### Workshop on Advances, Innovations, and Future Perspectives in High-Energy Nuclear Physics



### Report of Contributions

Workshop on A  $\,\cdots\,$  / Report of Contributions

Sample1

Contribution ID: 1 Type: **not specified** 

Sample1

Contribution ID: 5 Type: **not specified** 

# Little Bang at Big Colliders: 40 years of ultra-relativistic heavy ion physics

Sunday 20 October 2024 10:10 (30 minutes)

Presenter: SCHUKRAFT, Jurgen (University of Copenhagen (DK))

Session Classification: Plenary

Contribution ID: 6 Type: not specified

### China-France cooperation and achievement

Sunday 20 October 2024 10:40 (25 minutes)

Presenter: BASTID, Nicole (Université Clermont Auvergne (FR))

Session Classification: Plenary

Contribution ID: 7 Type: **not specified** 

### From PHOS to FoCal - 25 years of collaboration CCNU-UiB

Sunday 20 October 2024 11:05 (25 minutes)

**Presenter:** ROEHRICH, Dieter (University of Bergen (NO))

Session Classification: Plenary

Contribution ID: 8 Type: not specified

### China-Italy cooperation and achievement

Sunday 20 October 2024 11:30 (25 minutes)

**Presenter:** ROSSI, Andrea (INFN, Padova (IT))

Session Classification: Plenary

Contribution ID: 9 Type: not specified

### **ALICE Highlights**

Sunday 20 October 2024 14:00 (30 minutes)

**Presenter:** SCHWEDA, Kai (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

Session Classification: Plenary

Contribution ID: 10 Type: not specified

### **LHCb Highlights**

Sunday 20 October 2024 14:30 (30 minutes)

Presenter: ZHU, Xianglei (Tsinghua University (CN))

Session Classification: Plenary

Contribution ID: 11 Type: not specified

### **CMS Highlights**

Sunday 20 October 2024 15:00 (30 minutes)

Presenter: CHEN, Zhenyu (Shandong University (CN))

Session Classification: Plenary

Workshop on A  $\,\cdots\,$  / Report of Contributions

Tea Break

Contribution ID: 12 Type: not specified

#### Tea Break

Session Classification: Plenary

Contribution ID: 13 Type: not specified

# Heavy quark production in magnetic and rotational fields

**Presenter:** ZHUANG, Pengfei

Contribution ID: 14 Type: not specified

### **STAR Highlights**

**Presenter:** Prof. LUO, Xiaofeng

Session Classification: Plenary

Contribution ID: 15 Type: not specified

### Science, and reconstruction of hadronic events at the CEPC

Sunday 20 October 2024 16:20 (30 minutes)

Presenter: RUAN, Manqi

Session Classification: Plenary

Contribution ID: 16 Type: not specified

### Study of QCD phase structure at RHIC

Sunday 20 October 2024 16:50 (30 minutes)

Presenter: XU, Nu

Session Classification: Plenary

Contribution ID: 17 Type: not specified

# Isolated photon production in pp, pPb and PbPb collisions measured with ALICE

Session Classification: Welcome Speech

Contribution ID: 18 Type: not specified

# Recent measurements of dileptons and direct photons at RHIC-STAR

Session Classification: Welcome Speech

Contribution ID: 19 Type: not specified

# Experimental insights from CMS in ultra-peripheral collisions

Tuesday 22 October 2024 08:30 (25 minutes)

Presenter: YANG, Shuai (South China Normal University)

Session Classification: Plenary

Contribution ID: 20 Type: not specified

### Jet quenching and medium-response

Tuesday 22 October 2024 08:55 (25 minutes)

Presenter: YANG, Zhong (CCNU)

Session Classification: Plenary

Contribution ID: 21 Type: not specified

# Study of EEC discrimination power on quark and gluon quenching effects in heavy-ion collisions at 5.02 TeV

Tuesday 22 October 2024 09:45 (25 minutes)

Presenter: DAI, Wei (China University of Geosciences (Wuhan))

Session Classification: Plenary

Contribution ID: 22 Type: not specified

#### **Coffe Break**

Session Classification: Welcome Speech

Contribution ID: 23 Type: not specified

# How far can we see back in time in high-energy collisions using charm hadrons?

Tuesday 22 October 2024 10:30 (25 minutes)

