2024 RHIC/AGS Annual Users' Meeting

Report of Contributions

https://indico.bnl.gov/e/rhicagsaum2024

Contribution ID: **284** Type: **not specified**

Welcome Remarks

Thursday, 13 June 2024 09:00 (10 minutes)

Presenter: HEWETT, JoAnne (Director of Brookhaven National Laboratory)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **286** Type: **not specified**

Opening Remarks

Thursday, 13 June 2024 09:10 (25 minutes)

Presenter: GAO, Haiyan (BNL, Associate Laboratory Director, Nuclear and Particle Physics)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **287** Type: **not specified**

C-AD Report

Thursday, 13 June 2024 11:00 (25 minutes)

Presenter: HOCK, Kiel (Brookhaven National Laboratory)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **288** Type: **not specified**

STAR Run 24 Report

Thursday, 13 June 2024 11:25 (25 minutes)

Presenter: ADAM, Jaroslav (Czech Technical University)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **289** Type: **not specified**

sPHENIX Run 24 Report

Thursday, 13 June 2024 11:50 (25 minutes)

Presenter: NAGLE, James (University of Colorado)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **290** Type: **not specified**

Workshop Report: Jets

Thursday, 13 June 2024 13:45 (20 minutes)

Presenter: HODGES, Anthony (University of Illinois)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **292** Type: **not specified**

Report from the NSF

Thursday, 13 June 2024 10:05 (30 minutes)

Presenter: GREENE, Dr. Senta Victoria (Program Director, U.S. National Science Foundation)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **293** Type: **not specified**

Report from the DOE

Thursday, 13 June 2024 09:35 (30 minutes)

Presenter: STEPHENSON, Dr. Sharon (Physics Research Division Director, Office of Nuclear Physics, Department of Energy)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **294** Type: **not specified**

sPHENIX Highlights

Thursday, 13 June 2024 15:20 (30 minutes)

Presenter: HEMMICK, Thomas (Stony Brook University)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **295** Type: **not specified**

Workshop Report: Heavy Flavor

Thursday, 13 June 2024 14:05 (20 minutes)

Presenter: FRAWLEY, Anthony (Florida State University)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **296** Type: **not specified**

PHENIX Highlights

Thursday, 13 June 2024 15:50 (30 minutes)

Presenter: BELMONT, Ron (University of North Carolina Greensboro)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **297** Type: **not specified**

STAR Highlights

Thursday, 13 June 2024 16:20 (30 minutes)

Presenter: FENG, Yicheng (Purdue University)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **298** Type: **not specified**

Presentation of Merit & Thesis Awards

Thursday, 13 June 2024 16:50 (1 minute)

Presenter: HEWETT, JoAnne (Director of Brookhaven National Laboratory)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **299** Type: **not specified**

EIC Project Status

Friday, 14 June 2024 10:00 (30 minutes)

Presenter: FAST, James (Jefferson Laboratory)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **300** Type: **not specified**

ePIC: Status & Plans

Friday, 14 June 2024 11:00 (30 minutes)

Presenter: TU, Zhoudunming (Brookhaven National Laboratory)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **301** Type: **not specified**

EIC Detector II: Status & Plans (virtual)

Friday, 14 June 2024 11:30 (30 minutes)

Presenter: VOSSEN, Anselm (Duke University)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **302** Type: **not specified**

Report from BNL Facilities

Friday, 14 June 2024 12:00 (20 minutes)

Presenter: DANIELS, Thomas (Brookhaven National Laboratory)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **303** Type: **not specified**

Poster Awards

Friday, 14 June 2024 12:20 (5 minutes)

Presenter: ROSATI, Marzia (Iowa State University)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **304** Type: **not specified**

Business Meeting

Friday, 14 June 2024 12:40 (20 minutes)

Presenter: ROSATI, Marzia (Iowa State University)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **305** Type: **not specified**

Theory Overview

Wednesday, 12 June 2024 08:30 (35 minutes)

