

17th International Stellarator/Heliotron Workshop

Princeton Plasma Physics Laboratory

12 - 16 October, 2009

Monday, 12 October 2009

8:00 AM Buses to PPPL depart from Nassau Inn and Residence Inn

8:15 AM Buses to PPPL depart from Wyndham hotel

All oral sessions will be in the Melvin B. Gottlieb Auditorium

All posters will be in the lobby of the Lyman Spitzer Building

Registration outside the Auditorium

8:45 AM Opening remarks

I01	Bosch	Physics Programme for initial operation of Wendelstein 7-X
I02	Blackwell	The Australian National Plasma Fusion Facility: Results and Upgrade Plans
I03	Pankratov	Studies of RF discharge plasma behavior in the Uragan-3M and Uragan-2M torsatrons
I04	Helander	On plasma rotation and bootstrap currents in stellarators
I05	Lore	Neoclassical Electron Transport Barrier in the HSX Stellarator
I05	Ohdachi	Density collapse events observed in IDB/SDC plasmas on LHD
I07	Yoshinuma	Observations of Impurity Hole on LHD

13:00 Lunch

14:00-15:40 Poster session:

P01-01	Stevenson	Reconstruction of current-driven equilibria in the Compact Toroidal Hybrid using magnetic diagnostics
P01-02	Hartwell	Soft X-Ray Diagnostics on the Compact Toroidal Hybrid Experiment
P01-03	Knowlton	Disruptions in current-driven discharges in the Compact Toroidal Hybrid experiment
P01-04	Briesemeister	Initial Flow Velocity Measurements Using CHERS on HSX
P01-05	Wilcox	Zonal Flow Studies in the HSX Stellarator
P01-06	Likin	Confinement of fast ions in the HSX stellarator
P01-07	Zhai	Zeff Measurement from Bremsstrahlung Radiation on HSX
P01-08	Clark	A Computational Study of Impurity Transport with PENTA
P01-09	van Milligen	Tracer transport studies in simulation and experiment
P01-10	Romero	A half field configuration for high beta operation and plasma wall interaction studies at TJ-II
P01-11	Castejon	ECRH-induced convective flux in the TJ-II stellarator
P01-12	Garcia-Regana	Experimental characterization of the BXO Electron Bernstein Emission in the TJ-II Stellarator
P01-13	Krupnik	Development Of The Beam Probe Diagnostics For Electric And Magnetic Fields Investigations For Uragan-2M

P01-14	Krupnik	Installation And Calibration Heavy Ion Beam Probe On WEGA Stellarator
P01-15	Krupnik	Recent Measurements In TJ-II Stellarator By HIBP Diagnostic Of The Electric Potential Evolution And Fluctuation In ECRH And NBI Plasmas
P01-16	Ikeda	Production and electron heating of over-dense plasmas by 2.45 GHz electron Bernstein waves on CHS
P01-17	Mizuuchi	Effects of gas-fueling control on plasma performance in Heliotron J
P01-18	Mukai	Electron density profile measurement in Heliotron J with a microwave AM reflectometer
P01-19	Nagasaki	Study of ECCD Physics and Iota Profile Control in Heliotron J
P01-20	Kernbichler	On ECCD efficiency in toroidal plasmas with finite collisionality
P01-22	Bitter	Conceptual design of an X-ray imaging crystal spectrometer for the Large helical Device
P01-23	Sarasola	First observations of partially neutralized and quasineutral plasmas in the Columbia Non-neutral Torus
P01-24	Brenner	Confinement of Pure Electron Plasmas in the Columbia Non-neutral Torus
I08	Morisaki	Effect of Nonaxisymmetric Perturbation on Profile Formation
C01	Cole	Non-ambipolar particle fluxes and neoclassical viscosity in quasi-symmetry
C02	Schmitt	Modeling and Measurement of Toroidal Currents in the HSX Stellarator
C03	Lopez-Bruna	Local effects of magnetic resonances in ECRH plasmas of the TJ-II Heliac
C04	Sugama	Enhancement of Residual Zonal Flows in Helical Systems with Equilibrium Radial Electric Fields

18:15 Buses depart PPPL for reception at the Wyndham Hotel

18:30-20:30 Reception at the Wyndham Hotel

20:30 Buses depart Wyndham Hotel for Nassau Inn, PPPL, and Residence Inn

Tuesday, 13 October 2009

8:00 AM Buses to PPPL depart from Nassau Inn and Residence Inn

8:15 AM Buses to PPPL depart from Wyndham hotel

PL01	Yamada	High beta issues in a helical system
I09	Cooper	Drift stabilization of ballooning modes in a high-beta LHD configuration
I10	Narushima	Experimental study of effect of poloidal flow on stability of magnetic island in LHD
I11	Pretty	Results from an international MHD data mining collaboration
I12	Reiman	3D Equilibrium with Stochastic Regions Having Finite Pressure Gradient

