japan	Observation of Current Profile Evolution Associated with Magnetic Island Formation in Tearing Mode Discharges on JT-60U
EX/P5-16	E. Westerhof	Netherlands	Observation and manipulation of mesoscale structures in TEXTOR
EX/P5-19	M. Groth	USA	Implications of Wall Recycling and Carbon Source Locations on Core Plasma Fuelling and Impurity Content in DIII-D
EX/P5-20	G.S. Kirnev	Russian Federation	Comparison of Plasma Turbulence in the Low- and High-Field Scrape-off Layer in T-10

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**MORNING POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P5-21	B.N. Kolbasov	Russian Federation	Structure, phase analysis and component composition of multi-layer films depositing in tokamak T-10
EX/P5-22	Th. Loarer	France	Overview of gas balance in plasma fusion devices
EX/P5-23	R. Majeski	USA	Liquid Lithium Limiter Experiments In CDX-U
EX/P5-24	M. Mayer	Germany	Carbon deposition and deuterium inventory in ASDEX Upgrade
EX/P5-25	S.V. Mirnov	Russian Federation	Experiments with Lithium Limiter on T-11M Tokamak
EX/P5-27	T.W. Petrie	USA	Variation in Particle Control With Changes in Divertor Geometry
EX/P5-29	D.L. Rudakov	USA	Far SOL Transport and Main Wall Plasma Interaction in DIII-D
EX/P5-30	M. Sakamoto	Japan	Toroidal Structure of Hydrogen Recycling in ultra-long discharges on TRIAM-1M
EX/P5-32	T. Tanabe	Japan	Retention of hydrogen isotopes (H,D,T) and carbon erosion/deposition in JT-60U
EX/P5-33	B. Unterberg	Germany	Impact Of The Dynamic Ergodic Divertor On The Plasma Edge In The Tokamak TEXTOR
EX/P5-34	N. Yoshida	Japan	Microscopic Modification of Wall Surface by Glow Discharge Cleaning and its Impact on Vacuum Properties of LHD
EX/P5-35	B. Yuan	China	Plasma Boundary Determination on HL-2A
TH/P5-2	R.M.D.A. Coelho	Portugal	Mode coupling effects on the triggering of neoclassical tearing modes and plasma momentum braking
TH/P5-10	S.V. Konovalov	Russian Federation	Developmen tOf Theory Of Reversed-Shear Alfvén Eigenmodes
TH/P5-17	M. Yagi	Japan	Nonlinear Simulation of Tearing Mode and m=1 Kink Mode Based on Kinetic RMHD Model
TH/P5-18	D.P. Coster	Germany	Integrated modelling of material migration and target plate power handling at JET
TH/P5-26	D.Kh. Morozov	Russian Federation	Propagation and stability of perturbations in radiative plasmas
TH/P5-31	R. Singh	India	Radiative Improved Mode in a Tokamak :a theoretical model
FT/P5-36	V. Slugen	Slovakia	Grain boundary sliding and migration in copper: Effect of vacancy

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**AFTERNOON POSTER SESSIONS**

**14:15-18:30 Session OV/P6, EX/P6, TH/P6, IC/P6, FT/P6:  
Turbulent Transport Theory, Turbulent  
Transport Experiment, Innovative Concepts**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
OV/P6-15	M. Gryaznevich	U.K	Joint Research Using Small Tokamaks
EX/P6-12	S. Cirant	Italy	Shear modulation experiments with ECCD on TCV
EX/P6-13	J.C. DeBoo	USA	Search for a Critical T <sub>e</sub> Gradient in DIII-D L-Mode Discharges
EX/P6-14	R. Dux	Germany	Impurity Transport and Control in ASDEX Upgrade
EX/P6-16	F. Imbeaux	France	Nonlinear electron temperature oscillations on Tore Supra: experimental observations and modelling by the CRONOS code
EX/P6-17	A. Jacchia	Italy	Electron Heat Transport Studies Using Transient Phenomena In ASDEX Upgrade
EX/P6-18	P. Mantica	Italy	Progress in understanding heat transport at JET
EX/P6-19	S.V. Mirnov	Russian Federation	Study of an Anomalous Pinch Effect in the T-11M Tokamak
EX/P6-20	I. Nunes	Portugal	Density Profile Evolution During Dynamic Processes in ASDEX Upgrade
EX/P6-21	M.A. Pedrosa	Spain	Radial electric fields and improved confinement regimes in the TJ-II stellarator
EX/P6-22	G. Por	Hungary	Amplitude correlation analysis of W7-AS Mirnov-coil array data and other transport relevant diagnostics
EX/P6-23	T.L. Rhodes	USA	Comparison of Broad Spectrum Turbulence Measurements (0.40cm <sup>-1</sup> ), Gyro-kinetic Code Predictions, and Transport Properties from the DIII-D Tokamak
EX/P6-24	M. Romanelli	Italy	Studies of confinement and turbulence in FTU high field high density plasmas
EX/P6-25	R. Sabot	France	Measurements of density profile and density fluctuations in Tore Supra with reflectometry
EX/P6-26	D.A. Shelukhin	Russian Federation	Turbulence suppression in discharges with o-axis ECR heating on T-10 tokamak device
EX/P6-27	N.N. Skvortsova	Russian Federation	Low-Frequency Structural Plasma Turbulence in the L-2M Stellarator