Presenter: MEHTAR-TANI, Yacine (Brookhaven National Laboratory)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **306** Type: **not specified**

X-SCAPE

Wednesday, 12 June 2024 09:05 (25 minutes)

Presenter: SINGH, Mayank (Vanderbilt University)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **307** Type: **not specified**

Jet Physics at the EIC

Wednesday, 12 June 2024 09:30 (25 minutes)

Presenter: RINGER, Felix (UC Berkeley/LBNL)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **308** Type: **not specified**

Overview of Artificial Intelligence at RHIC and Beyond

Tuesday, 11 June 2024 09:00 (30 minutes)

This talk will provide an overview of applications of artificial intelligence at RHIC for a variety of purposes ranging from data-taking to physics analysis. Applications ongoing and envisioned for the upcoming EIC will also be discussed.

Presenter: BOSSI, Hannah (Massachusetts Institute of Technology (MIT))

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **309** Type: **not specified**

Experimental Overview

Wednesday, 12 June 2024 10:20 (35 minutes)

Presenter: Prof. HAVENER, Laura (Yale University)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **310** Type: **not specified**

Generative AI for full-detector, whole-event simulation of heavy ion collisions

Tuesday, 11 June 2024 09:30 (30 minutes)

Artificial intelligence (AI) generative models, such as generative adversarial networks (GANs), have been explored as alternatives to traditional simulations but face challenges with training instability and sparse data coverage. This study investigates the effectiveness of denoising diffusion probabilistic models (DDPMs) for full-detector, whole-event heavy-ion collision simulations as a surrogate model for the traditional Geant4 simulation method. DDPM performance in sPHENIX calorimeter simulation data is compared with GANs. DDPMs outperform GANs and exhibit superior stability and consistency across central and peripheral heavy-ion collision events. Additionally, DDPMs offer a substantial speedup, being approximately 100 times faster than the traditional Geant4 simulation method.

Presenter: GO, Yeonju (Brookhaven National Laboratory)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **311** Type: **not specified**

Synergies Between RHIC and LHC Jet Measurements

Wednesday, 12 June 2024 10:55 (25 minutes)

Presenter: BAILEY, Virginia (Georgia State University)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **312** Type: **not specified**

Interpretable Machine Learning applications to Jet Background Subtraction

Tuesday, 11 June 2024 10:00 (30 minutes)

Reconstructing jets in heavy collisions has always required dealing with the challenges of a high background environment. Traditional techniques, such as the area based method, suffered from poor resolution at low momenta due to the large fluctuating background there. In recent years, the resolution has been improved by using machine learning to estimate the background. While machine learning tends to lead to improvements in general (wherever it is applied), care must be taken to ensure these improvements do not come at the cost of interpretability or bias from models used for training. We demonstrate a middle path –using machine learning techniques to translate "black-box"models (such as neural nets) into human interpretable formulas. We present a novel application of symbolic regression to extract a functional representation of a deep neural network trained to subtract background for measurements of jets in heavy ion collisions. With this functional representation we show that the relationship learned by a neural network is approximately the same as a new background subtraction method using the particle multiplicity in a jet. We compare the multiplicity method to the deep neural network method alone, showing its increased interpretability and comparable performance. We also discuss the application of these techniques to background subtraction for jets measured at the EIC.

Presenter: HUGHES, Charles (Iowa State University)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **313** Type: **not specified**

Path-Length Dependent Energy Loss

Wednesday, 12 June 2024 11:20 (25 minutes)

Presenter: CONNORS, Megan (Georgia State University)

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **314** Type: **not specified**

Real-Time Information Distillation with Deep Neural Network-based Compression Algorithms

Tuesday, 11 June 2024 11:00 (30 minutes)

Real-time data collection and analysis in large experimental facilities pose significant challenges across multiple domains, including high-energy physics, nuclear physics, and cosmology. Machine learning (ML)-based methods for real-time data compression have garnered substantial attention as a solution. In this talk, we will explore the use of deep neural networks in designing fast compression algorithms for 3D tensor data from the Time-Projection Chamber (TPC) at the sPHENIX experiment. Specifically, we will delve into the application of Bicephalous Convolutional Neural Networks designed to handle the sparsity and discontinuity of data from the tracking detector. Additionally, we will present our recent development in utilizing sparse convolution techniques to better exploit the data's inherent sparsity. Finally, we will briefly discuss several AI hardware accelerators that we have tested to achieve high-throughput inference.