**Presenter:** BARNAFOLDI, Gergely Gabor

Session Classification: Plenary

Contribution ID: 24 Type: not specified

### Cold nuclear matter effects on jet production at the LHC

Tuesday 22 October 2024 11:20 (25 minutes)

Presenter: Dr SHAO, Dingyu (Fudan University (CN))

Session Classification: Plenary

Contribution ID: 25 Type: not specified

### Isolated photon production in pp, pPb and PbPb collisions measured with ALICE

Tuesday 22 October 2024 14:00 (25 minutes)

Presenter: CONESA BALBASTRE, Gustavo (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 26 Type: not specified

# Observation of the Antimatter Hypernucleus Antihyperhydrogen-4

Tuesday 22 October 2024 14:50 (25 minutes)

Presenter: QIU, Hao

Session Classification: Plenary

Coffe Break

Contribution ID: 27 Type: not specified

#### **Coffe Break**

Session Classification: Welcome Speech

Contribution ID: 28 Type: not specified

### Probing the flavour dependence of parton showers

Session Classification: Welcome Speech

Contribution ID: 29 Type: not specified

# Testing CPT symmetry with multi-strange baryons mass precision measurements using ALICE

Tuesday 22 October 2024 16:00 (25 minutes)

Presenter: SCHOTTER, Romain (Stefan Meyer Institute for Subatomic Physics of the Austrian

Academy of Sciences (AT))

Session Classification: Plenary

Contribution ID: 30 Type: not specified

# Parton fragmentation from vacuum to nuclear medium

Session Classification: Plenary

Contribution ID: 31 Type: not specified

# Data driven studies of tracking efficiencies with charm-hadron

**Presenter:** Mr DI BELLA, Valério

Session Classification: Plenary

Contribution ID: 32 Type: not specified

### HBT correlation in heavy-ion collisions with a hard process

Wednesday 23 October 2024 08:30 (25 minutes)

Presenter: Prof. KE, Weiyao (Central China Normal University)

Session Classification: Plenary

Contribution ID: 33 Type: not specified

# Overview of experimental results on open heavy-flavour hadronization

Wednesday 23 October 2024 09:20 (25 minutes)

**Presenter:** ROSSI, Andrea (INFN, Padova (IT))

Session Classification: Plenary

Contribution ID: 34 Type: not specified

### Probing the quark-gluon plasma with heavy-flavour hadrons

Wednesday 23 October 2024 09:45 (25 minutes)

Presenter: GROSA, Fabrizio (CERN)

Session Classification: Plenary

Workshop on A  $\,\cdots\,$  / Report of Contributions

coffee break

Contribution ID: 35 Type: not specified

#### coffee break

Session Classification: Welcome Speech

Contribution ID: 36

Type: not specified

# Search for the Chiral Magnetic Effect with Forced Match of Multiplicity and Elliptic Flow in Isobar Collisions at STAR

Session Classification: Welcome Speech

Contribution ID: 37 Type: not specified

### The ALICE upgrade program

Session Classification: Welcome Speech

Contribution ID: 38 Type: not specified

### Prospects and challenges for LHCb upgrades

Session Classification: Welcome Speech

Contribution ID: 39 Type: not specified

### Heavy quark production in magnetic and rotational fields

Monday 21 October 2024 08:30 (30 minutes)

**Presenter:** ZHUANG, Pengfei

Session Classification: Plenary

Contribution ID: 40 Type: not specified

### Global quark spin correlations in relativistic heavy ion collisions

Monday 21 October 2024 09:00 (30 minutes)

Presenter: LIANG, Zuo-tang (Shandong Uniersity)

Session Classification: Plenary

Contribution ID: 41 Type: not specified

### Soft physics for high energy nucleus-nucleus collisions

Monday 21 October 2024 09:30 (30 minutes)

**Presenter:** SONG, Huichao

Session Classification: Plenary

Contribution ID: 42 Type: not specified

# extraction of sound velocity in ultra-central heavy-ion collisions

**Presenter:** YAN, Li (Fudan University)

Contribution ID: 43 Type: not specified

#### **ALICE detector development at CCNU**

Monday 21 October 2024 15:00 (30 minutes)

Presenter: YIN, Zhong-Bao (Central China Normal University CCNU (CN))