I13	Hudson	"Cantori, chaotic coordinates and temperature gradients in chaotic -elds"
I14	Hanson	Three-dimensional Equilibrium Reconstruction: The V3FIT Code.
12:45	Lunch	
13:45-15:40 Poster Session		
P02-01	Akiyama	Status of a stellarator/heliotron H-mode database
P02-02	Funaba	Data Servers for the International Stellarator/Heliotron Profile Database (ISHPDB)
P02-03	Funaba	Transport Analysis of Reactor-Relevant High-Beta Plasmas on LHD
P02-04	Ascasibar	Global energy confinement studies in TJ-II NBI plasmas
P02-05	Zurro	The level of non-thermal velocity fluctuations deduced from Doppler spectroscopy and its role on TJ-II confinement
P02-06	Baumgaertel	Linear and nonlinear gyrokinetic studies of turbulence in stellarator geomerty with GS2...
P02-07	Kleiber	Global gyrokinetic simulations for stellarators
P02-08	Mynick	Geometry dependence of stellarator turbulence via GENE
P02-09	Birkenmeier	Geometrical Magnetic Field Effects on Turbulent Transport
P02-10	Beidler	Momentum-Correction Techniques for Stellarators
P02-11	Maaßberg	Momentum Correction Technique for Neutral Beam Current Drive
P02-12	Marushchenko	Momentum Correction Techniques for ECCD
P02-13	Turkin	Impact of momentum correction on bootstrap current and ECCD in W7-X
P02-14	Turkin	Benchmark of neoclassical thermal transport matrix
P02-15	Ware	Neoclassical and anomalous flows in stellarators
P02-16	Nishimura	A convergence study for the Laguerre expansion in the moment equation method for neoclassical transport in general toroidal plasmas
P02-17	Matsuyama	A Monte-Carlo-based calculation of neoclassical flows and viscosity for nonaxisymmetric toroidal plasmas
P02-18	Wakasa	Development of neoclassical transport module for the integrated simulation code in helical plasmas: TASK3D
P02-19	Matsuoka	Comprehensive Understandings on the Effects of Radial Electric Field on the Reduction of Neoclassical Diffusion in Improved Confinement in LHD
P02-20	Bondarenko	Influence of low order rational surfaces on the radial electric field of TJ-II ECH plasmas
P02-21	Satake	Calculation Of Neoclassical Toroidal Viscosity In Toroidal Plasmas With Broken Toroidal Symmetry
P02-22	Reimer	pectrally resolved Motional Stark-Effect Polarimetry at ASDEX Upgrade
P02-23	Ida	Ion internal transport barrier in Large Helical Device
P02-24	Yokoyama	Considerations from the viewpoints of neoclassical transport towards higher ion-temperature heliotron plasmas
C05	Canik	ELM triggering by non-axisymmetric magnetic fields in NSTX

C06	Park	Ideal Perturbed Equilibria in Tokamaks and Control of External Magnetic Perturbations
C07	Terranova	Self-organized helical equilibria in the RFX-mod reversed field pinch
C08	Carralero	Radial and Parallel Transport Fast Camera Observation on LHD SOL Region
C09	Nishino	Peripheral turbulence measurement in Heliotron J using fast cameras
C10	Otte	Overdense Plasma Operation in WEGA Stellarator
C11	Sunn-Pedersen	Overview of results from the CNT stellarator and future plans

18:15 Tours of NCSX components and NSTX
(no high heels, open-toed shoes, or sandals allowed)

19:00 Buses to hotels (no group event for dinner)

Wednesday, 14 October 2009

8:00 AM Buses to PPPL depart from Nassau Inn and Residence Inn

8:15 AM Buses to PPPL depart from Wyndham hotel

PL02	Finken	Role of Resonant Magnetic Perturbations in Tokamaks
I16	Jakubowski	Influence of the magnetic topology on transport in the plasma boundary with resonant magnetic perturbation at DIII-D
I17	Unterberg	Particle Exhaust and Scrape-off Layer Conditions During Resonant Magnetic Perturbations in Deuterium and Helium Discharges on DIII-D
I18	Solomon	Effect of Non-axisymmetric Fields on Toroidal Rotation Dynamics
I19	Tabares	Energy and Particle balance studies in the full lithiated TJ-II stellarator
I20	Masuzaki	Edge heat transport in the helical divertor configuration in LHD
I21	Ding	Particle Transport due to Stochastic Magnetic Field in a High-Temperature Plasma

12:45 Lunch

13:45-15:40 Poster Session

P03-01	Feng	On Particle Control of the W7-X Divertor
P03-02	Nold	Inter-machine edge turbulence data base
P03-03	Canik	Divertors for quasi-symmetric stellarators
P03-04	Geiger	Effects of Toroidal Currents on the Magnetic Configuration of W7-X
P03-05	Geiger	Magnetic Diagnostics and Plans for Equilibrium Reconstruction at W7-X
P03-06	Gobbin	Numerical reconstruction of spontaneous helical equilibria in RFX-mod
P03-07	Sakakibara	Remarks on Finite Beta Effects in International Stellarator/Heliotron Scaling
P03-08	Sakakibara	Study of MHD Characteristics by Magnetic Axis Control in high-beta plasmas of LHD
P03-09	Watanabe	Characteristics of edge MHD modes and ELM activities observed in LHD plasmas
P03-10	Okamura	Modification of LHD magnetic configurations based on the boundary shape control for improving confinement properties

