

## 1st APTWG International Conference Program

	June 14	June 15	June 16	June 17
	Tuesday	Wednesday	Thursday	Friday
AM	9:00 - 9:50 Registration/ Logistics/Welcome	9:00 - 9:55 Working Group Session D	9:00 - 9:55 Working Group Session A	9:00 - 10:00 Summary Session (C/D)
		Break	Break	Break
	9:50 - 11:30 Plenary Session I	10:10 - 11:30 Working Group Session D	10:10 - 11:30 Working Group Session A	10:30 - 11:30 Summary Session (A/B)
	Lunch	Lunch	Lunch	Conference Adjourns
PM	12:50 - 13:45 Plenary Session I	12:50 - 14:10 Working Group Session C	12:50 - 14:10 Working Group Session B	13:30 - 15:00 <i>Optional LHD tour</i>
	Break	Break	Break	
	13:55 - 15:35 Plenary Session II	14:25 - 15:45 Working Group Session C	14:25 - 15:45 Working Group Session B	
	Break	Break&Group photo	Break	
	15:45 - 17:15 Plenary Session II	16:15 - 18:15 Poster Session I (C/D)	16:00 - 18:00 Poster Session II (A/B)	
	17:20 - 20:15 <i>Conference Dinner (At the Oustat intl. Hotel)</i>			

**All Oral Sessions: Administration Building (⑤ in the map below), 4F Meeting Room #1**

**Poster Sessions: Simulation Science Research Laboratory (④ in the map below), 1F Meeting Room**

**Lunch: Administration Building (⑤ in the map below), 1F Cafeteria "Tokkiko"**



Tuesday, June 14, 2011

<b>9:00 - 9:40</b>				On-Site Registration/Logistics
<b>9:40 - 9:50</b>		<i>NIFS Deputy Director-General</i> O. Kaneko		Welcome
<b>Plenary Session I: Why does the plasma rotate without external torque?</b>				
<b>9:50 - 11:30</b>		<i>Chair: S.-I. Itoh</i>		
9:50 -	PLI-OV	P.H. Diamond	30+10	Critical Issues in Intrinsic Rotation Bifurcations: What Can We Learn from Spontaneous Reversals?
10:30 -	PLI-1	M. Kikuchi	20+10	On the offset toroidal rotation in Neoclassical Toroidal Viscosity
11:00 -	PLI-2	K. Nagaoka	20+10	Perpendicular viscosity and intrinsic torque driven by ion temperature gradient in LHD
<b>11:30 - 12:50</b> <i>LUNCH</i>				
<b>12:50 - 13:45</b>		<i>Chair: M. Yagi</i>		
12:50 -	PLI-3	H. Jhang	20+10	Role of intrinsic and external torque in the improvement of ion thermal confinement and internal transport barrier formation
13:20 -		K. Ida	25	Discussion
<b>13:45 - 13:55</b> <i>BREAK</i>				
<b>Plenary Session II: Why is the transport of plasmas NOT determined by a local quantity ?</b>				
<b>13:55 - 15:35</b>		<i>Chair: L. Yan</i>		
13:55 -	PLII-OV	S. Inagaki	30+10	Experimental Evidence of Interaction between Edge and Core Transport in Toroidal Plasmas
14:35 -	PLII-1	S.S. Kim	20+10	Formation and back transition of internal transport barrier in reversed shear plasmas
15:05 -	PLII-2	J. Li	20+10	Magnetic-island-induced microinstability due to temperature island collapse in multiscale plasma turbulence
<b>15:35 - 15:45</b> <i>BREAK</i>				
<b>15:45 - 17:15</b>		<i>Chair: S. Inagaki</i>		
15:45 -	PLII-3	T. Yamada	20+10	Observation of a streamer in drift wave turbulence
16:15 -	PLII-4	Z. Shi	20+10	Turbulence suppression during non-local transport on HL-2A tokamak
16:45 -		X. Ding	25	Discussion
<b>17:20 - 20:15</b> <i>Conference Dinner at the Oustat Intl. Hotel</i>				
17:20 -				Depart from NIFS (by bus)
18:15 - 20:15				Dinner at the Oustat Intl. Hotel

