

International Workshop on Hadron Structure and Spectroscopy 2023

Report of Contributions

Contribution ID: 1

Type: **not specified**

Di-hadron production and the transversity distribution of the nucleon

Tuesday 27 June 2023 09:00 (20 minutes)

Presenter: METZ, Andreas

Session Classification: Session

Contribution ID: 2

Type: **not specified**

Jefferson Lab: a look into the Future

Monday 26 June 2023 14:35 (25 minutes)

Presenter: Dr ROSSI, Patrizia (Jefferson Lab/LNF-INFN)

Session Classification: Session

Contribution ID: 3

Type: **not specified**

Fragmentation functions from e^+e^- annihilation experiments

Tuesday 27 June 2023 11:00 (25 minutes)

Presenter: GARZIA, Isabella

Session Classification: Session

Contribution ID: 4

Type: **not specified**

Extraction of Sivers and worm-gear-T distributions from SIDIS and Drell-Yan

Tuesday 27 June 2023 09:25 (20 minutes)

Presenter: VLADIMIROV, Alexey (Universidad Complutense de Madrid)

Session Classification: Session

Contribution ID: 5

Type: **not specified**

Femtography of unpolarized protons and pions at N³LL accuracy

Monday 26 June 2023 10:30 (20 minutes)

Presenter: RADICI, Marco

Session Classification: Session

Contribution ID: 7

Type: **not specified**

CLAS12 SIDIS longitudinal target results

Tuesday 27 June 2023 11:30 (25 minutes)

Presenter: AVAKIAN, harut

Session Classification: Session

Contribution ID: 8

Type: **not specified**

SIDIS measurements at COMPASS

Tuesday 27 June 2023 12:00 (25 minutes)

Presenter: MARTIN, Anna (Trieste University and INFN (IT))

Session Classification: Session

Contribution ID: 9

Type: **not specified**

Drell-Yan cross section measurements at SeaQuest and SpinQuest

Monday 26 June 2023 17:35 (20 minutes)

Presenter: NAGAI, Kei (Los Alamos National Laboratory)

Session Classification: Session

Contribution ID: **10**

Type: **not specified**

Hard exclusive π^0 production at COMPASS

Tuesday 27 June 2023 15:20 (20 minutes)

Presenter: LAVICKOVA, Karolina (Czech Technical University in Prague (CZ))

Session Classification: Session

Contribution ID: **11**

Type: **not specified**

GPD measurements at JLab

Tuesday 27 June 2023 14:30 (20 minutes)

Presenter: Dr NICCOLAI, Silvia (CNRS)

Session Classification: Session

Contribution ID: 12

Type: **not specified**

Hadron spectroscopy at BESIII

Wednesday 28 June 2023 10:45 (20 minutes)

Presenter: LIU, Beijiang

Session Classification: Session

Contribution ID: 13

Type: **not specified**

Hadron spectroscopy at GlueX

Wednesday 28 June 2023 11:10 (25 minutes)

Presenter: Dr HURCK, Peter (University of Glasgow (GB))

Session Classification: Session

Contribution ID: 14

Type: **not specified**

Machine learning for event reconstruction and particle identification at CLAS12

Wednesday 28 June 2023 14:00 (20 minutes)

Presenter: GAVALLIAN, Gagik (Jefferson National Lab)

Session Classification: Session

Contribution ID: 15

Type: **not specified**

New SIDIS results from H1 using machine learning for unfolding

Wednesday 28 June 2023 14:50 (20 minutes)

Presenter: ACOSTA, Fernando Torales (Lawrence Berkeley National Lab)

Session Classification: Session

Contribution ID: 16

Type: **not specified**

The LHCspin project

Monday 26 June 2023 15:30 (20 minutes)

