

Quark Gluon Plasma in Heavy Ion Collisions— Quantifying and Understanding Its Near-Perfect Fluidity 2025

重离子碰撞中的夸克-胶子等离子体——
定量理解其近乎完美的流体性 2025 国际研讨会

Conference Handbook



2025.09.14-09.17

Beijing, China

Venue Map

BEI JING
CHUNHUIYUAN RESORT
GENERAL LAYOUT

北京春晖园温泉度假酒店 平面示意图



General Information

Registration Desk:

- **Sep. 14th** 14:00 – 20:00 (Resort Hotel Lobby 度假酒店大堂)
- **Sep. 15th** 08:00 – 08:30 (Meeting Room Amethyst Hall, 1st Floor, Conference Center 会议中心一层紫晶殿)

Accommodation:

Resort Hotel / Lake Hot Spring Villa

- Please present your ID card or passport at the Resort Hotel front desk to check in.
- Breakfast Location: Gallery Restaurant, 2nd Floor, Convention Center
- Breakfast Time: 06:30 – 09:00
- The latest check-out time: 14:00

Venue Locations:

- **Sep. 15th** Meeting Room Amethyst Hall, 1st Floor, Convention Center
- **Sep. 16th** Meeting Room Amethyst Hall, 1st Floor, Convention Center
- **Sep. 17th** Meeting Room No. 12, 2nd Floor, Convention Center

Dining Locations:

- Buffet: Gallery Restaurant, 2nd Floor, Convention Center
- Reception Dinner: Lakeside BBQ (Sep. 15th, 18:00)
- Banquet Dinner: Meeting Room Amethyst Hall, (Sep. 16th, 19:00)
- **Special Note:** Guests arriving before dinner service on the 14th may use their room key to dine at the restaurant in the **Convention Center**. Each meal includes a complimentary allowance of **RMB 120** per person. Any additional charges beyond this amount will be at the guest's own expense.

Wi-Fi: chy**** (Name begins with "chy", no password)

Monday, September 15, 2025

Session 1 (8:30 AM - 10:00 AM)

-Chair: Peng-Fei Zhuang		
time	title	presenter
8:30	From large & cold to small & hot: Same same or different?	SCHUKRAFT, Juergen
9:00	From QCD to QGP: A 50-year journey to the extremis	WANG, Xin-Nian
9:30	Overview for RHIC Beam Energy Scan	XU, Nu

Group Photo & Coffee Break (10:00 AM - 10:30 AM)

Session 2 (10:30 AM - 12:00 PM)

-Chair: Defu Hou		
time	title	presenter
10:30	What else can we do with isobar collisions at RHIC	XU, Zhangbu
11:00	A journey of flow over the past decades	SNELLINGS, Raimond
11:30	Determination of QGP Parameters with a Bayesian Analysis	BASS, Steffen

Lunch Buffet (12:00 PM - 2:00 PM)

Session 3 (2:00 PM - 3:30 PM)

-Chair: Mei Huang		
time	title	presenter
2:00	Phase diagrams and random matrix theory beyond physics	AARTS, Gert
2:30	Spaghetti of Quarks with Glueballs: connection between sQGP and Quarkyonic Matter	FUKUSHIMA, Kenji
3:00	Search for the QCD Critical Endpoint at a Low Temperature from Lattice QCD	DING, Hengtong

Coffee Break (3:30 PM - 4:00 PM)

Session 4 (4:00 PM - 5:30 PM)

-Chair: Guangyou Qin		
time	title	presenter
4:00	Discovery of the finest droplet of QGP	ZHOU, You
4:30	Quantify collectivity via radial flow fluctuation	JIA, Jiangyong
5:00	QCD Collectivity inside a Jet: A New Window into the Ultimate Quark-Gluon Droplet	LI, Wei

Reception Dinner Lakeside BBQ (6:00 PM - 8:00 PM)

Tuesday, September 16, 2025

Session 5 (8:30 AM - 10:00 AM)

-Chair: Qun Wang		
time	title	presenter
8:30	Hyperon polarization in heavy ion collisions - experimental highlights	CHEN, Zhenyu
9:00	An improved formula for spin polarization at local thermodynamic equilibrium	BECATTINI, Francesco
9:30	Spin polarization and extension of the Bargmann-Michel-Telegdi equation	PU, Shi

Coffee Break (10:00 AM - 10:30 AM)

Session 6 (10:30 AM - 12:00 PM)

-Chair: Yuxin Liu		
time	title	presenter
10:30	Dynamical initialization of QGP fluids through core-corona picture	HIRANO, Tetsufumi
11:00	Revealing many-body properties of QCD matter at high-energy colliders	GIACALONE, Giuliano
11:30	From Wave function to Collision Geometry in Glauber Model	KE, Weiyao

Lunch Buffet (12:00 PM - 1:30 PM)

Session 7 (1:30 PM - 3:00 PM)

-Chair: Xiao-Feng Luo		
time	title	presenter
1:30	A Bayesian extraction of the shape of Xe-129	NIJS, Govert
2:00	Exploring Nuclear Shape Transitions and Shape Vibrations in Relativistic Heavy-Ion Collisions	ZHAO, Shujun
2:30	Hydrodynamic attractors: from models of nuclear collisions towards cold atom experiments	HELLER , Michal