Presenter: HUANG, Yi (Brookhaven National Laboratory)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **315** Type: **not specified**

FastML triggering in sPHENIX (Autonomous selection of physics events)

Tuesday, 11 June 2024 11:30 (30 minutes)

A demonstrator for separating events with a heavy flavor decay from background events in proton-proton collisions with the sPHENIX detector is presented. Due to data volume limitations, sPHENIX is capable of recording 10% of the minimum-bias collisions at RHIC using streaming readout in addition to its 15 kHz hardware trigger of rare events. This demonstrator will use machine-learning algorithms on FPGAs to sample the remaining 90% of the collisions.

Presenter: DEAN, Cameron (Massachusetts Institute of Technology (MIT))

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **316** Type: **not specified**

Jet Substructure

Wednesday, 12 June 2024 11:45 (25 minutes)

Presenter: HANGAL, Dhanush (Lawrence Livermore National Laboratory (US))

Session Classification: Jets - Bldg 488 Berkner Hall Room B

Contribution ID: **317** Type: **not specified**

Machine Learning Application in Jet Quenching Analysis

Tuesday, 11 June 2024 12:00 (30 minutes)

Measurements of jet substructure in ultra-relativistic heavy ion collisions suggest that the jet showering process is modified by interaction with the quark gluon plasma. Modifications of the hard substructure of jets can be explored using modern data-driven techniques. In this study, we use a machine learning approach to identify jet quenching amounts. Jet showering processes, both with and without the quenching effect, are simulated using the JEWEL Monte-Carlo event generator and embedded with uncorrelated backgrounds simulated using the ANGANTYR module within the PYTHIA event generator. Sequential substructure variables are extracted from the jet clustering history in an angular-ordered sequence and are used in the training of a neural network based on a long short-term memory network. To understand the detector effects on the efficacy of machine learning, we employed DELPHES-3.5.0 for rapid simulation of CMS detectors, providing reconstructed tracks and neutral particles similar to the particle flow candidates in CMS data. We measured the jet shape and jet fragmentation functions for jets classified by the neural network outputs and quantified their in-medium modifications. We validated that, even with detector effects and a large uncorrelated background of soft particles created in heavy ion collisions, the neural network is still able to learn from the desired features of jet quenching physics

Presenter: WU, Yilun (Vanderbilt University)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **318** Type: **not specified**

AI/ML applications for the EIC (Virtual)

Tuesday, 11 June 2024 13:30 (30 minutes)

The Electron-Ion Collider, a state-of-the-art facility for studying the strong force, is expected to begin commissioning its first experiments in early 2030. Artificial intelligence and machine learning are being incorporated from the beginning at this facility and will continue to be used throughout all phases leading up to the experiments. In this talk, I will highlight a few examples of AI/ML activities that may impact the science of the future EIC.

Presenter: FANELLI, Cristiano (College of William & Mary)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **319** Type: **not specified**

Towards ML Calibration with the ePIC Barrel Hadronic Calorimeter

Tuesday, 11 June 2024 14:00 (30 minutes)

Measurement of jets and their substructure will provide valuable information about the underlying dynamics of hard-scattered quarks and gluons in Deep-Inelastic Scattering events. The ePIC Barrel Hadronic Calorimeter (BHCal) will be a critical tool for such measurements at the Electron-Ion Collider. By enabling the measurement of the neutral hadronic component of jets, the BHCal will complement the Barrel Imaging Calorimeter (BIC) and the ePIC tracking system to improve our knowledge of the jet energy scale. However, to obtain a physically meaningful measurement, the response of the combined BIC + BHCal system must be properly calibrated using information from both. We present a potential Machine Learning (ML) based algorithm for the calibration of the combined system. With ML, this calibration can be done in such a way that is both computationally efficient and easy to deploy in a production environment, making such an approach ideal for quasi-real time calibrations needed in a streaming readout environment. We will discuss progress towards its implementation as well as the role it might play in a broader ML-based Particle Flow Algorithm.

