

19th International Workshop on H-mode Physics and Transport Barriers

“The H-mode Workshop”

September 24-27, 2024 Mito, Ibaraki, Japan

Topic 1	Name	Title
Review	Xi Chen	Intrinsically No-ELM and Small ELM Regimes and Extrapolation to Burning Plasmas
P1-01	Ran CHEN	A Novel Turbulence Transition Induced by Lower Hybrid Wave in an ELMy H-mode Pedestal at EAST
P1-02	Elena de la Luna	Pedestal structure and stability of high-performance scenarios with I-mode-like pedestals in JET with the Be/W wall
P1-03	Peng Shi	Dithering H-mode triggered by sawtooth on the MAST-U tokamak
P1-04	Kaiyu Zhang	Electromagnetic turbulence simulation for quasi-continuous exhaust regime
P1-05	X. Y. Yin	Experimental and Simulation Study of I-mode Detachment in Magnetic Confinement Fusion
P1-06	Anshu Liang	Characterization of edge quasi-coherent mode in H-mode discharge on the HL-3 tokamak
P1-07	Can Su	Normalized Collisionality scaling of H-mode In the EAST tokamak
P1-08	Saskia Mordijck	Impact of 3D fields on plasma confinement parameters in MAST-U
P1-09	Jerry Hughes	High confinement regimes on SPARC: Access and Avoidance
P1-10	YanJun Liu	Study the characters of WCM in I-mode plasma on EAST
P1-11	Zixi Liu	The study of Weakly Coherent Modes and Pedestal Relaxation Events during the I-mode regime
P1-12	Samuli Saarelma	Plasma boundary shape control to regulate ELMs
P1-13	Kangning Geng	Study of EHO-like mode and high-frequency fluctuation in the pedestal of the EAST tokamak
P1-14	Koki Imada	Peeling-limited and high-pedestal ELM-free H-mode periods in MAST Upgrade spherical tokamak

Topic 2	Name	Title
Review	Costanza Maggi	Advances in understanding the impact of the isotope mass on pedestal structure and transport
P2-15	Tokihiko Tokuzawa	Multi-scale turbulence response during L-H transition in LHD
P2-16	S.X. Wang	Investigation of particle transport in deuterium and helium plasmas on EAST tokamak
P2-17	Philipp Ulbl	Towards first-principles simulations of the L- to H-mode transition with the global gyrokinetic turbulence code GENE-X
P2-18	Xuxu Zhang	L- and H-mode scenario prediction based on NBI of NCST
P2-19	Kenji Tanaka	Isotope effects in linear and saturated ohmic confinement of TCV tokamak and their validation with gyrokinetic modelling

Topic 3	Name	Title
Review	Peter Manz	Density and radiation operational limits to H-mode sustainment
P3-01	Rachael McDermott	Plasma edge profile characteristics in the X-point radiator scenario at ASDEX Upgrade
P3-02	Rongjie Zhu	Observation of MHD mode transition and core toroidal rotation variation in EAST long-pulse discharges
P3-03	Julio Balbin	The ionization peak location in the determination of neutral opaqueness in DIII-D plasmas
P3-04	George McKee	High Resolution H-Mode Pedestal Fluctuation Measurements with Charge eXchange Imaging on DIII-D*
P3-05	Andrés Miller	The role of the separatrix in establishing boundaries for operational regimes on Alcator C-Mod based on a model for interchange-drift-Alfvén turbulence
P3-06	Mike Dunne	The quasi-continuous exhaust regime on ASDEX Upgrade and JET quasi-continuous exhaust regime on ASDEX Upgrade and JET
P3-07	Jia Huang	Dynamics of core peaked density profile during repetitive low-field-side pellet injection on EAST tokamak
P3-08	Xueqiao Xu	Enhancing Boundary Plasma Simulations: Key Advances from the ABOUND SciDAC Project
P3-09	Jarred Loughran	Comparing Particle Transport Modulation Study Methodology