Coffee Break (3:00 PM - 3:30 PM)

Session 8 (3:30 PM - 5:30 PM)

-Chair: Xu-guang Huang		
time	title	presenter
3:30	Machine learning for nuclear physics	PANG, Long-Gang
4:00	A theory discussion on new results from oxygen and neon collisions at the LHC	SCHEE, Wilke Van Der
4:30	On-line CERN seminar: Results from the recent 2025 light ion LHC run by ALICE ATLAS CMS and LHCb	https://webcast.web.cern.ch / event/i1586852

Banquet Dinner Round Table (7:00 PM - 9:00 PM)

Wednesday, September 17, 2025

Session 9 (8:30 AM - 10:00 AM)

-Chair: Ben-Wei Zhang

time	title	presenter
8:30	UPC experiment: status and update	ZHA, Wangmei
9:00	What have UPCs taught us about small-x, saturation physics and initial conditions of heavy-ion collisions	ZHAO, Wenbin
9:30	Developments on jet transport in heavy-ion collisions	CAO, Shan-Shan

Coffee break (10:00 AM - 10:30 AM)

Session 10 (10:30 AM - 12:00 PM)

-Chair: Xiao-Mei Li

time	title	presenter
10:30	Hydrodynamics and thermalization in terms of entropy production in heavy-ion collisions	LI, Yan
11:00	Benchmarking parton cascade with an exact solution of the Boltzmann equation	LIN, Zi-Wei
11:30	Physics feasibility and status of NICA-MPD	TANG, Zebo

Lunch [Buffet](#) (12:00 PM - 2:00 PM)

Session 11 (2:00 PM - 3:30 PM)

-Chair: Fei Gao

time	title	presenter
2:00	Temperature Measurement of QGP via Thermal Dileptons	YE, Zaochen
2:30	Exploring the shape of transverse momentum spectra	LUZUM, Matthew
3:00	Flow correlations and their efficiency correction	KITAZAWA, Masakiyo

Coffee break (3:30 PM - 4:00 PM)

Session 12 (4:00 PM - 6:00 PM)

-Chair: Huichao Song

time	title	presenter
4:00	Proton number fluctuations in azimuthal angle	BOŽEK, Piotr
4:30	Late time dynamics of correlation function in diffusive systems	ABBASI, Navid
5:00	Deuteron elliptic flow in ultrarelativistic heavy-ion collisions	TOMASIK, Boris
5:30	Simulating quantum field theories in real time	SHI, Shuzhe

Dinner [Buffet](#) (6:00 PM - 8:00 PM)

“重离子碰撞中的夸克-胶子等离子体——定量理解其近乎完美的流体性 2025 国际研讨会”会议通知

(Quark Gluon Plasma in Heavy Ion Collisions—Quantifying and Understanding Its Near-Perfect Fluidity 2025)

由北京大学（物理学院、高能物理研究中心）主办，清华大学、北京理工大学、华南师范大学、华中师范大学、中国科学院大学协办的“重离子碰撞中的夸克-胶子等离子体——定量理解其近乎完美的流体性 2025 国际研讨会”将于 2025 年 9 月 14 日-9 月 18 日（9 月 14 日报到）在北京举办。本次研讨会旨在为相关研究人员提供一个高水平的学术交流平台，围绕相对论重离子碰撞中的夸克-胶子等离子体及其性质等前沿议题展开深入讨论。会议的举办将促进理论与实验的紧密结合，进而揭示 QGP 的物理性质，为当前和未来重离子碰撞实验提供理论支撑。会议讨论的具体议题包括：（1）初始条件与核结构；（2）大系统与小系统；（3）夸克胶子等离子体的完美流体性质；（4）流体动力学理论与模型模拟；（5）贝叶斯分析与机器学习。

参会代表食宿由会议统一安排，住宿费用及差旅费用自理。（会议为部分邀请报告人提供食宿、差旅费支持）。

会议时间：2025 年 9 月 14 日-18 日

会议地点：北京春晖园酒店

会议网址：<https://indico.ihep.ac.cn/event/24981/>

会议组委会：宋慧超、高飞、黄梅、侯德富、秦广友、施舒哲、王恩科、邢宏喜、庄鹏飞

会务联系人：吕律 lvlv@pku.edu.cn



北京大学物理学院
北京大学高能物理研究中心

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Transportation

✧ Since there is no direct subway connection from the airport or train station to the hotel, we recommend taking a taxi.

✧ Please show this to the taxi driver:

请送我到春晖园温泉度假酒店

(北京市顺义区高泗路于庄段 37 号)

(Please send me to Beijing Chunhuiyuan Resort)

- From Beijing Capital International Airport to Hotel
By taxi (About 40 min, 60-70 RMB)
- From Beijing Daxing International Airport to Hotel
By taxi (About 1hour40 min, 280-300 RMB)
- From Beijing Railway Station to Hotel
By taxi (About 1hour, 100-120 RMB)
- From Beijing South Railway Station to Hotel
By taxi (About 1hour20min, 140-160 RMB)
- From Beijing West Railway Station to Hotel
By taxi (About 1hour, 130-150 RMB)