Session Classification: Plenary

Contribution ID: 44 Type: **not specified** 

#### **ALICE 3 physics programme**

**Presenter:** MAIRE, Antonin (IPHC - Strasbourg (CNRS-In2p3/Unistra))

Session Classification: Plenary

Contribution ID: 45

Type: not specified

# Efficient scientific computing with the ALICE event processing nodes GPU-based farm

Monday 21 October 2024 17:15 (30 minutes)

Presenter: RONCHETTI, Federico (CERN)

Session Classification: Plenary

Contribution ID: 46

Type: not specified

# Spin polarization phase transition and transportation of QGP at finite temperature in the presences of magnetic field and rotation

Wednesday 23 October 2024 10:55 (25 minutes)

Presenter: FENG, Sheng-Qin

Session Classification: Plenary

Contribution ID: 47 Type: **not specified** 

#### Collectivity from the STAR BES program

Wednesday 23 October 2024 14:00 (25 minutes)

**Presenter:** SHI, Shusu

Session Classification: Plenary

Contribution ID: 48 Type: not specified

# Extraction of sound velocity in ultra-central heavy-ion collisions

Wednesday 23 October 2024 14:25 (25 minutes)

**Presenter:** YAN, Li (Fudan University)

Session Classification: Plenary

Contribution ID: 49 Type: not specified

## Imaging shapes of atomic nuclei in High-Energy Nuclear collisions

Wednesday 23 October 2024 14:50 (25 minutes)

**Presenter:** ZHANG, Chunjian

Session Classification: Plenary

Contribution ID: 50 Type: not specified

# Unveiling the origin of QGP-like effects in pp and p-Pb collisions using flattenicity

Wednesday 23 October 2024 16:25 (25 minutes)

Presenter: ORTIZ VELASQUEZ, Antonio

Session Classification: Plenary

Contribution ID: 51 Type: not specified

# Study jet-induced medium response within CoLBT-hydro model

**Presenter:** YANG, Zhong (CCNU)

Contribution ID: **52** Type: **not specified** 

#### Quarkonium production in heavy-ion collisions

Tuesday 22 October 2024 16:25 (25 minutes)

Presenter: BAI, Xiaozhi (University of Science and Technology of China (USTC))

Session Classification: Plenary

Contribution ID: 53 Type: not specified

#### Lattice determination of heavy quark diffusion

Tuesday 22 October 2024 10:55 (25 minutes)

**Presenter:** Mr SHU, HaiTao

Session Classification: Plenary

Contribution ID: 54 Type: **not specified** 

#### Density dependent QCD effects in pp collisions

Monday 21 October 2024 10:50 (30 minutes)

**Presenter:** MORSCH, Andreas (CERN)

Session Classification: Plenary

Contribution ID: 55 Type: not specified

## Parton fragmentation from vacuum to nuclear medium

Monday 21 October 2024 11:20 (30 minutes)

Presenter: XING, Hongxi (South China Normal University)

Session Classification: Plenary

Contribution ID: 56 Type: not specified

# Light and heavy flavor jet quenching in relativisitic heavy-ion collisions

Monday 21 October 2024 11:50 (30 minutes)

Presenter: CAO, Shanshan (Shandong University)

Session Classification: Plenary

Contribution ID: 57 Type: not specified

### The development of Si detector in ALICE: from ITS2 to ITS3

Monday 21 October 2024 14:30 (30 minutes)

**Presenter:** FANTONI, Alessandra (INFN e Laboratori Nazionali di Frascati (IT))

Session Classification: Plenary

Contribution ID: 58 Type: not specified

#### Prospects and challenges for LHCb upgrades

Monday 21 October 2024 16:25 (25 minutes)

Presenter: GUITTIERE, Manuel (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 59 Type: not specified

#### **Detector development at CIAE**

Monday 21 October 2024 17:45 (30 minutes)

Presenter: LI, Xiaomei (China Institute of Atomic Energy (CN))

Session Classification: Plenary

Contribution ID: 60 Type: not specified

#### Multiplicity-dependent quarkonium production

Tuesday 22 October 2024 15:15 (25 minutes)

Presenter: URAS, Antonio (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 61 Type: not specified

#### Overview of recent HF highlights results

Wednesday 23 October 2024 08:55 (25 minutes)

