

1st Plasma Astrophysics School and Workshop (PASW25): Physical Processes in Multi-messenger Astrophysics, Space Physics, and Laboratory Plasmas

Mar 27 - Mar 30, 2025

Huazhong University of Science and Technology (HUST), Wuhan, China

PASW25 Program

Thursday, Mar 27, 2025 (Room W401)				
08:00 - 8:30	Registration			
08:30 - 09:00	Opening ceremony & Group photo			
Lecture 1				
09:00 - 10:30	L-1	Tomo Watanabe (Nagoya Univ, Japan)	90	Drift wave instabilities and turbulence in magnetized plasmas
10:30 - 11:00	Break			
Talks 1 Chair: Xinwu Cao				
11:00 - 11:25	T1-1	Feng Yuan	25	Physical processes driven by magnetic reconnection in accretion flow and jet
11:25 - 11:50	T1-2	Jinlin Han	25	Magnetic fields in the Milky Way: progress in last decades
11:50 - 12:15	T1-3	Jun Lin	25	The Chinese Giant Solar Telescope (CGST)
12:15 - 14:00	Lunch (Lvyuan, Hall 1)			
Lecture 2				
14:00 - 15:30	L-2	Khangulyan Dmitriy (IHEP, China)	90	Radiative processes in high energy astrophysics
15:30 - 15:50	Break			
Talks 2 Chair: Xiaozhou Zhao				
15:50 - 16:10	T2-1	Lei Lu	20	Advanced Space-based Solar Observatory (ASO-S)
16:10 - 16:30	T2-2	Linghua Wang	20	The in situ shock acceleration of suprathermal electrons at 1 AU
16:30 - 16:50	T2-3	Wei Wang	20	X-ray and radio variability in black hole X-ray binaries
16:50 - 17:10	T2-4	Yunwei Yu	20	The energy and origin of superluminous supernova
17:10 - 17:30	T2-5	Huanian Zhang	20	The gaseous halo of individual galaxies
17:30 - 17:40	T2-6	Mengye Wang	10	Simulation of Binary-Single Interactions in AGN Disk

Friday, Mar 28, 2025 (Room W510)				
Lecture 3				
08:40 - 10:10	L-3	Gang Qin (HIT, China)	90	Solar energetic particles
10:10 - 10:30	Break			
Talks 3 Chair: Xiaohui Sun				
10:30 - 10:50	T3-1	Chuan Li	20	The Lagrange-V Solar Observatory (LAVSO): A Deep-space Mission for Solar Physics and Space Weather
10:50 - 11:10	T3-2	Yang Guo	20	Data-Driven Magnetohydrodynamic Simulations and Radiation Synthesis Tools
11:10 - 11:30	T3-3	Xuening Bai	20	The MHD-PIC method and its applications to cosmic-ray acceleration and transport
11:30 - 11:50	T3-4	Qiang Yuan	20	Detection of extended X-ray emission surrounding PSR B0656+14 with eROSITA
11:50 - 12:10	T3-5	Xiaozhou Zhao	20	Flux Rope Eruptions and Shocks: 2.5D Numerical Modeling
12:10 - 14:00	Lunch (Lvyuan, Hall 1)			
Lecture 4				
14:00 - 15:30	L-4	Reinhard Schlickeiser (Ruhr-Univ. Bochum, Germany)	90	Wave-particle interactions
15:30 - 15:50	Break			
Talks 4 Chair: Jianfu Zhang				
15:50 - 16:10	T4-1	Junjie Mao	20	Around the corner: a new era of high-resolution X-ray spectroscopy
16:10 - 16:30	T4-2	Guiyun Liang	20	Charge-exchange spectroscopy in astrophysical and laboratory plasmas
16:30 - 16:50	T4-3	Suoqing Ji	20	The impact of turbulence and cosmic rays in the circumgalactic medium
16:50 - 17:10	T4-4	Xi Long	20	Chandra Large Project Observation of N132D: Expansion of the Forward Shock
17:10 - 17:30	T4-5	Xin Pan	20	A disk instability model for the quasi-periodic eruptions
17:30 - 17:40	T4-6	Xiangli Lei	10	Simulations on the collision between debris and torus: a fast-rise and long-delayed radio outburst in TDE
18:00 - 20:00	Banquet			

