

10th workshop of the APS Topical Group on Hadronic Physics

Wednesday, April 12, 2023

Parallel Session: Baryons, Hyperons, Cascades, Chair: Bill Briscoe - Orchestra C (2:00 PM - 3:35 PM)

time	[id] title	presenter
2:00 PM	[151] Investigation of the Σ^0 Production Mechanism in $p(3.5 \text{ GeV})+p$ Collisions	Dr ESMAIL, Waleed
2:20 PM	[75] Towards the Discovery of First Strange Hexaquark with CLAS12	CLASH, Geraint
2:40 PM	[82] Cross Section Analysis for $\Xi(1530)$ in the reaction $\gamma p \rightarrow K+K+\Xi(1530)$	SUMNER, Brandon
3:00 PM	[10] Total cross section of $\Xi(1820)^*$ in $\gamma p \rightarrow K+K+\Xi^*$ at GlueX.	AKONDI, chandra
3:20 PM	[77] Role of the QCD spin-directed momentum transfer mechanism in pp and ep scattering polarized hyperon production	LIUTI, simonetta

Parallel Session: Collective Phenomena, Chair: Björn Schenke - Orchestra D (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[5] Properties of gluon fields at early times in relativistic heavy ion collisions from a proper time expansion	CARRINGTON, Margaret
2:20 PM	[52] Effects of Conservation Laws on Particle Correlations in Relativistic Nuclear Collisions	DHINDSA, Harvir
2:40 PM	[73] Studying the Properties of the Quark-Gluon Plasma With Small and Large Collision Systems in a Bayesian Analysis Framework	MANKOLLI, Andi
3:00 PM	[163] (tbd)	
3:20 PM	[131] (tbd)	

Parallel Session: Data Science, Chair: Ramona Vogt - Orchestra A (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[64] Deep learning models for deeply virtual exclusive processes	KRIESTEN, Brandon
2:20 PM	[78] Polarized and unpolarized gluon parton distributions from lattice QCD and machine learning	SUFIAN, Raza
2:40 PM	[8] GPU-based Online Reconstruction for J/ψ TSSA at SpinQuest experiment	Dr FUCHEY, Eric
3:00 PM	[33] Developing an AI Tracking for the CLAS12 ALERT Program	YUROV, Mikhail
3:20 PM	[125] (tbd)	

Parallel Session: Lattice Studies in QCD, Chair: Martha Constantinou - Orchestra B (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[110] A continuum Schwinger method to study the pion's structure at future electron ion colliders	SEGOVIA, Jorge

2:20 PM	[38] Moments of nucleon generalized parton distributions from the leading-twist expansion of the quasi-GPD matrix element	GAO, Xiang
2:40 PM	[46] Transverse momentum-dependent parton distributions for longitudinally polarized nucleons from Lattice QCD	ENGELHARDT, Michael
3:00 PM	[88] Isoscalar Parton Distribution with Disconnected Diagrams	CHAMNESS, Christopher
3:20 PM	[56] GUMP program for GPD global analysis	GUO, Yuxun

Parallel Session: Collinear PDFs, Chair: Jing Wang - Orchestra B (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[50] Gluon TMD studies with heavy quarkonium states	CELIBERTO, Francesco Giovanni
4:20 PM	[19] Simultaneous Global Analysis of Di-Hadron Fragmentation Functions and Transversity PDFs	COCUZZA, Christopher
4:40 PM	[54] Basics of factorization in a scalar Yukawa field theory	ASLAN, Fatma
5:00 PM	[37] Leading Power Accuracy in Lattice Calculations of Parton Distributions	ZHANG, Rui
5:20 PM	[92] Complementarity in Joint Lattice-Experiment Analysis of Parton Distributions	Dr KARPIE, Joseph

Parallel Session: Exotics, Dynamics, Scalars, Chair: Eric Swanson - Orchestra C (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[23] The Search for Hybrid Mesons at GlueX	IMOEHL, William
4:20 PM	[27] Three-body dynamics of resonances from lattice QCD	DORING, Michael
4:40 PM	[26] Analytic continuation of the relativistic three-particle scattering amplitudes	DAWID, Sebastian
5:00 PM	[60] Extracting the Sigma resonance from first-principles QCD	RODAS, Arkaitz
5:20 PM	[66] Towards accessing $\gamma^* \rightarrow \pi\pi$ from lattice QCD	JACKURA, Andrew