**D. 3D Effects on Transport Physics Working Group**

<b>9:00 - 9:55</b>	<i>Chair: J. Dong</i>			
9:00 -	D-OV	H. Yamada	20+10	Overview of 3-D Effects on Transport Physics
9:30 -	D-O1	H.K. Park	18+7	2-D or 3-D effect of the transient MHD instabilities on transport physics in toroidal devices
<b>9:55 - 10:10</b>	<i>BREAK</i>			
<b>10:10 - 11:30</b>	<i>Chair: T. Takizuka</i>			
10:10 -	D-O2	S. Satake	18+7	Simulation studies on neoclassical viscosity in 3-dimensional magnetic configurations
10:35 -	D-O3	Y.M. Jeon	18+7	Characteristics of First H-modes and Plan for ELM Control by n=2 RMP in KSTAR
11:00 -		H.K. Park	30	Discussion
<b>11:30 - 12:50</b>	<i>LUNCH</i>			

**C. Edge Turbulence and L-H Transition Working Group**

<b>12:50 - 14:10</b>	<i>Chair: X. Gao</i>			
12:50 -	C-OV	G.S. Xu	20+10	Overview on recent progress in edge turbulence and L-H transition
13:20 -	C-O1	K. Toi	18+7	Formation of Edge Transport Barrier in Stochastic Field Region on the Large Helical Device (LHD)
13:45 -	C-O2	J. Dong	18+7	Spatial and spectral characteristics of large scale structures in edge turbulent plasmas of HL-2A tokamak
<b>14:10 - 14:25</b>	<i>BREAK</i>			
<b>14:25 - 15:45</b>	<i>Chair: A. Fukuyama</i>			
14:25 -	C-O3	K. Miki	18+7	Towards a 1D model of L-I-H evolution dynamics
14:50 -	C-O4	M. Sasaki	18+7	Zonal flows induced by geodesic acoustic modes
15:15 -		J. Dong	30	Discussion
<b>15:45 - 16:15</b>	<i>BREAK (Group Photo at the Entrance Hall)</i>			
<b>16:15 - 18:15</b>	<b>Poster Session I (C/D)</b>			

**A. Momentum Transport Working Group****9:00 - 9:55** Chair: K. Ida

9:00 - A-OV K. Itoh 20+10 An Overview for Momentum Transport Working Group

9:30 - A-O1 Y. Kosuga 18+7 Entropic Theory for the Efficiency of Intrinsic Rotation Drive

**9:55 - 10:10** BREAK**10:10 - 11:30** Chair: P.H. Diamond

10:10 - A-O2 J.-M. Kwon 18+7 Gyrokinetic Simulation Study of Symmetry Breaking and Residual Stress Evolution at the TEM→ITG Transition

10:35 - A-O3 N. Guertler 18+7 Prediction of zonal flows: A Reynolds stress response functional from comprehensive turbulence studies

11:00 - K. Itoh 30 Discussion

**11:30 - 12:50** LUNCH**B. Non-locality in Transport Working Group****12:50 - 14:10** Chair: Y. Kishimoto

12:50 - B-OV X.T. Ding 20+10 Review of the Non-local Transport Experiment

13:20 - B-O1 P.H. Diamond 18+7 Turbulence Propagation and Entrainment as a Mechanism for 'Non-Localities'

13:45 - B-O2 N. Tamura 18+7 Spatial Structure of Electron Heat Transport Revealed by a Nonlocal Transport Phenomenon in Large Helical Device

**14:10 - 14:25** BREAK**14:25 - 15:45** Chair: X.T. Ding

14:25 - B-O3 K. Ida 18+7 Curvature transition and spatiotemporal propagation of internal transport barrier in toroidal plasmas

14:50 - B-O4 M. Lesur 18+7 Mitigating the Energetic Particle Transport by tuning the Nonlinear Behavior of Alfvén Eigenmodes

15:15 - S. Inagaki 30 Discussion

**15:45 - 16:00** BREAK**16:00 - 18:00** Poster Session II (A/B)

Friday, June 17, 2011

**Summary Session**

<b>9:00 - 10:00</b>	<i>Chair:</i> H. Park	
9:00 -	J. Dong	30 Edge Turbulence and L-H Transition
9:30 -	K. Ida	30 3D Effects on Transport Physics
<b>10:00 - 10:30</b>	<i>BREAK</i>	
<b>10:30 - 11:30</b>	<i>Chair:</i> H. Sugama	
10:30 -	M. Kikuchi	30 Momentum Transport
11:00 -	J.M. Kwon	30 Non-locality in Transport
<b>11:30 - 11:45</b>	K. Ida	Closing Remarks
<b>11:45</b>	<i>Meeting Adjourns</i>	
<b>13:30 - 15:00</b>	<i>Optional LHD tour</i>	