Presenter: TERREVOLI, Cristina (Universita e INFN, Bari (IT))

Session Classification: Plenary

Contribution ID: **62** Type: **not specified** 

# Spin polarization of A hyperons along beam direction in p+Pb collisions using hydrodynamic approaches

Wednesday 23 October 2024 11:45 (25 minutes)

Presenter: YI, Cong

Session Classification: Plenary

Contribution ID: 63 Type: not specified

#### Constraining the gluon helicity at STAR

Wednesday 23 October 2024 16:50 (25 minutes)

Presenter: LIN, Ting

Session Classification: Plenary

Contribution ID: 66 Type: not specified

#### China-Italy cooperation and achievement

Presenter: ROSSI, Andrea (INFN, Padova (IT))

Contribution ID: 67 Type: not specified

#### **ALICE-China cooperation and achievement**

Sunday 20 October 2024 11:55 (25 minutes)

Presenter: ZHOU, Daicui (Central China Normal University CCNU (CN))

Session Classification: Plenary

Contribution ID: 68 Type: not specified

#### **ATLAS Highlights**

Sunday 20 October 2024 15:30 (30 minutes)

Presenter: HU, Qipeng (University of Science and Technology of China (CN))

Session Classification: Plenary

Contribution ID: 69 Type: not specified

### Deep learning for nuclear equation of state at extreme conditions

Presenter: PANG, LongGang (Central China Normal University)

Session Classification: Plenary

Contribution ID: **70** Type: **not specified** 

#### Heavy flavour production in LHCb

Monday 21 October 2024 10:00 (30 minutes)

**Presenter:** HE, Jibo (University of Chinese Academy of Sciences (CN))

Session Classification: Plenary

Contribution ID: 71 Type: not specified

#### Probing the flavour dependence of parton showers

Tuesday 22 October 2024 09:20 (25 minutes)

Presenter: ZARDOSHTI, Nima (CERN)

Session Classification: Plenary

Contribution ID: 72 Type: not specified

#### Classical description of quark interactions

Tuesday 22 October 2024 11:45 (25 minutes)

Presenter: TAN, Zhiguang

Session Classification: Plenary

Contribution ID: 73 Type: not specified

#### **QCD Challenges**

Tuesday 22 October 2024 14:25 (25 minutes)

**Presenter:** PETROVICI, Mihai (Horia Hulubei National Institute of Physics and Nuclear Engineering

(RO))

Session Classification: Plenary

Type: not specified

Contribution ID: 74

# First observation of (B0 -> D- pi+) signal in ALICE (pp 13.6 TeV)

**Presenter:** BIGOT, Alexandre (Centre National de la Recherche Scientifique (FR))

Contribution ID: 75 Type: not specified

#### Quarkonium production in pp and p-Pb collisions

Tuesday 22 October 2024 16:50 (25 minutes)

Presenter: FEUILLARD, Victor Jose Gaston (Heidelberg University (DE))

Session Classification: Plenary

Contribution ID: 76 Type: not specified

#### Prompt/non-prompt Jpsi production in ALICE

Tuesday 22 October 2024 17:15 (25 minutes)

Presenter: COQUET, Maurice (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 77 Type: **not specified** 

### Quarkonium photoproduction in peripheral PbPb and ultra-peripheral collisions

Tuesday 22 October 2024 17:40 (25 minutes)

Presenter: ARSENE, Ionut Cristian (University of Oslo (NO))

Session Classification: Plenary

Contribution ID: 78 Type: not specified

#### Spin polarization in A+A and p+A collisions

Wednesday 23 October 2024 10:30 (25 minutes)

Presenter: PU, Shi

Session Classification: Plenary

Contribution ID: 79 Type: not specified

### Probing collectivity with fluctuations of the pt spectrum

Wednesday 23 October 2024 15:15 (25 minutes)

**Presenter:** OLLITRAULT, Jean-Yves

Session Classification: Plenary

Contribution ID: **80** Type: **not specified** 

### W and Z production in hadronic collisions with ALICE

Wednesday 23 October 2024 15:40 (25 minutes)

Presenter: STOCCO, Diego (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 81 Type: not specified

### Anistropic flow measurements in small collision systems

Presenter: ZHAO, Mingrui (China Institute of Atomic Energy (CN))