Saturday, Mar 29, 2025 (Room W510)**Lecture 5**

08:40 - 10:10	L-5	Huirong Yan (Univ. Potsdam, Germany)	90	Cosmic ray transport
10:10 - 10:30	Break			
Talks 5 Chair: Weihua Lei				
10:30 - 10:50	T5-1	Jingye Yan	20	DAocheng Radio Telescope (DART) First Results
10:50 - 11:10	T5-2	Xiaowei Zhou	20	Small-scale inhomogeneity effects on coherent solar radio emission
11:10 - 11:30	T5-3	Meng Zhou	20	Energy dissipation and particle acceleration in collisionless turbulent magnetic reconnection
11:30 - 11:50	T5-4	Shiyong Huang	20	GPIC: An Advanced Particle-In-Cell Code Using GPU Acceleration and its Application in Magnetic Reconnection
11:50 - 12:10	T5-5	Xi Luo	20	The manifestation of the charge-sign effect in cosmic ray short term variation
12:10 - 14:00	Lunch (Lvyuan, Hall 2)			
Lecture 6				
14:00 - 15:30	L-6	Dejin Wu (PMO, China)	90	Kinetic Alfven wave (太阳风中的动力学阿尔文波湍动)
15:30 - 15:50	Break			
Talks 6 Chair: Lu Wang				
15:50 - 16:10	T6-1	Quanming Lu	20	Origin of reconnecting current sheets in shocked turbulent plasma
16:10 - 16:30	T6-2	Guoqing Zhao	20	Observational properties and generation mechanisms of ion cyclotron waves in solar wind turbulence
16:30 - 16:50	T6-3	Yiran Zhang	20	Turbulent Convection Anisotropies of Cosmic Rays
16:50 - 17:10	T6-4	Siming Liu	20	LHAASO observations of SNRs
17:10 - 17:20	T6-5	Qiwang Sun	10	A novel approach to determine the actual age, radial velocity and distance of MSP J0218+4232
17:20 - 17:30	T6-6	Zhangxi Xue	10	Influence of the local interstellar environment on cosmic ray properties

Sunday, Mar 30, 2025 (Room W510)				
Lecture 7				
08:40 - 10:10	L-7	Yosuke Mizuno (SJTU, China)	90	Magnetic dissipation in relativistic jets
10:10 - 10:30	Break			
Talks 7 Chair: Bei You				
10:30 - 10:50	T7-1	Dahai Yan	20	Patterns of X-ray and gamma-ray Flares: from Blazar to Magnetar and Sun
10:50 - 11:10	T7-2	Yaping Li	20	Extreme Mass-Ratio Inspirals in Active Galactic Nucleus Disks: The Role of Circumsingle Disks
11:10 - 11:30	T7-3	Rongfeng Shen	20	The debris stream's pericenter shock in a TDE
11:30 - 11:50	T7-4	Guobin Mou	20	Multiwavelength emission/Multi-messengers from TDE outflow—cloud interaction
11:50 - 12:10	T7-5	Jiawen Li	20	Magnetic Flux Transport within Black Hole Accretion Disk
12:10 - 14:00	Lunch (Lvyuan, Hall 2)			
Lecture 8				
14:00 - 15:30	L-8	Jungyeon Cho (Chungnam National Univ., S. Korea)	90	MHD turbulence
15:30 - 15:50	Break			
Talks 8 Chair: Aijun Dong				
15:50 - 16:10	T8-1	Jun Lin	20	The Solar Close Observations and Proximity Experiments (SCOPE) Mission
16:10 - 16:30	T8-2	Chandra Bahadur Singh	20	Studies of (in)stabilities of shocks in advective flows around black holes and their observational signatures
16:30 - 16:50	T8-3	Zongnan Li	20	Exploring the role of cosmic ray ionization in low ionization nuclear emission line regions
16:50 - 17:00	T8-4	Jingyu Peng	10	Observations of Preferential Heating and Acceleration of α -particles in the Young Solar Wind by Parker Solar Probe
17:00 - 17:10	T8-5	Fei Gao	10	The dust mineralogy study in the protoplanetary disk of EX Lup
17:10 - 17:20	T8-6	Yangxuan Diao	10	GeV Gamma-Ray Emission from SNR G156.2+5.7
18:00 - 20:00	Adjourn			