# 1st APTWG International Conference Poster Program

Wednesday, June 15, 2011

Poster Session I (C/D)		
C-O 1	K. Toi	Formation of Edge Transport Barrier in Stochastic Field Region on the Large Helical Device (LHD)
C-O 2	J. Dong	Spatial and spectral characteristics of large scale structures in edge turbulent plasmas of HL-2A tokamak
C-O 3	K. Miki	Towards a 1D model of L-I-H evolution dynamics
C-O 4	M. Sasaki	Zonal flows induced by geodesic acoustic modes
C-P 1	L. Yan	The ELM characteristics of H-mode discharges on the HL-2A tokamak
C-P 2	K. Tanaka	Turbulence response in H mode transition of LHD
C-P 3	B. Chatthong	Numerical Study of L-H Transition Using Bifurcation Approach
C-P 4	H.-S. Kim	L- to H-mode power threshold and H-mode characteristics in KSTAR
C-P 5	H. Saitoh	Formation of peaked density profile of high-beta plasma in RT-1
C-P 6	Y. Nishimura	An L-H transition scenario in quasi-neutral tokamak plasmas
C-P 7	T. Akiyama	Evolution of edge parameters in improved modes with ETB in CHS and LHD
C-P 8	S.-H. Seo	Frequency sweeping reflectometry on the KSTAR for density profile measurements
C-P 9	A. Fukuyama	Modeling of edge transport barrier formation using the dynamic transport simulation code TASK/TX
C-P 10	H. Tanaka	Blob/hole generation near the divertor leg in LHD
C-P 11	S. Banerjee	Origin and evolution of coherent convective structures investigated using fast imaging in QUEST
C-P 12	S. Sugita	Simulation Study on Non-diffusive Transport by Plasma Blob in Tokamak Scrape-off Layer
C-P 13	T. Oishi	Beam Emission Spectroscopy Measurement for Density Fluctuations in Large Helical Device
C-P 14	W. Lee	Microwave imaging reflectometry for transport study on KSTAR
C-P 15	S. Ohshima	Edge Fluctuation Measurement using Multiple Langmuir Probes in Heliotron J
C-P 16	K. Fujii	Spectrally-resolved Fluctuation Measurement of the Balmer- $\alpha$ Line Emission from an LHD Plasma
C-P 17	R. Hager	The nonlinear dispersion relation of geodesic acoustic modes
C-P 18	H. Igami	Characteristics of electron heat transport around inflection points of the temperature profile during ECH
D-O 1	H.K Park	2-D or 3-D effect of the transient MHD instabilities on transport physics in toroidal devices
D-O 2	S. Satake	Simulation studies on neoclassical viscosity in 3-dimensional magnetic configurations
D-O 3	Y.M. Jeon	Characteristics of First H-modes and Plan for ELM Control by n=2 RMP in KSTAR
D-P 1	S. Matsuoka	A new scheme to calculate the radial electric field and its application to a CERC plasma
D-P 2	S. Toda	Study of Electric Field Pulsation in Helical Plasmas
D-P 3	A. Shimizu	Radial Profile of Potential and Electric Field in the Low Density Core Plasma of LHD
D-P 4	M. Nunami	Gyrokinetic Simulation Study on ITG Turbulent Transport in LHD with High Ion Temperature
D-P 5	T.-H. Watanabe	Gyrokinetic simulations of zonal flow generation with three-dimensional effects in helical plasmas
D-P 6	S. Izumi	Study of radial diffusion of energetic ions by high-m magnetic perturbations by DCOM code
D-P 7	F.T. Ming	Observation of low mode number MHD activities by the tangentially viewing 2D VUV camera on LHD
D-P 8	S. Nishimura	Impacts of resonant magnetic perturbations on stellarator plasmas
D-P 9	G. Park	Kinetic Simulation of RMP-Induced Plasma Transport in Diverted Tokamak Geometry
D-P 10	S. Nishimura	An application of generalized Taguchi's formulation of neoclassical transport as a validation of the traditional moment equation approach
D-P 11	S. Ohdachi	Stability analysis of the H-mode plasmas in the outward-shifted configurations in the Large Helical Device
D-P 12	M. Yokoyama	Development and application of integrated transport code for helical plasmas
D-P 13	R. Seki	First Application of Customized TASK3D Code for Transport Study in LHD
D-P 14	M. Sato	Study of resistivity effect on MHD stability beta limit in LHD by TASK3D