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
EX/P6-28	K. Tanaka	Japan	Experimental study of particle transport and density fluctuation in LHD
EX/P6-29	R.J. Taylor	USA	Observation of neoclassical ion pinch in the Electric Tokamak
EX/P6-30	M. Valovic	U.K.	Energy and Particle Confinement in MAST
EX/P6-31	J.H. Weisen	Switzerland	Anomalous particle and impurity transport in JET
EX/P6-32	B. Zurro	Spain	Impurity transport and confinement in the TJ-II Stellarator
TH/P6-1	R.L. Dewar	Australia	Complex nonlinear Lagrangian for the Hasegawa-Mima equation
TH/P6-2	D.A. D'ippolito	USA	Convective Transport in Tokamaks
TH/P6-3	K. Hallatschek	Germany	Forces on Zonal Flows in Tokamak Core Turbulence
TH/P6-4	A. Hirose	Canada	On dependence of thermal transport on the safety factor q in tokamaks
TH/P6-5	C. Holland	USA	Multiscale Studies of ETG and Drift Wave Turbulence and Transport Bifurcation Dynamics
TH/P6-6	W.M. Nevins	USA	Statistical Analysis of ITG Turbulence
TH/P6-7	Y. Sarazin	France	Thermodynamical properties of gyrokinetic simulations in magnetized plasmas
TH/P6-8	R.V. Shurygin	Russian Federation	Numerical simulation of the electromagnetic plasma at the edge of tokamak
TH/P6-9	P.W. Terry	USA	A Comprehensive Spectral Theory of Zonal-Mode Dynamics in Trapped Electron Mode Turbulence
TH/P6-10	B.Ph. Van Milligen	Spain	Transport up the gradient and probabilistic transport models for fusion
TH/P6-11	Aike Wang	China	Synergistic effects of magnetic and velocity shear on electromagnetic drift modes in tokamaks
TH/P6-13	C. Sozzi	Italy	Experimental Observations Related To The Thermodynamic Properties Of The Tokamak
TH/P6-39	C.S. Chang	USA	Monte Carlo Particle Simulation of Neoclassical Edge Pedestal Formation Dynamics and Pedestal Scaling Law
TH/P6-55	Y.N. Dnestrovskij	Russian Federation	Simulation of Internal Transport Barriers by the Canonical Profiles Transport Model

