

# **Hokkaido Workshop on Particle Physics at Crossroads**

## **Report of Contributions**

Contribution ID: 2

Type: **not specified**

## Neutrino Physics in the Muon Collider Era

*Thursday, 7 March 2024 10:10 (40 minutes)*

**Presenter:** DE GOUVEA, Andre (Northwestern University)

**Session Classification:** Session

Contribution ID: 3

Type: **not specified**

## **Making use of electron neutrino beam from muon storage ring**

*Thursday, 7 March 2024 10:50 (40 minutes)*

**Presenter:** SATO, Joe (Yokohama National University)

**Session Classification:** Session

Contribution ID: 4

Type: **not specified**

## **New physics search at lepton beam dumps**

*Thursday, 7 March 2024 11:30 (30 minutes)*

**Presenter:** KENTO, Asai (ICRR, the University of Tokyo)

**Session Classification:** Session

Contribution ID: 5

Type: **not specified**

## Light dark matter search with Noble gas TPC

*Thursday, 7 March 2024 13:30 (30 minutes)*

**Presenter:** KIMURA, Masato (KEK)

**Session Classification:** Session

Contribution ID: 6

Type: **not specified**

**TBD**

**Presenter:** KRNJAIC, Gordan (Fermilab & University of Chicago)

**Session Classification:** Session

Contribution ID: 7

Type: **not specified**

# Dark Matter Detection with Quantum Computers

*Sunday, 10 March 2024 09:00 (40 minutes)*

**Presenter:** MOROI, Takeo (U. Tokyo)

**Session Classification:** Session

Contribution ID: 8

Type: **not specified**

# **The origin of pseudo-Nabmu-Goldstone-Boson Dark Matter**

*Thursday, 7 March 2024 14:30 (30 minutes)*

**Presenter:** TSUMURA, Koji (Kyushu University)

**Session Classification:** Session



Contribution ID: 9

Type: **not specified**

## Recurrent Axinovae

*Thursday, 7 March 2024 15:20 (30 minutes)*

**Presenter:** FOX, Patrick (Fermilab)

**Session Classification:** Session

Contribution ID: 10

Type: **not specified**

## **Renormalization group effects in QCD axion phenomenology**

*Thursday, 7 March 2024 15:50 (30 minutes)*

**Presenter:** OKAWA, Shohei (KEK)

**Session Classification:** Session

Contribution ID: 11

Type: **not specified**

## **Axion fragmentation and axion dark matter**

*Sunday, 10 March 2024 12:30 (30 minutes)*

**Presenter:** SATO, Ryosuke

**Session Classification:** Session

Contribution ID: 12

Type: **not specified**

## WIMP Dark Matter at Collider

*Sunday, 10 March 2024 10:10 (30 minutes)*

**Presenter:** SHIRAI, Satoshi

**Session Classification:** Session

Contribution ID: 13

Type: **not specified**

## Indirect probes of muon EDM and spin force

*Sunday, 10 March 2024 09:40 (30 minutes)*

**Presenter:** EMA, Yohei

**Session Classification:** Session

Contribution ID: 14

Type: **not specified**

## **Axion and accelerator**

*Sunday, 10 March 2024 11:30 (30 minutes)*

**Presenter:** YIN, Wen (Tohoku U.)

**Session Classification:** Session

Contribution ID: 15

Type: **not specified**

## **Interplay of new physics effects in muon $g-2$ , EDM and LFV with U(2) flavor symmetry**

*Sunday, 10 March 2024 12:00 (30 minutes)*

**Presenter:** YAMAMOTO, Kei (Hiroshima Inst. Tech.)

**Session Classification:** Session

Contribution ID: 16

Type: **not specified**

## **Search for charged lepton flavor violation with muons**

*Saturday, 9 March 2024 16:20 (30 minutes)*

**Presenter:** UCHIYAMA, Yusuke (KEK)

**Session Classification:** Session



Contribution ID: 17

Type: **not specified**

## **Muon g-2/EDM experiment at J-PARC**

*Saturday, 9 March 2024 16:50 (30 minutes)*

**Presenter:** OGAWA, Shinji (Kyushu University)

**Session Classification:** Session

Contribution ID: **18**

Type: **not specified**

## **Muonium oscillation experiment at Fermilab**

*Saturday, 9 March 2024 14:50 (40 minutes)*

**Presenter:** YONEHARA, Katsuya (FNAL)

**Session Classification:** Session

Contribution ID: 19

Type: **not specified**

## **Muon cooling at J-PARC**

*Saturday, 9 March 2024 15:50 (30 minutes)*

**Presenter:** KAMIOKA, Shusei

**Session Classification:** Session

Contribution ID: 20

Type: **not specified**

## **International Linear Collider: status of studies and situations**

*Friday, 8 March 2024 11:00 (40 minutes)*

**Presenter:** SUEHARA, Taikan (ICEPP)

**Session Classification:** Session

Contribution ID: 21

Type: **not specified**

## **Physics of extended Higgs models and their test at future collider and cosmological experiments**

*Friday, 8 March 2024 11:40 (30 minutes)*

**Presenter:** KANEMURA, Shinya (Osaka U.)

**Session Classification:** Session

Contribution ID: 22

Type: **not specified**

## **Plan of future KEK projects**

*Saturday, 9 March 2024 09:00 (40 minutes)*

**Presenter:** OKADA, Yasuhiro (KEK)

**Session Classification:** Session

Contribution ID: 23

Type: **not specified**

## **The P5 Report and Muon Collider Development in the US**

*Saturday, 9 March 2024 09:40 (40 minutes)*

**Presenter:** PALMER, Mark (Brookhaven)

**Session Classification:** Session

Contribution ID: 24

