

# **The 1st International Workshop on TeV Muon-Ion Colliders**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## **Session IV: New physics opportunities at TeV DIS machines, Synergies**

Contribution ID: 2

Type: **not specified**

## **Physics Motivations for Muon-Based Colliders**

*Wednesday 13 December 2023 09:15 (40 minutes)*

**Presenter:** DI PETRILLO, Karri Folan (University of Chicago)

**Session Classification:** Session I

Contribution ID: 3

Type: **not specified**

## **Outcome of US High Energy Physics P5 2023**

*Wednesday 13 December 2023 09:55 (40 minutes)*

**Presenter:** Dr PALMER, mark (BNL)

**Session Classification:** Session I

Contribution ID: 4

Type: **not specified**

## Welcome and Introduction

*Wednesday 13 December 2023 09:00 (15 minutes)*

**Session Classification:** Session I

Contribution ID: 5

Type: **not specified**

## **Small-x physics: status, open questions and opportunities**

*Wednesday 13 December 2023 11:40 (40 minutes)*

**Presenter:** YUAN, Feng

**Session Classification:** Session II

Contribution ID: 6

Type: **not specified**

## **Introduction to Muon Collider Concept and US HEP efforts**

*Wednesday 13 December 2023 11:00 (40 minutes)*

**Presenter:** JINDARIANI, Sergo (Fermi National Accelerator Lab. (US))

**Session Classification:** Session II

Contribution ID: 7

Type: **not specified**

## **Parton distribution function at TeV DIS machines**

*Wednesday 13 December 2023 14:40 (40 minutes)*

**Presenter:** Prof. NADOLSKY, Pavel (Southern Methodist University)

**Session Classification:** Session III



Contribution ID: 8

Type: **not specified**

# Concept and physics potential of a Muon-Ion Collider

*Wednesday 13 December 2023 14:00 (40 minutes)*

**Presenter:** ACOSTA, Darin (Rice University)

**Session Classification:** Session III

Contribution ID: 9

Type: **not specified**

## **Leptoquarks and other BSM opportunities at a MuIC/LHeC**

*Thursday 14 December 2023 09:00 (30 minutes)*

**Presenter:** CHEUNG, Kingman (National Tsing Hua University (TW))

**Session Classification:** Session V

Contribution ID: **10**

Type: **not specified**

## **Targetry and Cooling of a Muon Collider**

*Thursday 14 December 2023 09:30 (40 minutes)*

**Presenter:** YONEHARA, Katsuya

**Session Classification:** Session V

Contribution ID: 11

Type: **not specified**

## **Muon Acceleration and Collider Rings, and Radiation Mitigation**

*Thursday 14 December 2023 10:40 (40 minutes)*

**Presenter:** STRATAKIS, Diktys

**Session Classification:** Session VI

Contribution ID: 12

Type: **not specified**

## **Thoughts on design considerations and challenges for a Muon-Ion Collider Sited at BNL, including possible staging options**

*Thursday 14 December 2023 11:20 (40 minutes)*

**Presenters:** MONTAG, Christoph (BNL); MONTAG, Christoph

**Session Classification:** Session VI

Contribution ID: 13

Type: **not specified**

## **Detector at Muon Colliders / Machine-Detector Interface**

*Thursday 14 December 2023 13:30 (40 minutes)*

**Presenter:** LUCCHESI, Donatella (Universita e INFN, Padova (IT))

**Session Classification:** Session VII

Contribution ID: 14

Type: **not specified**

## **Discussion on Muon collider technology, Beam Induced Background, design considerations for MuIC etc.**

*Thursday 14 December 2023 14:10 (40 minutes)*

**Presenter:** CHAMIZO LLATAS, Maria (Brookhaven National Laboratory (US))

**Session Classification:** Session VII

Contribution ID: 15

Type: **not specified**

## **Physics and Detector Overview at the Electron-Ion Collider**

*Thursday 14 December 2023 15:20 (40 minutes)*

**Presenters:** LI, Xuan (Los Alamos National Laboratory); LI, Xuan (Los Alamos National Laboratory)

**Session Classification:** Session VIII



Contribution ID: 16

Type: **not specified**

## **Nucleon Spin Physics with Polarized Beams: Past, Present and Future**

*Thursday 14 December 2023 16:00 (40 minutes)*

**Presenter:** LEWIS, Nicole (Rice University (US))

**Session Classification:** Session VIII

Contribution ID: 17

Type: **not specified**

## **Discussion on Consideration of a Detector and interaction point at Muon-Ion Colliders: unique needs, synergies with Mu+Mu-**

*Thursday 14 December 2023 16:40 (50 minutes)*

**Presenter:** ULLRICH, Thomas

**Session Classification:** Session VIII

Contribution ID: **18**

Type: **not specified**

## **Outcome of US Nuclear Physics Long-Range Plan**

*Friday 15 December 2023 09:40 (40 minutes)*

**Presenter:** ULLRICH, Thomas

**Session Classification:** Session VIII

Contribution ID: 19

Type: **not specified**

## **Building synergies between the NP and HEP collider physics communities**

*Friday 15 December 2023 10:40 (40 minutes)*

**Presenter:** CHAMIZO LLATAS, Maria (Brookhaven National Laboratory (US))

**Session Classification:** Session X

Contribution ID: **20**

Type: **not specified**

**TBD**

**Session Classification:** Session X

Contribution ID: 21

Type: **not specified**

## Workshop Summary and Path Forward

*Friday 15 December 2023 11:20 (40 minutes)*

**Session Classification:** Session X

Contribution ID: 22

Type: **not specified**

## **History, development, key lessons and status of Electron-Ion Collider in US**

*Wednesday 13 December 2023 15:50 (40 minutes)*

**Presenter:** DESHPANDE, Abhay

**Session Classification:** Session V

Contribution ID: 23

Type: **not specified**

## **Discussion on Synergies in Physics, Accelerator/Collider technology between NP and HEP**

*Wednesday 13 December 2023 16:30 (1 hour)*

**Presenter:** Prof. OLNESS, Fred (Southern Methodist University (US))

**Session Classification:** Session V



Contribution ID: 24

Type: **not specified**

## International Muon Collider Collaboration Status

*Friday 15 December 2023 09:00 (40 minutes)*

**Presenter:** SCHULTE, Daniel (CERN)

**Session Classification:** Session VIII