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
TH/P6-56	A.B. Kukushkin	Russian Federation	Influence of Suprathermal Electrons Kinetics on Cyclotron Radiation Transport in Hot Toroidal Plasmas
IC/P6-6	S. Okada	Japan	Sustainment and Additional Heating of High-Beta Field-Reversed Configuration Plasmas
IC/P6-16	Z. Yoshida	Japan	Potential control and flow generation in a toroidal internal-coil system – a new approach to high-beta equilibrium
IC/P6-33	P.M. Bellan	USA	Identification of the sequence of steps intrinsic to spheromak formation
IC/P6-34	E.V. Belova	USA	Numerical Study of the Formation, Ion Spin-up and Nonlinear Stability Properties of Field- Reversed Configurations
IC/P6-35	W. Choe	Republic of Korea	Solenoid-Free Toroidal Plasma Start-Up Concept Utilizing only the Outer Poloidal Field Coils
IC/P6-36	E. Del Bosco	Brazil	Present status of operation of the ETE spherical tokamak
IC/P6-37	R.F. Ellis	USA	Steady Supersonic Rotation in the Maryland Centrifugal Experiment
IC/P6-40	D.L. Grekov	Ukraine	High frequency way of helium ash removal from stellarator-reactor
IC/P6-41	A.L. Hoffman	USA	Long Pulse FRC Sustainment with Enhanced Edge Driven Rotating Magnetic Field Current
IC/P6-42	T.R. Jarboe	USA	Recent Results from the HIT-II and HIT-SI Helicity Injection Current Drive Experiments
IC/P6-43	M.T. Kotschenreuther	USA	Scrape Off Layer Physics for Burning Plasmas and Innovative Divertor Solutions
IC/P6-44	Y. Ono	Japan	Direct Access to Burning Spherical Tokamak Experiment by Pulsed High-Power Heating of Magnetic Reconnection
IC/P6-45	N. Pomphrey	USA	Plasma Control for NCSX and Development of Equilibrium Reconstruction for Stellarators
IC/P6-46	A. Reiman	USA	Interaction of Ambipolar Plasma Flow with Magnetic Islands in a Quasi- Axisymmetric Stellarator
IC/P6-47	U. Shumlak	USA	Evolution of Plasma Flow Shear and Stability in the ZaP Flow Z-Pinch
IC/P6-48	R. E. Siemon	USA	Liner compression of a self-organized MAGO / inverse-pinch configuration

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**AFTERNOON POSTER SESSIONS (continued)**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IC/P6-49	S. Sinman	Turkey	Experimental Study on a New Spherical Tokamak Configuration Scheme Employing by Means of Spherical Snow-plough
IC/P6-50	L. Soto	Chile	Research on the Enhancement of the Thermonuclear Component of the Neutron Yield in Pinch Plasma Focus Devices
IC/P6-51	D.A. Spong	USA	Recent Advances in Quasi-Poloidal Stellarator Physics Issues
IC/P6-53	G.A. Wurden	USA	FRC plasma studies on the FRX-L plasma injector for MTF
IC/P6-54	K. Yoshikawa	Japan	Research and Development of a Compact Fusion Neutron Source for Humanitarian Landmine Detection
FT/P6-38	C. Xiao	Canada	Vertical CT Injection into the STOR-M Tokamak
PD/P1-1	G. Ciralo	France	Controlling Test Particle Transport in Fusion Relevant Hamiltonians
PD/P1-2	S. Shiina	Japan	Economically Attractive Features of Steady-State Neoclassical Reversed Field Pinch Equilibrium with Low Aspect Ratio

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**MORNING SESSIONS**

**8:30-10:20**    **Session EX/9: Configuration Effects and Transport**  
**Chair: J. Sanchez, Spain**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/9-1	Pochelon, A.	Switzerland	18	Effect of Plasma Shape on Electron Heat Transport in the Presence of extreme Temperature Gradients in TCV
EX/9-2	Sano, F.	Japan	18	Confinement Studies of Helical-axis Heliotron Plasmas
EX/9-3	Kitajima, S.	Japan	18	LH Transition by a Biased Hot Cathode in the Tohoku University Heliac
EX/9-4	Silva, C.	Portugal	18	Limiter and Emissive Electrode Biasing Experiments on the Tokamak ISTTOK
EX/9-5	Wood, R.D.	USA	18	Improved Operation and Modeling of the SSPX Spheromak
EX/9-6Ra	<u>Kwon, Myeon</u>	Republic of Korea	18	Progress in the Study of Plasma Heating, Stability, and Confinement on HANBIT Mirror Device
EX/9-6Rb	Jhang, H. G.	Republic of Korea		Influence of radio frequency waves on the interchange stability in HANBIT mirror plasmas
EX/9-6Rc	Koidan, V.S.	Russian Federation		Heating and Confinement of Ions at Multimirror Trap GOL-3
EX/9-6Rd	Cho, T.	Japan		Advances in Potential Formation and Findings in Sheared Radial Electric-Field Effects on Turbulence and Loss Suppression in GAMMA 10

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**MORNING SESSIONS (continued)**

