

Parallel Session: Astrophysics, Cosmology, and Gravitation

Red: 25-min invited talk; Blue: 15-min short invited talk; Green: 15-min contributed talk

ACG	Oct 20	Oct 21	Oct 22	Oct 23	Oct 24
Chair	Plenary Session				Shan-Ming Ruan
09:00-09:25					Run-Qiu Yang
09:25-09:40					Zhu Yi
09:40-10:05					Xiao-Mei Kuang
10:05-10:20					Hyewon Han
10:20-10:50	Break				
Chair	Plenary Session	No ACG	Li Li	Chiang-Mei Chen	Plenary Session
10:50-11:15			Nobuyoshi Ohta	Zhong-Zhi Xianyu	
11:15-11:30			Hongguang Liu	Jiajun Zhang	
11:30-11:45			Cong Zhang	Mayuri Rao	
11:45-12:10			Shan-Ming Ruan	Tao Liu	
12:10-14:00	Lunch				
13:00-14:00	Poster				Departure
Chair	Yi-Fu Cai	Jun Lin	Hao-Ran Yu	No ACG	
14:00-14:25	Qing-Guo Huang	Arman Shafieloo	Yu Tian		
14:25-14:50	Lijing Shao	Yi-Fu Cai	Li Li		
14:50-15:05	Ying-li Zhang	Suoqing Ji	Cheng-Yong Zhang		
15:05-15:30	Shi Pi	Hao-Ran Yu	Jieci Wang		
15:30-15:55	Xiaofeng Wang	Qing Gao	Jun Lin		
15:55-16:25	Break				
Chair	Qing-Guo Huang	Xiaofeng Wang	Jieci Wang	No ACG	
16:25-16:50	Sai Wang	Cheng Zhao	Song He		
16:50-17:15	Siyuan Chen	Shao-Jiang Wang	Mingyong Guo		
17:15-17:30	Lang Liu	Chen Zhang	Yu-Peng Zhang		
17:30-17:45	Theresa Fruth	Chiang-Mei Chen	Naoki Yoshioka		
17:45-18:00	Dilip Kumar	Cristian Andres Rivera Medina	Hocheol Lee		

Afternoon Session:

Date: **October 20**

chair	Yi-Fu Cai (USTC)	
14:00-14:25	Qing-Guo Huang ITP-CAS	The spatial correlations between pulsars for interfering gravitational-wave sources in Pulsar Timing Array
14:25-14:50	Lijing Shao Peking University	Fundamental Physics with Pulsars around Sgr A*
14:50-15:05	Ying-li Zhang Tongji University	Formation of primordial black holes from inflationary models
15:05-15:30	Shi Pi ITP-CAS	Inflation beyond slow-roll and non- Gaussianities
15:30-15:55	Xiaofeng Wang Tsinghua University	Probing the fundamental physics of the universe with stellar explosion
15:55-16:25	Break	
chair	Qing-Guo Huang (ITP-CAS)	
16:25-16:50	Sai Wang Hangzhou Normal U.	Secondary gravitational-wave background and its anisotropies
16:50-17:15	Siyuan Chen SHAO, CAS	Finding the source of the nanohertz gravitational wave signal from PTAs
17:15-17:30	Lang Liu Beijing Normal U.	Gauge Dependence and Invariance in Induced Gravitational Waves
17:30-17:45	Theresa Fruth University of Sydney	Status of the LUX-ZEPLIN dark matter experiment
17:45-18:00	Dilip Kumar University of Hyderabad	Short-GRBs from Shock Collisions Driven by Magnetic Reconnection in Cosmic String Wakes

Afternoon Session:

Date: **October 21**

chair	Jun Lin (YNAO-CAS)	
14:00-14:25	Arman Shafieloo KASI, DaeJeon	Reconstructing Dark Energy
14:25-14:50	Yi-Fu Cai USTC	Theoretical perspectives on late-time cosmic acceleration in light of latest cosmological observations
14:50-15:05	Suoqing Ji Fudan University	What Happens When Supermassive Black Holes Speak to Galaxies?
15:05-15:30	Hao-Ran Yu Xiamen University	Spin direction of elliptical galaxies: observation and prediction