Parallel Session: Nuclear phase diagram from Heavy Ions to Neutron Stars, Chair: Ramona Vogt - Orchestra D (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[43] Baryon Stopping and Associated Production of Mesons in Au+Au Collisions at $\sqrt{s_{NN}}=3.0$ GeV at STAR	KIMELMAN, Benjamin
4:20 PM	[99] Study the effects of pre-hydrodynamic flow in heavy-ion collisions at the RHIC Beam Energy Scan program	MUNIR, Mashhood
4:40 PM	[149] Proton number cumulants and correlation functions at RHIC-BES from hydrodynamics	VOVCHENKO, Volodymyr
5:00 PM	[81] Study net proton fluctuations with (3+1)D hybrid simulations and machine learning	BOUDREAU, Brandon
5:20 PM	[104] Nuclear phase diagram: from heavy ions to neutron stars	DEXHEIMER, Veronica

Parallel Session: Ultra Peripheral Collisions, Chair: Vicki Greene - Orchestra A (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[61] ALICE results and future prospects on UPCs	TAPIA TAKAKI, Daniel
4:20 PM	[4] CGC for Ultra-Peripheral Pb+Pb Collisions at the Large Hadron Collider: a more realistic calculation	DUAN, Haowu
4:40 PM	[98] Tracking the baryon quantum number with heavy-ion collisions	TSANG, Chun Yuen
5:00 PM	[129] (tbd)	
5:20 PM	[172] (tbd)	

Thursday, April 13, 2023

Parallel Session: Generalized Parton Distributions, Chair: Alexei Prokudin - Orchestra B (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[79] Proton GPDs from lattice QCD with novel methods	MILLER, Joshua
2:20 PM	[57] Shedding light on shadow generalized parton distributions (GPDs)	MOFFAT, Eric
2:40 PM	[90] Phenomenology of proton and deuteron deeply virtual exclusive scattering	BAUTISTA, Joshua Beethoven
3:00 PM	[146] Evolution and the modelling of GPDs	DUTRIEUX, Hervé
3:20 PM	[175] (tbd)	

Parallel Session: J/Psi at Threshold, Chair: Patrizia Rossi - Orchestra C (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[53] Near-threshold quarkonium production and gravitational form factors	HATTA, Yoshitaka
2:20 PM	[69] Threshold charmonium photoproduction with GlueX	PENTCHEV, Lubomir
2:40 PM	[96] Recent results from near-threshold J/ψ photoproduction measurement from Hall-C J/ψ-007 experiment	PRASAD, Shivangi
3:00 PM	[2] J/ψ near threshold in holographic QCD: A and D gravitational form factors	MAMO, Kiminad
3:20 PM	[115] Charmonium photo production	SZCZEPANIAK, Adam

Parallel Session: Meson Structure, Chair: Dave Gaskell - Orchestra D (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[117] Measurements of Light Meson Structure via Tagged Deep Inelastic Scattering	MONTGOMERY, Rachel
2:20 PM	[76] Pion and kaon form factors from lattice QCD	DELMAR, Joseph
2:40 PM	[63] The Non-Perturbative Structure of Pion	MAEROVITZ, Joseph
3:00 PM	[11] Update On Meson Structure Studies at Jefferson Lab Hall C	HEINRICH, nathan
3:20 PM	[86] Extracting the Pion Distribution Amplitude from Lattice QCD through Pseudo-Distributions	KOVNER, Daniel

Parallel Session: Short Range Correlations, Chair: Axel Schmidt - Orchestra A (2:00 PM - 3:40 PM)

time	[id] title	presenter
2:00 PM	[105] New results from A(e,e'p) measurement on Short-range correlations in Neutron-rich nuclei	NGUYEN, Dien
2:20 PM	[108] Recent Jefferson Lab Measurement on Inclusive Scattering from Nuclei at x>\$1	DURAN, Burcu
2:40 PM	[160] Probing nuclear short-range correlations with real photons at Jefferson Lab	KOLAR, Tim

3:00 PM	[116] Nuclear short-range correlations with the generalized contact formalism	WEISS, Ronen
3:20 PM	[87] QCD in Nuclei: Hidden Color Singlets and Diquark Phenomenology	RITTENHOUSE WEST, Jennifer

Parallel Session: EMC Effect, Chair: Nadia Fomin - Orchestra A (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[148] First Measurement of the Flavor Dependence of Nuclear PDF Modification Using Parity-Violating Deep Inelastic Scattering	BEMINIWATTHA, Rakitha
4:20 PM	[150] Isovector EMC Effect from JAM Global QCD Analysis with MARATHON Data	LIU, Hanjie
4:40 PM	[156] Understanding the EMC effect with tagged DIS measurements	HAUENSTEIN, Florian
5:00 PM	[62] EMC effect measurements at 11GeV	SHARDA, Abhyuday
5:20 PM	[161] Medium-modified spin structure functions in the EMC and anti-shadowing regions	BROOKS, Will