Topic 4	Name	Title
Review	Nobuyuki Aiba	Modelling for ELMs and H-mode pedestal: MHD, gyrokinetic modelling
P4-01	Zhongqing Liu	Effect of negative central shear on infernal-kink instability in negative-triangularity plasmas
P4-02	GARY M Staebler	GYROKINETIC THEORY OF 2D MOMENTUM TRANSPORT AND THE L/H TRANSITION
P4-03	Xinliang Xu	HL-2A’s Multiple ELM cycles simulations by integrating BOUT++’s drift MHD and transport codes
P4-04	Philip B. Snyder	Predicting and Optimizing Pedestal Structure
P4-05	Jonas Puchmayr	Pedestal destabilization by magnetic perturbation fields in tokamak plasmas
P4-06	Itsuki Oyama	Exclusive nature of ion temperature gradient mode and parallel velocity gradient mode
P4-07	Lidija Radovanović	Exploring the influence of plasma shape on pedestal structure and stability in ASDEX Upgrade
P4-08	Miroslav Šos	Pedestal performance of JET Ne-seeded D and D-T discharges
P4-09	Jason Parisi	Effect of plasma squareness on pedestal width-height scaling and prospects for ELM-free operation

Topic 5	Name	Title
Review	Clemente Angioni	Impact of tungsten and its transport on H-mode plasmas, experiments and modelling
P5-01	ZHANG Ling	Comparison of Tungsten Transport Among Original, RMP-Induced and RF-Induced ELM-Free H-Mode Plasmas on EAST Tokamak
P5-02	Chengxi Zhou	Dependence of Up/Down Asymmetry of Tungsten Impurity Ions on Toroidal Rotation in EAST H-Mode Discharges
P5-03	Yunxin Cheng	The effect of LHW on tungsten transport in NBI dominant H-mode plasma in EAST
P5-04	Wenmin Zhang	Edge and Core Impurity Behavior and Transport in EAST H-Mode Plasma with Internal Transport Barrier
P5-05	B. Chapman-Oplopoiou	The composition of ETG turbulence in JET-ILW pedestals
P5-06	Shanni Huang	Impurity transport driven by kinetic ballooning mode in the strong gradient pedestal of tokamak plasmas
P5-07	Zhen Zhou	Effect of ICRF on tungsten impurity behavior in EAST H-mode discharge
P5-08	Florian Koechl	Integrated Modelling of ITER plasma scenarios in the SRO phase
P5-09	Zhen Sun	On-demand triggering of ELM using impurity pellet injection into ELM-absent H-mode plasma on EAST

Topic 6	Name	Title
Review	Liang Wang	Integrated core performance and heat/particle exhaust with edge transport barriers
P6-01	Xiang Gao	ELM penetration in ITB plasmas on EAST tokamak
P6-02	Yifeng Zheng	Simulation Study on Fast Ion Loss and Heat Load on Limiters under Reversed Shear Configurations in EAST
P6-03	Gongshun Li	Core plasma confinement improvement by the suppression of high frequency density fluctuation on EAST tokamak
P6-04	R. Z. Hu	Simulation Study on the Impact of Energy Particles on the Pedestal
P6-05	Wu Xiaofeng	Transport simulation of ECRH H-mode experiments on NCST
P6-06	Feifei Long	A Comprehensive Study of ECM Propagation and Impact in the SOL region and Physical regime in EAST tokamak
P6-07	Xuexi Zhang	Verification between experiments and predictive modelling of scenarios with off-axis current in EAST
P6-08	Wang Yunfei	Power balance analysis of high-parameter long-pulse H-mode on EAST
P6-09	Xiang Zhu	Study of the mechanism of neutral beam injection parameters on the fishbone cycle frequency on the EAST tokamak
P6-10	Teobaldo Luda	Full-radius integrated modelling of H-mode confinement dependence on plasma size and predictions for ITER and DEMO