P03-11	Sato	Simulation study of MHD stability beta limit in LHD by TASK3D
P03-12	Schlutt	Investigation of equilibrium plasma beta limits in 3-D magnetic topologies
P03-13	Yanagi	Design integration on split and segmented-type helical coils for FFHR
P03-14	Brown	Improved W7-X current lead temporary support and assembly arrangement
P03-15	Dodson	Configuration space control for Wendelstein 7-X
P03-16	Deng	Energetic-Electron-Driven Instability in the Helically Symmetric Experiment
P03-17	Frederickson	Modeling fast ion transport in TAE avalanches in NSTX
P03-18	Okada	Heating Position Dependence of Energy Spectra of Fast Ions Generated by ICRF Heating in Heliotron J
P03-19	Kubo	Collective Thomson Scattering of 77 GHz High Power ECRH Beam in LHD
P03-20	Seki	Monte-Carlo Study of Perpendicularly Injected High-Energy Particles using Real Coordinate System in LHD
P03-22	Pomphrey	Improving the tokamak and RFP with 3-D fields, and use of stellarator tools for their study
P03-23	Bergerson	Non-Axisymmetric Helical Structures in the MST Reversed-Field Pinch
P03-24	Evans	Overview of the DIII-D non-axisymmetric center post coil design and physics basis
I22	Masamune	Transition to helical RFP state and associated change in magnetic stochasticity in a low-aspect-ratio RFP
C12	Heitzenroeder	NCSX Construction Accomplishments
C13	Goto	Core Plasma Design of a Heliotron Reactor
C14	Schauer	Extrapolation of the W7-X magnet system to reactor size
C15	Garabedian	QAS Design of The Demo Reactor (<i>presented by McFadden</i>)
C16	Bromberg	Stellarator configuration improvement using high temperature superconducting monoliths

18:150 Buses depart PPPL for hotels, pause 15 minutes at hotels, then proceed to:
19:00-20:30 Conference Banquet at Prospect House on Princeton University campus.
20:30 Buses depart Prospect House for hotels and PPPL.

Thursday, 15 October 2009

8:00 AM Buses to PPPL depart from Nassau Inn and Residence Inn

8:15 AM Buses to PPPL depart from Wyndham hotel

PL03	Hirsch	Overview of LH-transition experiments in helical devices
I23	Estrada	L-H transition experiments in TJ-II
I24	Sano	Study of Improved Confinement Modes in Heliotron J
I25	Xanthopoulos	Turbulence in 3D geometry
I26	Ramisch	Investigation of turbulent transport and shear flows in the edge of fusion plasmas

I27	Pedrosa	Long-range correlations during plasma transitions in the TJ-II stellarator
I28	Tamura	Characteristics of nonlocally-coupled transition of the heat transport in LHD
12:45	Lunch	
13:15	Buses depart PPPL for excursions to New York and West Orange.	
19:00	Buses return from West Orange	
21:30	Buses return from New York	

Friday, 16 October 2009

8:00 AM Buses to PPPL depart from Nassau Inn and Residence Inn

8:15 AM Buses to PPPL depart from Wyndham hotel

PL04	Toi	Interplay between Energetic Particles and Alfvén Eigenmodes in Toroidal Plasmas
I29	Spong	Energetic particle-driven instabilities in general toroidal configurations
I30	Isobe	Effect of energetic-ion-driven MHD instabilities on energetic-ion-transport in Compact Helical System and Large Helical Device
I31	Kobayashi	Energetic particle transport in NBI plasmas of Heliotron J
I32	Murakami	Optimization study of ICRF heating in the LHD and HSX configurations
I33	Heidbrink	Measurements of Fast-ion Transport by Instabilities in Tokamaks
I34	Suzuki	3D effect on stochastic field in non-axisymmetric tori
12:30	Closing	
13:00	Lunch	

14:30 Bus departs for Wyndham

17:00 Buses depart for all hotels

18:00 Buses depart for all hotels after CWGM

Device Overview Posters (up all week)

P-D01	Mizuuhci	Overview of Heliotron J
P-D02	Otte	Overview of WEGA
P-D03	Bosch	Overview of W7-X
P-D04	Hidalgo	Overview of TJ-II
P-D05	Knowlton	Overview of CTH
P-D06	Talmdage	Overview of HSX
P-D07	Pedersen	Overview of CNT
P-D08	Ida	Overview of LHD
P-D09	Blackwell	Overview of H-1
P-D10	Pankratov	Overview of Urugans
P-D11	Stroth	Overview of TJ-K
P-D12	Kitajima	Overview of TU-Heliac