Parallel Session: J/Psi and Hadron Properties, Chair: Patrizia Rossi - Orchestra C (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[6] Observation of new structures in the J/psi/J/psi mass spectrum in pp collisions at 13 TeV	YI, Kai
4:20 PM	[65] Polarization measurement of coherent J/psi photoproduction with the ALICE experiment	GAUTAM, Amrit
4:40 PM	[39] Status of the MUon proton Scattering Experiment (MUSE)	LAVRUKHIN, Ievgen
5:00 PM	[58] Potential Model Calculations of Proton Mass Radius with Constrained Charge Radius	GALLIMORE, Daniel
5:20 PM	[162] (tbd)	

Parallel Session: Probes of QGP, Chair: Raghav Kunawalkam Elayavalli - Orchestra D (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[40] Identifying Quenching Effect in Heavy-ion Collisions with Machine Learning	WU, Yilun
4:20 PM	[24] Understanding the production of heavy flavor exotics in heavy ion collisions	LIAO, JINFENG
4:40 PM	[49] Φ Meson Production at Forward Rapidity in Au + Au Collisions at $\sqrt{s_{NN}} = 200$ GeV	ACHARYA, Uttam
5:00 PM	[47] The evolution of jets and high- p_T probes in small collision systems using a multi-stage approach.	SOURI, ismail
5:20 PM	[154] The sPHENIX experiment at RHIC	Dr MA, Weihu

Parallel Session: Transverse Momentum Dependent Distributions, Chair: Alexei Prokudin - Orchestra B (4:00 PM - 5:40 PM)

time	[id] title	presenter
4:00 PM	[83] Tomography of pions and protons via transverse momentum dependent distributions	BARRY, Patrick
4:20 PM	[3] Rapidity-only TMD factorization at one loop	BALITSKY, Ian
4:40 PM	[67] Mapping Nucleon and Meson Parton Distributions with Lattice QCD	LIN, Huey-Wen
5:00 PM	[55] Transverse-momentum-dependent factorization at next-to-leading power	GAMBERG, Leonard
5:20 PM	[32] Consistent large transverse momentum matching in TMDs with “Hadron Structure Oriented” approach	RAINALDI, Tommaso

Friday, April 14, 2023

Parallel Session: Hadron Structure in QCD, Chair: Alexei Prokudin - Orchestra B (8:30 AM - 10:10 AM)

time	[id] title	presenter
8:30 AM	[14] Numerical Study of Twist-3 Longitudinal-Transverse Double-Spin Asymmetries: a Probe of Quark-Gluon-Quark Correlations in Hadrons	BAUER, Brandon
8:50 AM	[15] Light front time and rest frame densities of hadrons	FREESE, Adam
9:10 AM	[29] Confinement and Color Vortices in Chromostatics	SIVERS, Dennis
9:30 AM	[34] Tsallis-MIT bag model pressure distribution and the physical meaning of the bag pressure	HERRERA CORRAL, Gerardo
9:50 AM	[72] The correlated spatial structure of the proton from double generalized parton distributions as a framework for dynamical imaging	LIUTI, simonetta

Parallel Session: JLab 12 GeV and Future Initiatives, Chair: David Gaskell - Orchestra A (8:30 AM - 10:10 AM)

time	[id] title	presenter
8:30 AM	[118] Jefferson Lab Positron Program	Dr HIGINBOTHAM, Douglas
8:50 AM	[20] Future Pion Structure Studies with JLab at 22 GeV and the EIC	Dr KAY, Stephen
9:10 AM	[100] Gravitational form factors and mechanical properties of the proton	ELOUADRHIRI, Latifa
9:30 AM	[16] Experimental Studies of Evolution Properties of Structure Functions in Polarized SIDIS	AVAGYAN, Harut
9:50 AM	[45] Measurements of the $\cos\phi$ and $\cos^2\phi$ Moments of the Unpolarized SIDIS π^+ Cross-section at CLAS12	CAPOBIANCO, Richard

Parallel Session: Light Meson Decays, Chair: Lubomir Pentchev - Orchestra C (8:30 AM - 10:10 AM)

time	[id] title	presenter
8:30 AM	[102] Precision tests of fundamental physics with light pseudoscalar mesons	GONZÁLEZ-SOLÍS, Sergi
8:50 AM	[22] The physics program using the new JLab Eta(') Factory (JEF) in Hall D at Jefferson Lab.	BRISCOE, Bill
9:10 AM	[17] Linking the $3P_0$ decay model to Landau gauge QCD	LLANES-ESTRADA, Felipe J.
9:30 AM	[74] A FAIR Phase-0 experiment to determine the π^0 electromagnetic transition form factor at MAMI	NOLL, Oliver
9:50 AM	[114] The REDTOP experiment: a η/η' factory to explore dark matter and physics beyond the Standard Model	GATTO, Corrado

