

Chirality 2018

The 4th international Workshop on Chirality, Vorticity and Magnetic Field in Heavy Ion Collisions

Monday 19 March – Thursday 22 March
Galileo Galilei Institute, Largo Enrico Fermi, 2 I-50125 Florence

PROGRAM

Monday, 19 March

- 8:30 – 09:30 **Registration**
- 9:30 – 9:50 **Welcome and Introduction**
1st Morning Session, Chair: M. Lisa
- 09:50-10:25 Huan Zhong Huang
35' "Overview of Experimental Searches for CME and CVE"
- 10:25-11:00 Gang Wang
35' "STAR measurements in search of the CME and the CMW"
- 11:00-11:30 **Coffee Break**
2nd Morning Session, Chair: J. Liao
- 11:30-12:05 Wei Li
35' "The study of the chiral magnetic effect in CMS"
- 12:05-12:30 Defu Hou
25' "Field theoretic perspectives of the chiral magnetic effect with a nonconstant axial chemical potential"
- 12:30-12:55 Matthias Kaminski
25' "A reality check for chiral magnetic transport & holography"
- 12:55-15:00 **Lunch Break**
1st Afternoon Session, Chair: D. Hou
- 15:00-15:35 Karl Landsteiner
35' "Review on holographic methods for the Chiral Magnetic Effect"
- 15:35-16:10 Shi Pu
35' "Effects of strong magnetic fields in heavy ion collisions"
- 16:10-16:40 **Coffee Break**
2nd Afternoon Session, Chair: W. Florkowski
- 16:40-17:05 Roy Lacey
25' "A New Correlator to Detect and Characterize the Chiral Magnetic Effect"
- 17:05-17:25 Scott Pratt
20' "Charge-Balance Correlations from Hydrodynamic Calculations"
- 17:25-17:45 Niseem Abdelrahman
20' "Beam energy and collision system dependence of charge separation using the $R(\Delta S)$ correlator"
- 17:45-18:05 Leonardo Tinti
20' "Resummed hydrodynamic expansion for an electromagnetic interacting plasma"

Tuesday, 20 March

1st Morning Session, Chair: Q. Wang

- 09:30-10:05 Iurii Karpenko
35' "Lambda polarization from RHIC BES to LHC energies in viscous hydrodynamic approach"
- 10:05-10:40 Sergei Voloshin
35' "Status and outlook of polarization measurements"

10:40-11:10 **Coffee Break**

2nd Morning Session, Chair: H. Z. Huang

- 11:10-11:45 Takafumi Niida
35' "Polarization measurements in STAR"
- 11:45-12:10 Michael Lisa
25' "Global polarization measurements and their implications regarding the magnetic fields"
- 12:10-12:35 Laszlo Csernai
25' "Lambda polarization in peripheral heavy ion collisions"
- 12:35-12:55 Naoto Tanji
20' "Nonequilibrium axial charge production in expanding color fields"

12:55-15:00 **Lunch Break - Poster Session**

1st Afternoon Session, Chair: R. Lacey

- 15:00-15:35 Pengfei Zhuang
35' "Out-of-Equilibrium Chiral Magnetic Effect from Chiral Kinetic Theory"
- 15:35-16:10 Niklas Mueller
35' "World-line Approach to Chiral Kinetic Theory and the Chiral Magnetic Effect"

16:10-16:40 **Coffee Break**

2nd Afternoon Session, Chair: D. Srivastava

- 16:40-17:05 Xu-Guang Huang
25' "Chiral kinetic theory in noninertial frame"
- 17:05-17:25 Di-Lun Yang
20' "Non-Equilibrium Anomalous Transport of Chiral Fluids from Kinetic Theory"
- 17:25-17:45 Giorgio Torrieri
20' "The ideal hydrodynamic limit of a fluid with polarization using Lagrangian techniques"
- 17:45-18:05 Oleg Teryaev
20' "Polarisation in heavy-ion collisions: how to discriminate between different mechanisms?"

Wednesday, 21 March

1st Morning Session, Chair: S. Voloshin

- 09:30-10:05 Wojciech Florkowski
35' "Relativistic hydrodynamics with spin"
- 10:05-10:40 Qun Wang
35' "Global polarization in a transport model"

10:40-11:10 **Coffee Break**

2nd Morning Session, Chair: L. Csernai

- 11:10-11:45 Aihong Tang
35' "Phi alignment measurement in STAR"
- 11:45-12:10 Naoki Yamamoto
25' "Chiral soliton lattice in magnetic fields and rotation"
- 12:10-12:35 Aldo Cotrone
25' "On the Universality of the Chern-Simons Diffusion Rate"
- 12:35-12:55 Enrico Speranza
20' "Spin-dependent distribution functions for relativistic hydrodynamics of spin-1/2 particles"

12:55-15:00 **Lunch Break**

1st Afternoon Session, Chair: G. Wang

- 15:00-15:35 Massimo D'Elia
35' "Status of lattice QCD with magnetic field"
- 15:35-15:55 Kazuya Mameda
20' "Competition between the rotational effect and the finite-size effect on relativistic fermions"

15:55-16:30 **Coffee Break**

2nd Afternoon Session, Chair: M. D'Elia

- 16:30-16:50 Kirill Tuchin
20' "Chirality evolution in plasma with magnetic monopoles"
- 16:50-17:10 Xinyang Wang
20' "Phase diagram of rotating QCD matter"

Social Dinner - 20:00

"Terrazza Brunelleschi" – Hotel Baglioni, Piazza dell'Unità Italiana, 6, 50123 Firenze FI

Thursday, 22 March

1st Morning Session, Chair: F. Becattini

09:30-10:05 Jinfeng Liao
35' "Anomalous Chiral Effects in Viscous Fluid Dynamics: Predictions for Isobaric Collisions"

10:05-10:40 Luca Del Zanna
35' "Relativistic MHD for astrophysical plasmas: theory and numerical simulations"

10:40-11:10 **Coffee Break**

2nd Morning Session, Chair: P. Zhuang

11:10-11:35 Ana Julia Mizher
25' "The chiral magnetic effect in planar condensed matter systems"

11:35-12:00 Gabriele Inghirami
25' "The influence of the magnetic fields on the elliptic flow in HIC at RHIC and LHC energies"

12:00-12:25 Lucia Oliva
20' "Impact of the vortical pre-equilibrium stage of relativistic heavy ion collisions on quark-gluon plasma dynamics and photon production"

12:55-15:00 **Lunch Break**

Guided tour to the "Villa il Gioiello" – 14:00 – 18:00

Posters

- Baoyi Chen
"Photoproduction of vector mesons with QGP effects"
- Ashutosh Dash
"Magneto-Vortical evolution of QGP in heavy ion collisions"
- Nikolaos Davis
"Spectator-induced electromagnetic effects at CERN SPS energies"
- Tuna Demircik
"Nonlinear Chiral Transport Phenomena from Holography"
- Jorge Fernández-Pendás
"Holographic Weyl semimetals"
- Miklos Horvath
"Non-static analysis of the anomalous chiral conductivities"
- Avdhesh Kumar
"Chiral and Weibel Instabilities in Quark Gluon Plasma"
- Radoslaw Ryblewski
"Dynamics of relativistic polarized vortices"
- Noriyuki Sogabe
"Does the chiral magnetic effect affect the dynamic critical phenomena in QCD?"
- Kun Xu
"Chiral Phase Transition With Finite Size In NJL Model"