

QCD Workshop on Chirality, Vorticity and Magnetic Field in Heavy Ion Collisions

March 27-30, 2017

Physics and Astronomy Building (PAB) 2-434

March 27, 2017

Chair Paul Sorenson

9:00 – 9:15 Welcome

9:15 – 10:00 Jinfeng Liao Anomalous Chiral Transport in Heavy Ion Collisions: Challenges and Opportunities

10:00 – 10:30 Yuji Hirono First Full Magnetohydro Calculation of CME with Dynamical Magnetic Field

10:30 – 11:00 Coffee Break

Chair Yugang Ma

11:00 – 11:30 Qun Wang Derivation of Covariant Chiral Kinetic Equation with Wigner Function

11:30 – 12:00 Di-Lun Yang Side-Jumps and Collisions in Chiral Kinetic Theory from Quantum Field Theories

12:00 – 12:30 Ajit Srivastava Magnetohydrodynamics Simulations, Vortices and Flow Fluctuations in Relativistic Heavy-Ion Collisions

12:30 – 2:00 Lunch

Chair Jiangyong Jia

2:00 – 2:30 Mei Huang Quark Matter under Strong Magnetic Field

2:30 – 3:00 Koichi Hattori Transport Phenomena in Strong Magnetic Fields

3:00 – 3:30 Shiyong Li Transport Properties of QGP in the Presence of Magnetic Field

3:30 – 4:00 Coffee Break

Chair Zhongbo Kang

4:00 – 4:30 Kirill Tuchin Taming Instability of Magnetic Field in Chiral Medium

4:30 – 5:00 Xiaoliang Xia Structure of Magnetic and Vorticity Fields in HI Collisions

5:00 – 5:30 Mark Mace Progress in Understanding Anomaly Induced Transport from Real-time Lattice Simulations

March 28, 2017

PAB 2-434

Chair Nu Xu

- 9:00 – 9:45 Wei Li CMS Results on Searches of CME/CMW
- 9:45 – 10:30 Gang Wang STAR Results on Searches of CME/CMW/CVE with Identified Particles
- 10:30 – 11:00 Coffee Break
- Chair Dmitri Kharzeev
- 11:00 – 11:30 Jaap Onderwaater Chiral Magnetic Effect Studies at ALICE Using Event Shape Engineering
- 11:30 – 12:00 Prithwish Tribedy Search for the CME in U+U, Au+Au and p+Au Collisions with STAR
- 12:00 – 12:30 Jie Zhao Chiral magnetic effect search in p+Au, d+Au and Au+Au collisions at RHIC
- 12:30 – 2:00 Lunch
- Chair Kirill Tuchin
- 2:00 – 2:30 Jiangyong Jia Recent Development in Understanding Collectivity in Small Systems
- 2:30 – 3:00 Shi Pu Chiral Kinetic Theory with Bjorken Expansion
- 3:00 – 3:30 Srimoyee Sen Chiral Shock Wave
- 3:30 – 4:00 Coffee Break
- Chair Jinhui Chen
- 4:00 – 4:30 Yin Jiang Non-perturbative Effects on the Chiral Transition near Equilibrium
- 4:30 – 5:00 Sho Ozaki Band Structure of Photons in 'Axion Crystals'
- 5:00 – 5:30 Aldo Cotrone Theta Angels in Holographic QCD
- 6:00 – 9:00 Workshop Dinner @ UCLA Faculty Center

March 29, 2017

PAB 2-434

Chair Mei Huang

9:00 – 9:30 Dmitri Kharzeev What Next – Theoretical Perspective
9:30 – 10:00 Defu Hou Chiral Magnetic Effect with an Non-constant Axial
Chemical Potential
10:00 – 10:30 Yi Yin Wave Turbulence in Chiral Fluid

10:30 – 11:00 Coffee Break

Chair Jinfeng Liao

11:00 – 11:30 Francesco Becattini Some Theoretical and Phenomenological Remarks
about Polarization and Vorticity
11:30 – 12:00 Isaac Upsal Global Polarization of Lambda Hyperons at RHIC BES
12:00 – 12:30 Maxim Konyushikhin Vorticity Studies at ALICE with Lambda Hyperons
12:30 – 2:00 Lunch

Chair Xin-Nian Wang

2:00 – 2:30 Nakafumi Niida Lambda Global Polarization in Au+Au at 200 GeV
2:30 – 3:00 Hui Li Study of Lambda Polarization and Vorticity Field with
AMPT Model
3:00 – 3:30 Matto Buzzegoli Non-dissipative Vorticious Hydrodynamic Coefficients
For Stress-Energy Tensor and Axial Current

3:30 – 4:00 Coffee Break

Chair Francesco Becattini

4:00 – 4:30 Andrey Sadofyev Chirality and Macroscopic Helicities
4:30 – 5:00 LongGang Pang Identifying QCD Transition Using Deep Learning
5:00 – 5:30 Paul Sorenson What Next – Experimental Perspective

March 30, 2017

Knudsen 5-137

Discussion of Experimental Efforts

Possible excursion to Getty Museum for some participants