10:40-12:50 Session EX/10: Plasma-wall Interaction  
Chair: R. Singh, India

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
EX/10-1	Philipps, V.	Germany	18	Overview of recent work on material erosion, migration and long-term fuel retention in the EU-fusion programme and conclusions for ITER
EX/10-2	Tsitrone, E.	France	18	Deuterium retention in Tore Supra long discharges
EX/10-3	Nakano, T.	Japan	18	Impact of nearly-saturated divertor plates on particle control in long and high-power heated discharges in JT-60U
EX/10-4	Komori, A.	Japan	18	Edge Plasma Control by Local Island Divertor in LHD
EX/10-5	Neu, R.L.	Germany	18	Tungsten: An option for divertor and main chamber plasma facing components in future fusion devices
EX/10-6Ra	<u>Hollman, E.M.</u>	USA	18	Disruption Thermal Quench Mitigation by Noble Gas Jet Injection in DIII-D
EX/10-6Rb	Bakhtiari, M.	Japan		Disruption Mitigation Experiments in the JT-60U Tokamak
EX/10-6Rc	Martin, G.	France		Disruption Mitigation on Tore Supra

**Saturday, 6 November 2004**

**AFTERNOON SESSIONS**

**14:15-16:10 Session S/1: Summary**  
**Chair: C. Varandas, Portugal**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
S/1-1	Ninomiya, H.	Japan	30	EX-C, EX-D, IC (EX/1, EX/4, EX/6, EX/8, EX/9, EX/10)
S/1-2	Stambaugh, R.D	USA	30	EX-S, EX-W (EX/2, EX/3, EX/5, EX/7)
S/1-3	Connor, J.	U.K.	30	TH

**16:30-18:30 Session S/1 (continued): Summary**  
**Chair: Varandas, C., Portugal**

S/1-4	Basko, M.M.	Russian Federation	30	IF
S/1-5	Wan, Yuanxi	China	30	IT, FT, SE
	Goldston, R.	USA		Closing

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**MORNING POSTER SESSIONS**

**8:30-12:50**    **Session IF/P7, FT/P7: Fusion Technology and Power Plant Design 2, Inertial Fusion Exp. and Theory**

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IF/P7-5	Y. Kozaki	Japan	A New Concept of Laser Fusion Experimental Reactor with Fast Ignition Target
IF/P7-14	K. Nagai	Japan	Fabrication of Cryogenic Targets for Fast Ignition Realization Experiment
IF/P7-26	Y. Kalinin	Russian Federation	Study on the Pulsed Power Fusion at the Kurchatov Institute
IF/P7-27	M.G. Haines	U.K.	Fast Ignition Studies and Magnetic Field Generation
IF/P7-28	S.Sen Gupta	India	Generation of Relativistic Electron Beam and its Anomalous Stopping in the Fast Ignition Scheme
IF/P7-29	H. Nagatomo	Japan	Development of Fast Ignition Integrated Interconnecting Code (FI3) for Fast Ignition Scheme
IF/P7-30	F. Osman	Australia	Theory of ps-Laser Nonlinear Force Driven Ion Beams for Fusion
IF/P7-31	M. Murakami	Japan	Innovative Ignition Scheme for IFE-Impact Ignition
IF/P7-32	L.J. Suter	USA	Recent findings in NIF ignition target physics and potential implications for IFE
IF/P7-34	G. Velarde	Spain	Progress in Inertial Fusion Energy Modelling at DENIM
IF/P7-36	M. Shukla	India	Laser ablation induced shock pressure amplification in multilayered thin foil targets
IF/P7-52	A.N. Starodub	Russian Federation	Laser Driver for IFE: Novel Approach
FT/P7-1	K.M. Feng	China	Fusion/Transmutation Reactor Studies Based on the Spherical Tours Concept
FT/P7-2	E.A. Azizov	Russian Federation	Stationary Compact VNS Tokamak for Transmutation
FT/P7-3	A.A. Ivanov	Russian Federation	Status of a Mirror Type 14 MeV Neutron Source Project in Novosibirsk
FT/P7-4	Y. Asaoka	Japan	Conceptual design of a demonstration reactor for electric power generation
FT/P7-6	S. Medin	Russian Federation	Energy Conversion in Reactor Chamber for Fast Ignition Heavy Ion Fusion

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MORNING POSTER SESSIONS (continued)