Type: **not specified**

## Muon Collider Progress

*Saturday, 9 March 2024 10:40 (40 minutes)*

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

**Session Classification:** Session



Contribution ID: 25

Type: **not specified**

## Status of the FCC Feasibility Study

*Friday, 8 March 2024 10:20 (40 minutes)*

**Presenter:** GROJEAN, Christophe (DESY)

**Session Classification:** Session

Contribution ID: 26

Type: **not specified**

## **Axion wind detection with superfluid helium-3**

*Sunday, 10 March 2024 11:00 (30 minutes)*

**Presenter:** KAHN, Yoni (U. Illinois)

**Session Classification:** Session

Contribution ID: 27

Type: **not specified**

## **On Stability of Fermionic Superconducting Current in Cosmic String**

*Friday, 8 March 2024 09:00 (30 minutes)*

**Presenter:** IBE, Masahiro (ICRR)

**Session Classification:** Session

Contribution ID: 28

Type: **not specified**

# Dark Supercooled Phase Transition as a Key to Unlock the Universe

*Friday, 8 March 2024 09:30 (30 minutes)*

**Presenter:** NAKAI, Yuichiro (Shanghai Jiaotong U.)

**Session Classification:** Session

Contribution ID: 29

Type: **not specified**

## **Beyond the Standard Model at Muon Colliders**

*Saturday, 9 March 2024 14:10 (40 minutes)*

**Presenter:** CRAIG, Nathaniel (UC Santa Barbara)

**Session Classification:** Session

Contribution ID: 30

Type: **not specified**

## **Portrait of Higgs with Inclusive Rate via Forward Muon Detection**

*Friday, 8 March 2024 13:30 (30 minutes)*

**Presenter:** LIU, Zhen (U. Minnesota)

**Session Classification:** Session

Contribution ID: **31**

Type: **not specified**

## **muTristan**

*Friday, 8 March 2024 14:00 (30 minutes)*

**Presenter:** MATSUDO, Ryutaro (National Taiwan U.)

**Session Classification:** Session

Contribution ID: 32

Type: **not specified**

## Design study of muTRISTAN

*Friday, 8 March 2024 14:30 (30 minutes)*

**Presenter:** YOSHIDA, Mitsuhiro (KEK)

**Session Classification:** Session



Contribution ID: 33

Type: **not specified**

## Muon Collider Detector

*Friday, 8 March 2024 15:20 (30 minutes)*

**Presenter:** DIPETRIELLO, Karri (U. Chicago)

**Session Classification:** Session

Contribution ID: 34

Type: **not specified**

## **Experimental Challenges and Opportunities of a High Energy Muon Collider**

*Friday, 8 March 2024 15:50 (30 minutes)*

**Presenter:** OJALVO, Isobel (Princeton)

**Session Classification:** Session

Contribution ID: 35

Type: **not specified**

## **Development of silicon tracking detector with precise timing and spatial resolution**

*Friday, 8 March 2024 16:20 (30 minutes)*

**Presenter:** NAKAMURA, Koji (KEK)

**Session Classification:** Session

Contribution ID: 36

Type: **not specified**

## **Muon Collider Physics Challenges**

*Saturday, 9 March 2024 11:20 (40 minutes)*

**Presenter:** WULZER, Andrea (Barcelona, IFAE)

**Session Classification:** Session

Contribution ID: 37

Type: **not specified**

## **Higgs physics at a Muon Collider**

*Saturday, 9 March 2024 13:30 (40 minutes)*

**Presenter:** MEADE, Patrick (Stony Brook)

**Session Classification:** Session

Contribution ID: 38

Type: **not specified**

## **T-violation of neutrino oscillation at $\mu$ TRISTAN**

*Thursday, 7 March 2024 16:40 (10 minutes)*

**Presenter:** SUGAMA, Sho (Tokyo Metropolitan U.)

**Session Classification:** Session

Contribution ID: 39

Type: **not specified**

## Higgs Production at $\mu^+ \mu^+$ Colliders

*Thursday, 7 March 2024 16:50 (10 minutes)*

**Presenter:** TREUER, Lukas (KEK)

**Session Classification:** Session

Contribution ID: 40

Type: **not specified**

## **Quantum entanglement of ions for light dark matter detection**

*Thursday, 7 March 2024 17:00 (10 minutes)*

**Presenter:** TAKAI, Ryoto (KEK)

**Session Classification:** Session



Contribution ID: 41

Type: **not specified**

## WIMPs at $\mu^+\mu^+$ collider

*Thursday, 7 March 2024 17:10 (10 minutes)*

**Presenter:** WEI, Shang-Fu (U. Tokyo)

**Session Classification:** Session

Contribution ID: 42

Type: **not specified**

## **New Contributions to Lepton Dipole Moments in Vector-like Lepton Models**

*Thursday, 7 March 2024 17:20 (10 minutes)*

**Presenter:** OSAKI, Genta (U. Tokyo)

**Session Classification:** Session

Contribution ID: 43

Type: **not specified**

## **Thermal Leptogenesis in the Minimal Gauged U(1) $L_\mu$ - $L_\tau$ Model**

*Thursday, 7 March 2024 17:30 (10 minutes)*

**Presenter:** WADA, Juntaro (U. Tokyo)

**Session Classification:** Session

Contribution ID: 44

Type: **not specified**

## **Muon Philip Forces and Dark Matter at Future Facilities**

**Presenter:** KRNJAIC, Gordan (Fermilab & University of Chicago)

**Session Classification:** Session

Contribution ID: 45

Type: **not specified**

## **Muon Philic Forces and Dark Matter at Future Facilities**

*Thursday, 7 March 2024 14:00 (30 minutes)*

**Presenter:** KRNJAIC, Gordan (Fermilab & University of Chicago)

**Session Classification:** Session