15:30-15:55	Qing Gao Southwest U.	Observational constraints on inflationary models with nonminimal derivative coupling by ACT
15:55-16:25	Break	
chair	Xiaofeng Wang (Tsinghua University)	
16:25-16:50	Cheng Zhao Tsinghua University	An Overview of DESI Cosmology
16:50-17:15	Shao-Jiang Wang ITP-CAS	DESI Dark Energy, Hubble Tension, and Modified Gravity
17:15-17:30	Chen Zhang Northeastern U.	Superradiant dark matter production from primordial black holes
17:30-17:45	Chiang-Mei Chen National Central U.	Monodromy Approach for Black Hole Physics
17:45-18:00	Cristian Andres Rivera Medina National Central U.	Schwinger pair production in near extremal RN-dS black holes

Morning Session:

Date: **October 22**

chair	Li Li (ITP-CAS)	
10:50-11:15	Nobuyoshi Ohta Osaka Metropolitan U.	Einstein gravity with cosmological constant and scalar fields is nonperturbatively renormalizable
11:15-11:30	Hongguang Liu Westlake U.	Loop quantum gravity, coherent state path integral and one-loop effective action
11:30-11:45	Cong Zhang Beijing Normal U.	Covariant dynamics from static spherically symmetric geometries
11:45-12:10	Shan-Ming Ruan Peking U.	Universal Time Evolution of Holographic and Quantum Complexity

Afternoon Session:

Date: **October 22**

chair	Hao-Ran Yu (Xiamen University)	
14:00-14:25	Yu Tian UCAS	Hyperboloidal formalism and its applications in dynamics of de Sitter black holes
14:25-14:50	Li Li ITP-CAS	Uncovering quantum corrections to thermodynamics of black holes with Chern-Simons term

14:50-15:05	Cheng-Yong Zhang Jinan U.	Nonlinear bottleneck effect in black hole dynamics
15:05-15:30	Jieci Wang Hunan Normal U.	Relativistic quantum channel identification and quantum metrology
15:30-15:55	Jun Lin YNAO-CAS	Theories of Solar Eruptions and Observational Consequences
15:55-16:25	Break	
chair	Jieci Wang (Hunan Normal U.)	
16:25-16:50	Song He Ningbo U.	Unify the QGP transports and equations of state in a holographic QCD Model
16:50-17:15	Mingyong Guo Beijing Normal U.	Near-horizon Polarization as a Diagnostic of Black Hole Spacetime
17:15-17:30	Yu-Peng Zhang Lanzhou U.	Nonlinear Coupling Effects between Scalar Dark Matter and Black Holes
17:30-17:45	Naoki Yoshioka Hiroshima U.	A solution to U(1) quality problem with Metric-Affine gravity
17:45-18:00	Hocheol Lee Dongguk U.	Violation of the Bound on Chaos in Charged and Rotating AdS Black Hole

Morning Session:

Date: **October 23**

chair	Chiang-Mei Chen (National Central U.)	
10:50-11:15	Zhong-Zhi Xianyu Tsinghua U.	Analytical methods for cosmological correlators
11:15-11:30	Jiajun Zhang SHAO-CAS	21cm Observational Cosmology
11:30-11:45	Mayuri Rao Raman Research Institute	Global cosmological signal detection experiments at radio frequencies
11:45-12:10	Tao Liu HKUST	Unveiling Ultralight Axion-like Dark Matter — A PTA-PPA Method

Morning Session:

Date: **October 24**

chair	Shan-Ming Ruan (Peking University)	
09:00-09:25	Run-Qiu Yang Tianjin U.	Butterfly in Spacetime: Inherent Instabilities in Stable Black Holes
09:25-09:40	Zhu Yi Beijing Normal U.	PTA Observations and Scalar-Induced Gravitational Waves: A Probe of Small-Scale Primordial Perturbations

09:40-10:05	Xiao-Mei Kuang Yangzhou U.	Exploring photon sphere structure of hairy black holes
10:05-10:20	Hyewon Han Dongguk U.	Relationship between quasinormal modes and grey-body factors in higher dimensions

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