The goal of LHCspin is to develop, in the next few years, innovative solutions and cutting-edge technologies to access spin physics in high-energy polarized fixed-target collisions, by exploring a unique kinematic regime given by the LHC beam and by exploiting new probes. This ambitious task poses its basis on the recent installation of SMOG2, the unpolarized gas target in front of the LHCb spectrometer. Specifically, the unpolarized target, already itself a unique project, will allow to carefully study the dynamics of the beam-target system, and clarify the potentiality of the entire system, as the basis for an innovative physics program at the LHC. The forward geometry of the LHCb spectrometer ($2 < \eta < 5$) is perfectly suited for the reconstruction of particles produced in fixed-target collisions. This configuration, with center-of-mass energies ranging from 115 GeV in pp interactions to 72 GeV in collisions with nuclear beams, allows to cover a wide backward rapidity region, including the poorly explored high x-Bjorken and high x-Feynman regimes. With the instrumentation of the proposed target system, LHCb will become the first experiment delivering simultaneously unpolarized beam-beam collisions at $\sqrt{s}=14$ TeV and both polarized and unpolarized beam-target collisions. The status of the project is presented along with a selection of physics opportunities.

Presenter: SANTIMARIA, Marco (INFN e Laboratori Nazionali di Frascati (IT))

Session Classification: Session

Contribution ID: 17

Type: **not specified**

sPHENIX Cold-QCD Program

Monday 26 June 2023 15:05 (20 minutes)

Presenter: Dr NUKAZUKA, Genki (RIKEN BNL Research Center)

Session Classification: Session

Contribution ID: **18**

Type: **not specified**

Measurement of the spin transfer to Λ hyperons at CLAS12

Wednesday 28 June 2023 14:25 (20 minutes)

Presenter: MCENEANEY, Matthew

Session Classification: Session

Contribution ID: **19**

Type: **not specified**

Light-meson spectroscopy at COMPASS

Wednesday 28 June 2023 11:40 (25 minutes)

Presenter: HAAS, Philipp (Technische Universitaet Muenchen (DE))

Session Classification: Session

Contribution ID: 20

Type: **not specified**

AMBER Phase I: Establishing a new QCD facility at the M2 secondary beam line of CERN's SPS

Monday 26 June 2023 12:20 (20 minutes)

Presenter: Mr POESCHL, Thomas (Technische Universitaet Muenchen (DE))

Session Classification: Session

Contribution ID: **21**

Type: **not specified**

AMBER Phase II: QCD physics beyond colliders

Monday 26 June 2023 15:55 (20 minutes)

Presenter: SEITZ, Bjoern

Session Classification: Session

Contribution ID: 22

Type: **not specified**

Pion GPDs

Tuesday 27 June 2023 16:45 (20 minutes)

Presenter: MORGADO CHÁVEZ, Jose Manuel (LSN/DPhN/Irfu CEA-Saclay)

Session Classification: Session

Contribution ID: 23

Type: **not specified**

Probing gluon TMDs in back-to-back production of $J/\psi - \text{jet}$ and $J/\psi - \gamma$ in eP collision

Tuesday 27 June 2023 09:50 (20 minutes)

We present a calculation of the azimuthal asymmetries in back-to-back production of $J/\psi - \text{jet}$ and $J/\psi - \gamma$ in eP collision. We use NRQCD to estimate the J/ψ production, and assume TMD factorization for the back-to-back kinematics. We show that these asymmetries will be useful for probing the gluon TMDs, like the linearly polarized gluon TMD, in unpolarized scattering, and gluon Sivers function, when the proton is transversely polarized. We give estimates of the upper bound of the asymmetries, as well as using different parametrizations of the gluon TMDs. We investigate the effect of TMD evolution on the asymmetry.

Presenter: MUKHERJEE, Asmita (Indian Institute of Technology, Bombay, India)

Session Classification: Session

Contribution ID: 24

Type: **not specified**

Dynamics of J/ψ photoproduction near threshold

Wednesday 28 June 2023 10:20 (20 minutes)

The near threshold region of heavy quarkonium has received a lot of attention with possible applications to a wide breadth of physics. I will discuss the recent JPAC analysis of new Jefferson Lab data from the GlueX and Jpsi-007 experiments. I will discuss the still wide array of physics scenarios that may underpin the near threshold data including strong coupled channel effects to open charm states and the existence of hidden charm pentaquarks. I highlight the need to disentangle the competing dynamical processes especially as it relates to extracting meaningful quantities related to nucleon structure and or exotic hadrons.