Presenter: ANDERSON, Derek (Iowa State University)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **320** Type: **not specified**

Machine Learning Applications for EBIS Beam Intensity and RHIC Luminosity Maximization

Tuesday, 11 June 2024 14:30 (30 minutes)

In this talk, we present some results about EBIS beam intensity and RHIC luminosity online and offline optimization, using the machine learning packages GPTune and XGBoost.

Presenter: GU, Xiaofeng (Collider Accelerator Department, BNL)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **321** Type: **not specified**

Machine learning applications in particle accelerators

Tuesday, 11 June 2024 15:30 (30 minutes)

Discussion and examples of Bayesian optimization, Reinforcement learning, and future planning for particle accelerators.

Presenter: GAO, Yuan (Collider Accelerator Department, BNL)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **322** Type: **not specified**

MultiFold

Tuesday, 11 June 2024 16:00 (30 minutes)

MultiFold is a machine-learning based technique that can correct for detector effects for multiple observables in an unbinned manner. In this talk, we discuss how MultiFold works, highlight its applications in several experiments, and introduce resources available to get started on using it.

Presenter: SONG, Youqi (Yale University)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **323** Type: **not specified**

Adventures in OmniFold: Multivariable Unfolding of Jet-Level Observables with STAR Data (Virtual)

Tuesday, 11 June 2024 16:30 (30 minutes)

OmniFold, the full phase space application of MultiFold, is an unbinned way of correcting multiple observables for detector effects simultaneously using machine learning. As these dependencies are typically addressed in a binned, observable-by-observable fashion, OmniFold presents a novel alternative. In this talk, we present the OmniFold method and a direct application of it to jet-level STAR data.

Presenter: HARRISON, Hannah (University of Kentucky)

Session Classification: Computing, Machine Learning, & AI - Building 463, John Dunn Seminar Room

Contribution ID: **324** Type: **not specified**

Highlights from the STAR experiment on flow measurements

Tuesday, 11 June 2024 10:45 (25 minutes)

Presenter: SINHA, Priyanshi (IISER Tirupati)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **325** Type: **not specified**

Highlights from the PHENIX experiment on flow measurements

Tuesday, 11 June 2024 11:10 (25 minutes)

Presenter: MITRANKOV , Yuri (Stony Brook University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **326** Type: **not specified**

Highlights from the sPHENIX experiment on flow measurements

Tuesday, 11 June 2024 11:35 (25 minutes)

Presenter: UMAKA, Ejiro (Brookhaven National Laboratory)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **327** Type: **not specified**

Theoretical highlights on anisotropic flow calculations

Tuesday, 11 June 2024 15:45 (25 minutes)

Presenter: Dr WU, Xiang-Yu (McGill University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **328** Type: **not specified**

New flow observables from BSQ charge fluctuations

Tuesday, 11 June 2024 16:10 (25 minutes)

Presenter: SALINAS SAN MARTIN, Jordi (University of Illinois at Urbana-Champaign)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **330** Type: **not specified**

The small system flow measurements from the STAR experiment at RHIC

Tuesday, 11 June 2024 14:00 (25 minutes)

Presenter: YAN , Zhengxi (Stony Brook University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **331** Type: **not specified**

The small system flow measurements from the PHENIX experiment at RHIC

Tuesday, 11 June 2024 14:25 (25 minutes)