Parallel Session: Neutrino Hadron Interactions, Chair: Florian Hauenstein - Orchestra D (8:30 AM - 10:10 AM)

time	[id] title	presenter
8:30 AM	[124] An Introduction to Neutrino-Nucleus Interactions: A Generator Perspective	Dr BARROW, Joshua
8:50 AM	[113] Nuclear Effects in Neutrino Experiments	ASHKENAZI, Adi

9:10 AM	[143] The impact of neutrino-nucleus interactions on neutrino oscillation physics	PANDEY, Vishvas
9:30 AM	[145] Measurement of axial vector form factor in antineutrino elastic scattering on free protons in the MINERvA experiment	CAI, Tejin
9:50 AM	[158] Compatibility of Neutrino DIS Data and Its Impact on Nuclear Parton Distribution Functions	OLNESS, Fred

Parallel Session: Computational and Quantum Computing,, Chair: Jacquelyn Noronha-Hostler - Orchestra D (10:30 AM - 12:10 PM)

time	[id] title	presenter
10:30 AM	[21] Spectroscopy of Ising Mesons on a Noisy Digital Quantum Simulator	ROY, Ananda
10:50 AM	[70] Quantum Computations for Field Theory Models in Hadron Physics and GPDs	GOLDSTEIN, Gary
11:10 AM	[59] Validation of the fragmentation reactions in GEANT4 tool against LISE++ for rare isotopes studies	Dr AMAR, Sokhna Bineta Lo
11:30 AM	[157] Towards Trapped-Ion Analog Simulation of Lattice Gauge Theories	PAGANO, Guido
11:50 AM	[106] The baryon anticorrelation problem may require modifying fragmentation in PYTHIA	GONZALEZ, Victor

Parallel Session: Electron Ion Collider, Chair: David Gaskell - Orchestra A (10:30 AM - 12:10 PM)

time	[id] title	presenter
10:30 AM	[68] Probing twist-2 GPDs through the exclusive photoproduction of a photon-meson pair at JLab and beyond	NABEEBACCUS, Saad
10:50 AM	[44] Accessing structure of protons and nuclei at small x at the Electron-Ion Collider	ZHAO, Wenbin
11:10 AM	[71] Quark and Gluon Helicity Evolution at Small x	TARASOV, Andrey
11:30 AM	[51] Test beam studies of a high-granularity *SiPM-on-Tile" calorimeter insert for the EIC	PREINS, Sean
11:50 AM	[140] ePIC Overview	REINHOLD, Joerg

Parallel Session: Hadronization, Heavy Flavor and Jet Production, Chair: Raghav Kunawalkam Elayavalli - Orchestra B (10:30 AM - 12:10 PM)

time	[id] title	presenter
10:30 AM	[111] Cold Nuclear Matter Effects on Heavy Flavor Production	VOGT, Ramona
10:50 AM	[85] Possible Existence of Universal Limit for Valence PDFs	M SARGSIAN, Misak
11:10 AM	[48] TMD Fragmentations from thrust dependent observables.	SIMONELLI, Andrea
11:30 AM	[153] Studying hadronization mechanisms with spectator tagging of slow protons at Fermilab, Jefferson Lab, and EIC	ROBLES, Carolina
11:50 AM	[80] Femtosopic correlations between D0 mesons and identified hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at STAR	ROY CHOWDHURY, Priyanka

Parallel Session: Hadron Properties and Interactions, Chair: Bill Briscoe - Orchestra C (10:30 AM - 12:10 PM)

time	[id] title	presenter
10:30 AM	[9] N to Delta Transition Form Factors at low momentum transfers	ATAC, Hamza
10:50 AM	[12] K-matrix Analysis of Bottomonium in e+e- Annihilation	HÜSKEN, Nils
11:10 AM	[13] The LHCb state $P^{\Lambda}_{\psi s}$ (4338) as a triangle singularity	SWANSON, Eric
11:30 AM	[91] Primakoff photoproduction of eta-mesons at GlueX (PrimEx-eta experiment)	ARROYAVE FLECHAS, Viviana A
11:50 AM	[89] Deuteron Electro-Disintegration at Very High Missing Momenta	VILLEGAS MINYETY, Gema