<i>No of Paper IAEA-CN-116</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
FT/P7-7	G. Kurita	Japan	Critical beta analyses with ferromagnetic and plasma rotation effects and wall geometry for a high beta steady state tokamak
FT/P7-8	H. Tamai	Japan	Design study of National Centralized Tokamak facility for the demonstration of steady state high beta plasma operation
FT/P7-9	F. Gnesotto	Italy	RFX: new tools for real-time MHD control
FT/P7-10	D.A. Humphreys	USA	Integrated Plasma Control for High-Performance Tokamaks
FT/P7-11	S. Hermsmeyer	Germany	Development and reactor integration of Helium cooled in-vessel components for DEMO
FT/P7-12	M. Ionescu-Bujor	Germany	Helium Loop Karlsruhe (HELOKA)-large experimental facility for the in-vessel ITER and DEMO components
FT/P7-13	P. Norajitra	Germany	The European Development of Helium-cooled Divertors for DEMO
FT/P7-14	C.H. Choi	Republic of Korea	Fabrication of the KSTAR Toroidal Field Coil Structure
FT/P7-15	B.G. Hong	Republic of Korea	Recent Advances in the Long Pulse Heating and Current Drive System for KSTAR
FT/P7-16	K. Kim	Republic of Korea	Status of the KSTAR Superconducting Magnet System Development
FT/P7-17	H.L. Yang	Republic of Korea	Progress in the Assembly of the KSTAR Tokamak
FT/P7-18	P.U. Lamalle	Belgium	Recent developments in ICRF antenna modelling
FT/P7-19	K. Ohkubo	Japan	Research and Development of Steady-State EC/ICRF Heating in LHD and an Optimal Remote Steering Antenna
FT/P7-21	W.J. Goedheer	Netherlands	Magnum-psi, a plasma generator for plasma-surface interaction research in ITER-like conditions
FT/P7-22	P.J. Heitzenroeder	USA	Component Manufacturing Development for the National Compact Stellarator Experiment (NCSX)
FT/P7-23	D.M. Meade	USA	High-Beta Steady-State Advanced Tokamak Regimes for ITER and FIRE
FT/P7-24	V. Heinzl	Germany	The IFMIF Test Cell – Design and Neutronics Overview
FT/P7-25	U. Fischer	Germany	Advanced Computational Tools and Methods for Nuclear Analyses of Fusion Technology Systems
FT/P7-35	S. Nishio	Japan	Technological and Environmental Prospects of Low Aspect Ratio Tokamak Reactor "VECTOR"

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4-10 October 2000

Eighteenth Conference Proceedings, Vienna 2001

Yokohama, Japan,

19-24 October 1998

Seventeenth Conference Proceedings (2001 Edition),  
Vienna 2001

CD-ROM, IAEA-CSP-8/C ISSN 1562-4153 (cost free)

Montreal, Canada

7-11 October 1996

Sixteenth Conference Proceedings, Vienna, 1997,  
Volumes 1-3

**IAEA Plasma Physics and Controlled Nuclear Fusion Conferences**

Seville, Spain  
26 September – 1 October 1994  
Fifteenth Conference Proceedings, Vienna, 1995, Volumes 1–4

Würzburg, Germany  
30 September – 7 October 1992  
Fourteenth Conference Proceedings, Vienna, 1993,  
Volumes 1–3

**Energy from Inertial Fusion (book)**

Vienna 1995

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ITER Documentation Series No. 24  
IAEA, Vienna, 2002

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## SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA

### 2004 (REMAINING)

20<sup>th</sup> IAEA Fusion Energy Conference  
1-6 November, Vilamoura, Portugal

RERTR-2004 International Meeting on Reduced Enrichment for  
Research and Test Reactors  
7-12 November, Vienna, Austria

International Symposium on the Disposal of Low-Activity  
Radioactive Waste  
13-17 December, Cordoba, Spain

### 2005

International Conference on Nuclear Security: Global Directions  
for the Future  
16-18 March, London, UK

International Conference on "Nuclear Power for the 21<sup>st</sup> Century  
April, Paris, France

International Conference on Area Wide Pest Control  
9-13 May, Vienna, Austria

International Symposium on Utilization of Accelerators  
5-9 June, Dubrovnik, Croatia

International Symposium on Uranium Production and Raw  
Materials for Nuclear Fuel Cycle – Supply and Demand,  
Environment, Economy and Energy Security  
20-24 June, Vienna, Austria

International Conference on the Safety and Security of  
Radioactive Sources: Towards a Sustainable Global System of  
Lifelong Control over Sources  
27 June-1 July, Bordeaux, France,

International Conference on the Safety of Radioactive Waste  
Disposal  
3-7 October, Tokyo, Japan

International Symposium on Trends in Radiopharmaceuticals  
10-14 October, Vienna, Austria

International Symposium on Characterization and Quality Control  
of Nuclear Fuel  
17-21 October, Vienna, Austria

International Conference on Operational Safety Performance in  
Nuclear Installations  
5-9 December, Vienna, Austria

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the  
IAEA website: <http://www.iaea.org/>

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