## Poster Session II (A/B)

PLI- 1	M. Kikuchi	On the offset toroidal rotation in Neoclassical Toroidal Viscosity
PLI- 2	K. Nagaoka	Perpendicular viscosity and intrinsic torque driven by ion temperature gradient in LHD
PLI- 3	H. Jhang	Role of intrinsic and external torque in the improvement of ion thermal confinement and internal transport barrier formation
A-O 1	Y. Kosuga	Entropic Theory for the Efficiency of Intrinsic Rotation Drive
A-O 2	J.-M. Kwon	Gyrokinetic Simulation Study of Symmetry Breaking and Residual Stress Evolution at the TEM→ITG Transition
A-O 3	N. Guertler	Prediction of zonal flows: A Reynolds stress response functional from comprehensive turbulence studies
A-P 1	S. Murakami	Simulation study of toroidal flow generation by ICRF minority heating
A-P 2	W. Lee	Investigation of toroidal impurity rotation in KSTAR Ohmic discharges and effects of magnetic field structure on rotation
A-P 3	T. Takizuka	On the analysis method for momentum transport experiments
A-P 4	H. Lee	Measurement of ion temperature and toroidal rotation velocity in Heliotron J
A-P 5	H. Sugama	Effects of symmetry properties on momentum balance and radial electric fields in toroidal plasmas
PLII- 1	S.S. Kim	Formation and back transition of internal transport barrier in reversed shear plasmas
PLII- 2	J. Li	Magnetic-island-induced microinstability due to temperature island collapse in multiscale plasma turbulence
PLII- 3	T. Yamada	Observation of a streamer in drift wave turbulence
PLII- 4	Z. Shi	Turbulence suppression during non-local transport on HL-2A tokamak
B-O 1	P.H. Diamond	Turbulence Propagation and Entrainment as a Mechanism for 'Non-Locality'
B-O 2	N. Tamura	Spatial Structure of Electron Heat Transport Revealed by a Nonlocal Transport Phenomenon in Large Helical Device
B-O 3	K. Ida	Curvature transition and spatiotemporal propagation of internal transport barrier in toroidal plasmas
B-O 4	M. Lesur	Mitigating the Energetic Particle Transport by tuning the Nonlinear Behavior of Alfvén Eigenmodes
B-P 1	S. Inagaki	Identification and Characterization of Fluctuations with Long Distance Correlation in LHD
B-P 2	W. Zhang	Experimental study of electron scale density fluctuation on HT-7 Tokamak
B-P 3	M. Yagi	Simulation study on non-local transport in toroidal plasmas
B-P 4	Y. Kishimoto	The role of meso-scale structures on global profile relaxation and spectrum
B-P 5	H. Wang	Mossy edge localized modes with lower-hybrid current drive and lithium-wall coatings on the EAST superconducting tokamak
B-P 6	K. Mukai	Density modulation experiment in Heliotron J
B-P 7	M. Jiang	The characteristics of edge localized modes on EAST with lower-hybrid current drive and Lithium coated wall
B-P 8	M. Nakata	Nonlinear entropy transfer via zonal flows in gyrokinetic plasma turbulent transport
B-P 9	S. Tokunaga	Avalanching heat transport in steady state internal transport barriers with reversed magnetic shear
B-P 10	S. Kubo	On the cause of density clamping phenomena by ECRH in LHD
B-P 11	P. Liu	Reciprocating probe measurements of L-H transition in LHCD H-mode on EAST
B-P 12	T. Ido	Potential Fluctuations Associated with Energetic-Particle Induced Geodesic Acoustic Mode and Alfvén eigenmodes in the LHD plasmas
B-P 13	N. Kasuya	On Detection of a Global Mode Structure by Use of Turbulence Diagnostic Simulator