Contribution ID: 82

Type: not specified

### Exploring nuclear structure with multiparticle azimuthal correlations at the LHC

Presenter: LU, Zhiyong (China Institute of Atomic Energy (CN))

Contribution ID: 83 Type: not specified

### Deep learning for nuclear equation of state at extreme conditions

Thursday 24 October 2024 09:00 (25 minutes)

Presenter: PANG, LongGang (Central China Normal University)

Session Classification: Plenary

Contribution ID: 84 Type: not specified

### Exploring nuclear structure with multiparticle azimuthal correlations at the LHC

Thursday 24 October 2024 09:25 (25 minutes)

Presenter: LU, Zhiyong (China Institute of Atomic Energy (CN))

Session Classification: Plenary

Contribution ID: 85 Type: not specified

# External magnetic field induced paramagnetic squeezing effect in heavy-ion collisions at the LHC

Thursday 24 October 2024 09:50 (25 minutes)

**Presenter:** JIANG, Zefang

Session Classification: Plenary

Contribution ID: **86** Type: **not specified** 

# Nonperturbative heavy quark transport in a semi-Quark-Gluon-Plasma

Thursday 24 October 2024 10:35 (25 minutes)

**Presenter:** LI, Shuang (China Three Gorges University)

Session Classification: Plenary

Contribution ID: 87 Type: not specified

# Search for the chiral magnetic effect with forced match of multiplicity and elliptic flow in isobar collisions at STAR

Thursday 24 October 2024 11:00 (25 minutes)

Presenter: Dr LIN, Yufu (Guangxi Normal University,)

Session Classification: Plenary

Contribution ID: 88 Type: not specified

# Exotic states production in nuclear collisions at the LHC energy

Thursday 24 October 2024 11:25 (25 minutes)

Presenter: SHE, Zhilei

Session Classification: Plenary

Contribution ID: 89 Type: not specified

#### **Closing Remarks**

Thursday 24 October 2024 11:50 (25 minutes)

Presenter: ZHANG, Xiaoming (Central China Normal University CCNU (CN))

Session Classification: Plenary

Contribution ID: 90 Type: not specified

#### The ALICE upgrade program

Monday 21 October 2024 14:00 (30 minutes)

Presenter: VAN LEEUWEN, Marco (Nikhef National institute for subatomic physics (NL))

Session Classification: Plenary

Contribution ID: 91 Type: not specified

#### MAPS chip R&D at CCNU

Monday 21 October 2024 16:50 (25 minutes)

**Presenter:** SUN, Xiangming

Session Classification: Plenary

Contribution ID: 92 Type: not specified

# Distilling circularly polarized photon emission from magnetized chiral plasmas

Wednesday 23 October 2024 11:20 (25 minutes)

**Presenter:** WANG, Xinyang

Session Classification: Plenary

Contribution ID: 93 Type: not specified

# First observation of (B0 -> D- pi+) signal in ALICE (pp 13.6 TeV)

**Presenter:** BIGOT, Alexandre (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: 94 Type: not specified

### Anistropic flow measurements in small collision systems

Wednesday 23 October 2024 17:15 (25 minutes)

Presenter: ZHAO, Mingrui (China Institute of Atomic Energy (CN))

Session Classification: Plenary

Contribution ID: 95 Type: not specified

# Probe element synthesis in star with deep underground JUNA facility

Sunday 20 October 2024 17:20 (30 minutes)

Presenter: LIU, Weiping

Session Classification: Plenary

Contribution ID: 96 Type: not specified

#### **Collectivity: Prospects and Future Directions**

Sunday 20 October 2024 17:50 (35 minutes)

**Presenter:** JIA, Jiangyong (Stony Brook University (US))

Session Classification: Plenary

Contribution ID: 97 Type: not specified

#### **ALICE 3 physics programme**

Monday 21 October 2024 15:30 (30 minutes)

**Presenter:** MAIRE, Antonin (IPHC - Strasbourg (CNRS-In2p3/Unistra))

Session Classification: Plenary

Greetings

Contribution ID: 98 Type: not specified

#### Greetings

Monday 21 October 2024 16:20 (5 minutes)

Presenter: MASCIOCCHI, Silvia (GSI - Helmholtzzentrum fur Schwerionenforschung GmbH (DE))

Session Classification: Plenary