Presenter: LIM , Sanghoon (Pusan University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **332** Type: **not specified**

Theoretical progress in small systems calculations

Tuesday, 11 June 2024 15:20 (25 minutes)

Presenter: ZHAO, Wenbin (Brookhaven National Laboratory)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **333** Type: **not specified**

Vorticity measurements from the STAR experiment at RHIC

Tuesday, 11 June 2024 09:00 (25 minutes)

Presenter: GOU, Xingrui (Shandong University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **335** Type: **not specified**

Experimental Overview of the Spin Alignment and Electromagnetic Field Effect Observations at RHIC

Tuesday, 11 June 2024 09:25 (25 minutes)

Presenter: SHEN, Diyu (Fudan University)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **336** Type: **not specified**

”Spin puzzle” spins back

Tuesday, 11 June 2024 09:50 (25 minutes)

Presenter: Dr YIN, Yi (Institute of modern physics chinese academy of sciences)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **337** Type: **not specified**

Introduction

Wednesday, 12 June 2024 09:00 (10 minutes)

Presenters: FRAWLEY, Anthony (Florida State University); OLIVEIRA DA SILVA, Antonio Carlos (Iowa State University)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **338** Type: **not specified**

Open Heavy-Flavor Physics - STAR

Wednesday, 12 June 2024 09:10 (30 minutes)

Presenter: LOMICKY, Ondrej (Czech Technical University in Prague)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **339** Type: **not specified**

Open Heavy-Flavor Physics - PHENIX

Wednesday, 12 June 2024 09:40 (30 minutes)

Presenter: RICHFORD, Daniel (City University of New York)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **341** Type: **not specified**

Open Heavy-Flavor Physics - sPHENIX

Wednesday, 12 June 2024 10:30 (30 minutes)

Presenter: MARSHALL, Thomas (University of California - Los Angels)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **342** Type: **not specified**

Open Heavy-Flavor Physics - LHC

Wednesday, 12 June 2024 11:00 (30 minutes)

Presenter: DHANKHER, Preeti (University of California Berkeley)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **343** Type: **not specified**

Heavy-Flavor Jets - sPHENIX

Wednesday, 12 June 2024 11:30 (30 minutes)

Presenter: KVAPIL, Jakub (Los Alamos National Laboratory)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **344** Type: **not specified**

HF Quarkonium Physics - STAR

Wednesday, 12 June 2024 13:00 (30 minutes)

Presenter: ZHANG, Wei (South China Normal University)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **345** Type: **not specified**

HF Quarkonium Physics - PHENIX

Wednesday, 12 June 2024 13:30 (30 minutes)

Presenter: LIU, Ming (Los Alamos National Laboratory)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **346** Type: **not specified**

HF Quarkonium Physics - sPHENIX

Wednesday, 12 June 2024 14:00 (30 minutes)

Presenter: ROSATI, Marzia (Iowa State University)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **347** Type: **not specified**

HF Quarkonium Physics - LHC

Wednesday, 12 June 2024 14:30 (30 minutes)

Presenter: KIM, Minjung (UC Berkeley)

Session Classification: Heavy Flavor - Bldg. 490 Medical Conference Room

Contribution ID: **349** Type: **not specified**

BES Overview

Wednesday, 12 June 2024 09:15 (30 minutes)

Presenter: RUAN, Lijuan (Brookhaven National Laboratory)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **350** Type: **not specified**

Opening Remarks

Wednesday, 12 June 2024 09:00 (15 minutes)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **351** Type: **not specified**

Endcap Time-of-Flight Detector in BES

Wednesday, 12 June 2024 09:45 (30 minutes)

Presenter: SOEHNGEN, Yannick (University of Heidelberg)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **352** Type: **not specified**

Hypernuclei Production

Wednesday, 12 June 2024 10:30 (30 minutes)

Presenter: VASSILIEV, Iouri (GSI Helmholtzzentrum fur Schwerionenforschung GmbH)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **353** Type: **not specified**