Presenter: WINNEY, Daniel (South China Normal U.)**Session Classification:** Session

Contribution ID: 25

Type: **not specified**

TMD structure of hadrons: status and prospects

Monday 26 June 2023 09:55 (30 minutes)

Presenter: PISANO, Cristian

Session Classification: Session

Contribution ID: 26

Type: **not specified**

Hadron spectroscopy today

Monday 26 June 2023 09:20 (30 minutes)

Presenter: HUESKEN, Nils (Johannes Gutenberg U. Mainz, Germany)

Session Classification: Session

Contribution ID: 27

Type: **not specified**

Exclusive measurements at LHC sensitive to GPDs

Tuesday 27 June 2023 14:55 (20 minutes)

Presenter: VAN HULSE, Charlotte (Universidade de Santiago de Compostela (ES))

Session Classification: Session

Contribution ID: 28

Type: **not specified**

Highlights from STAR experiment

Monday 26 June 2023 11:30 (20 minutes)

Presenter: ZHANG, Jinlong (Shandong University)

Session Classification: Session

Contribution ID: 29

Type: **not specified**

Highlights from PHENIX experiment

Monday 26 June 2023 11:55 (20 minutes)

Presenter: UJVARI, Balazs (University of Debrecen (HU))

Session Classification: Session

Contribution ID: 30

Type: **not specified**

Standard and q_T -weighted transverse spin asymmetries in COMPASS Drell-Yan data

Wednesday 28 June 2023 09:25 (20 minutes)

Presenter: NIEMIEC, Malgorzata Rozalia (University of Warsaw (PL))

Session Classification: Session

Contribution ID: 31

Type: **not specified**

Double J/ψ production in pion-nucleon scattering at COMPASS

Wednesday 28 June 2023 09:00 (20 minutes)

Presenter: GRIDIN, Andrei (Joint Institute for Nuclear Research (RU))

Session Classification: Session

Contribution ID: 32

Type: **not specified**

Highlights from the JAM collaboration

Monday 26 June 2023 16:45 (20 minutes)

Presenter: SATO, Nobuo

Session Classification: Session

Contribution ID: 33

Type: **not specified**

Modeling polarised quark fragmentation in electron-positron annihilation

Tuesday 27 June 2023 10:15 (20 minutes)

Presenter: KERBIZI, Albi (Universita e INFN Trieste (IT))

Session Classification: Session

Contribution ID: 34

Type: **not specified**

New techniques to access the x-dependence of GPDs

Tuesday 27 June 2023 17:35 (20 minutes)

Presenter: YU, Zhite

Session Classification: Session

Contribution ID: 35

Type: **not specified**

Lattice QCD calculations of hadron structure

Monday 26 June 2023 17:10 (20 minutes)

Presenter: KARPIE, Joseph (Jefferson Lab)

Session Classification: Session

Contribution ID: 36

Type: **not specified**

CFF and GPD extraction from multi-channel fits

Tuesday 27 June 2023 17:10 (20 minutes)

Presenter: ČUIĆ, Marija

Session Classification: Session

Contribution ID: 37

Type: **not specified**

Calculating GPDs in Lattice QCD: Recent developments

Tuesday 27 June 2023 16:15 (25 minutes)

Recent advancements have facilitated the approximate computation of light-cone correlation functions in lattice QCD through the evaluation of their Euclidean counterparts. In this presentation, we will provide a brief overview of these significant developments that have direct implications for Generalized Parton Distributions (GPDs). Additionally, we will delve into our latest work, where we have developed a formalism aimed at enhancing the efficiency of lattice calculations for GPDs.

Presenter: BHATTACHARYA, Shohini**Session Classification:** Session

Contribution ID: **38**

Type: **not specified**

Welcome

Monday 26 June 2023 09:00 (15 minutes)

Presenters: MATOUSEK, Jan (Charles University (CZ)); Mr AUGSTEN, Kamil (Czech Technical University (CZ))

Session Classification: Session

Contribution ID: 39

Type: **not specified**

Hadron spectroscopy at LHCb

Wednesday 28 June 2023 12:10 (20 minutes)

Presenter: Mr XU, Zehua (LPC Clermont CNRS/IN2P3 (FR))

Session Classification: Session