BES Theory Overview

Wednesday, 12 June 2024 11:00 (30 minutes)

Presenter: ALMAALOL, Dekra (University of Illinois at Urbana-Champaign)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **354** Type: **not specified**

High-Order Moments and EoS Theory Overview

Wednesday, 12 June 2024 11:30 (30 minutes)

Presenter: VOVCHENKO, Volodymyr (Lawrence Berkeley National Laboratory)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **355** Type: **not specified**

Dielectron Analysis in BES

Wednesday, 12 June 2024 14:00 (30 minutes)

Presenter: JIN, Chenliang (Rice University)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **356** Type: **not specified**

Fluctuations in BES Overview

Wednesday, 12 June 2024 14:30 (30 minutes)

Presenter: HUANG, Yige (CCNU IOPP STAR)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **357** Type: **not specified**

Flow in BES Overview

Wednesday, 12 June 2024 15:00 (30 minutes)

Presenter: DUCKWORTH, Emilie (Kent State University)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **358** Type: **not specified**

Polarization/Femtoscopy Overview

Wednesday, 12 June 2024 15:45 (45 minutes)

Presenter: LISA, Michael (Ohio State University)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **359** Type: **not specified**

Magnetic Field Effect in v1 Splitting in BES

Wednesday, 12 June 2024 16:30 (30 minutes)

Presenter: DASH, Aditya Prasad (University of California Los Angeles)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **360** Type: **not specified**

CME Overview

Wednesday, 12 June 2024 17:00 (30 minutes)

Presenter: FENG, Yicheng (Purdue University)

Session Classification: Beam Energy Scan - Bldg. 510 Physics Large Conference Room

Contribution ID: **361** Type: **not specified**

STAR Foward Systems and Related Topics

Tuesday, 11 June 2024 13:00 (30 minutes)

Presenter: LIANG, Xilin (University of California, Riverside)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **362** Type: **not specified**

Highlights from the PHENIX

Tuesday, 11 June 2024 13:30 (30 minutes)

Presenter: LOOMIS, Devon (University of Michigan, Ann Arbor)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **363** Type: **not specified**

Propects with the sPHENIX

Tuesday, 11 June 2024 14:00 (30 minutes)

Presenter: NUKAZUKA, Genki (RIKEN BNL Research Center)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **364** Type: **not specified**

Entanglement in UPC Collisions

Tuesday, 11 June 2024 15:00 (30 minutes)

Presenter: DUAN, Haowu (North Carolina State University)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **365** Type: **not specified**

UPC Flow and Baryon Junction

Tuesday, 11 June 2024 15:30 (30 minutes)

Presenter: TRIBEDY, Prithwish (Brookhaven National Laboratory)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **366** Type: **not specified**

UPC Photoproduction at RHIC

Tuesday, 11 June 2024 16:00 (30 minutes)

Presenter: SHEIKH, Ashik Ikbal (Kent State University)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **367** Type: **not specified**

Midrapidity Measurements Highlighting Lambda (Virtual)

Tuesday, 11 June 2024 16:30 (30 minutes)

Presenter: VANEK , Jan (Brookhaven National Laboratory)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **368** Type: **not specified**

Helicity Correlation of Lambda Hyperons at UPC and EIC

Tuesday, 11 June 2024 17:00 (30 minutes)

Presenter: WEI, Shu-yi

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **369** Type: **not specified**

Spin/Cold-QCD Theory Towards EIC

Tuesday, 11 June 2024 17:30 (30 minutes)

Presenter: ZHOU, Yiyu (South China Normal University)

Session Classification: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC - Bldg. 488, Berkner Hall Room B

Contribution ID: **370** Type: **not specified**

Particle Suppression in AA and p/dA Collisions Including Short Path Length Corrections

Thursday, 13 June 2024 14:25 (30 minutes)

Presenter: HOROWITZ, William (University of Cape Town)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **371** Type: **not specified**

Workshop Report: Computing, Machine Learning, & AI

Thursday, 13 June 2024 17:10 (20 minutes)

Presenter: MENGEL, Tanner (University of Tennessee (UTK))

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **372** Type: **not specified**

Workshop Report: Flow & Vorticity

Friday, 14 June 2024 09:00 (20 minutes)

Presenter: (MAGDY) ABDELRAHMAN, Niseem (University of Tennessee, Knoxville)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **373** Type: **not specified**

Workshop Report: Beam Energy Scan

Friday, 14 June 2024 09:20 (20 minutes)

Presenter: KHYZHNIAK, Yevheniia (Ohio State University)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **374** Type: **not specified**

Workshop Report: Cold QCD, Spin Physics, & UPCs from RHIC to the EIC

Friday, 14 June 2024 09:40 (20 minutes)

Presenters: BRANDENBURG, Daniel (Ohio State University); NAM, Jae (Temple University)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **375** Type: **not specified**

Introduction

Wednesday, 12 June 2024 14:30 (10 minutes)

Presenter: FRANTZ, Justin (Ohio University)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **376** Type: **not specified**

DEI Updates at the Lab

Wednesday, 12 June 2024 14:40 (25 minutes)

Presenter: BLACKBURN, Noel (Brookhaven National Laboratory)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **377** Type: **not specified**

APS-IDEA: Facilitating Community Transformation.

Wednesday, 12 June 2024 15:05 (25 minutes)

Presenter: CLARK, Dessie Lee (University of Wisconsin)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **378** Type: **not specified**

Discussion about DEI Strategies in RHI for the Future

Wednesday, 12 June 2024 15:30 (35 minutes)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **379** Type: **not specified**

Career Directions: From heavy ion physics to quant trading

Wednesday, 12 June 2024 16:20 (20 minutes)

advice from a PHENIX 2006-10 alumn and Hedge Fund co-founder

Presenter: WEI, Rui (Scientech LLC)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **380** Type: **not specified**

Career Directions

Wednesday, 12 June 2024 16:40 (20 minutes)

advice from a Data Scientist

Presenter: RUNCHEY, Jonathan (Home Depot)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **381** Type: **not specified**

Career Directions

Wednesday, 12 June 2024 17:00 (20 minutes)

advice from a PET detector scientist

Presenter: SUBEDI, Shiv Kumar (Canon Medical Research)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **382** Type: **not specified**

Open dissection on flow and collectively in small collision systems

Tuesday, 11 June 2024 16:35 (25 minutes)

Presenters: Dr (MAGDY) ABDELRAHMAN, Niseem (University of Tennessee, Knoxville); HU, Yu (Lawrence Berkeley National Laboratory)

Session Classification: Flow & Vorticity - Bldg. 510, Physics Large Seminar Room and Bldg 490, Medical Large Conference Room

Contribution ID: **383** Type: **not specified**

Poster Flash Talk

Friday, 14 June 2024 12:25 (15 minutes)

Presenter: SWEGER, Zachary (University of California, Davis)

Session Classification: Plenary Session II - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **384** Type: **not specified**

Group Picture

Thursday, 13 June 2024 12:15 (5 minutes)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **385** Type: **not specified**

Dinner at Painters' Restaurant at 6:00 p.m. Reservations Required

Wednesday, 12 June 2024 17:25 (1 minute)

Session Classification: Diversity, Equity, & Inclusion + Career Dual Session - Bldg,488 Berkner Hall Room B

Contribution ID: **386** Type: **not specified**

Thesis Award Winner

Thursday, 13 June 2024 17:00 (5 minutes)

Presenter: PANDAV, Ashish (NISER Bhubaneswar)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium

Contribution ID: **387** Type: **not specified**

Thesis Award Winner

Thursday, 13 June 2024 16:55 (5 minutes)

Presenter: NEFF, Dylan (CEA-Saclay)

Session Classification: Plenary Session I - Bldg. 488 Berkner Hall Auditorium