

**KEK Theory Meeting on
Particle Physics
Phenomenology
(KEK-PH2022) and
International Joint Workshop
on the Standard Model and
beyond**

Report of Contributions

Contribution ID: 10

Type: **not specified**

Effects of renormalization group kernels on the lightest neutrino mass in the Type-I Seesaw Model

Wednesday, 30 November 2022 16:05 (20 minutes)

Presenter: BENOIT, Nicholas J. (Hiroshima University)

Session Classification: Short talks 4-A

Contribution ID: 11

Type: **not specified**

SMEFT effects on gravitational wave spectrum from electroweak phase transition

Thursday, 1 December 2022 11:25 (20 minutes)

Presenter: HASHINO, Katsuya (Tokyo University of Science)

Session Classification: Short talks 6-B

Contribution ID: 12

Type: **not specified**

Impact of quark flavor violating SUSY on $h(125)$ decays at future lepton colliders

Wednesday, 30 November 2022 17:45 (20 minutes)

Presenter: HIDAKA, Keisho (Tokyo Gakugei University)

Session Classification: Short talks 5-B

Contribution ID: 13

Type: **not specified**

Asymmetric SIMP Dark Matter

Tuesday, 29 November 2022 11:25 (20 minutes)

Presenter: HO, Shu-Yu (KIAS)

Session Classification: Short talks 1-A

Contribution ID: 14

Type: **not specified**

Minimal Nambu-Goldstone Higgs Model in Supersymmetric SU(5)

Wednesday, 30 November 2022 11:45 (20 minutes)

Presenter: HOR, Shihwen (The University of Tokyo)

Session Classification: Short talks 3-B

Contribution ID: 15

Type: **not specified**

CP-violating effects on gravitational waves in a complex singlet extension of the Standard Model with degenerate scalars

Wednesday, 30 November 2022 16:05 (20 minutes)

Presenter: IDEGAWA, Chikako (Ochanomizu university)

Session Classification: Short talks 4-B

Contribution ID: 17

Type: **not specified**

Residual flavor symmetry breaking of modular flavor models from the string landscape

Tuesday, 29 November 2022 11:25 (20 minutes)

Presenter: ISHIGURO, Keiya (SOKENDAI, Tsukuba (KEK))

Session Classification: Short talks 1-B

Contribution ID: **18**

Type: **not specified**

Lepton Flavor Model with A4 symmetry and 3HDM

Thursday, 1 December 2022 11:25 (20 minutes)

Presenter: IZAWA, Yukimura (Hiroshima Univ.)

Session Classification: Short talks 6-A

Contribution ID: 19

Type: **not specified**

Solution to Axion Quality Problem by Non-Minimal Gravitational Coupling

Thursday, 1 December 2022 15:45 (20 minutes)

Presenter: KANAZAWA, Yoshiki (University of Tokyo)

Session Classification: Short talks 7-B

Contribution ID: 20

Type: **not specified**

Stability of the embedded string in the $SU(N) \times U(1)$ Higgs model and the application to some GUT breakings

Wednesday, 30 November 2022 11:25 (20 minutes)

Presenter: KANDA, Yukihiro (Nagoya University)

Session Classification: Short talks 3-B

Contribution ID: 21

Type: **not specified**

Late-Forming PBH: Beyond the CMB era

Thursday, 1 December 2022 16:05 (20 minutes)

Presenter: KAWANA, Kiyoharu (KIAS)

Session Classification: Short talks 7-B

Contribution ID: 22

Type: **not specified**

CP violation in gauged U(1)_B

Thursday, 1 December 2022 11:45 (20 minutes)

Presenter: MATSUI, Toshinori (Korea Institute for Advanced Study)

Session Classification: Short talks 6-A

Contribution ID: 23

Type: **not specified**

Scalar Dark Matter with a $\mu\tau$ Flavored Mediator

Tuesday, 29 November 2022 11:45 (20 minutes)

Presenter: MIYAO, Coh (Kyushu University)

Session Classification: Short talks 1-A

Contribution ID: 24

Type: **not specified**

Wrong Sign Yukawa in 2HDM

Thursday, 1 December 2022 15:45 (20 minutes)

Presenter: MONDAL, Tanmoy (Osaka Univeristy)

Session Classification: Short talks 7-A

Contribution ID: 26

Type: **not specified**

Electroweak baryogenesis in aligned two Higgs doublet model

Thursday, 1 December 2022 11:45 (20 minutes)

Presenter: MURA, Yushi (Osaka University)

Session Classification: Short talks 6-B

Contribution ID: 27

Type: **not specified**

Magnetized T^4 orbifold model

Tuesday, 29 November 2022 15:45 (20 minutes)

Presenter: NASU, Kaito (Hokkaido University)

Session Classification: Short talks 2-B

Contribution ID: 28

Type: **not specified**

Matter Parities from Finite Modular Symmetries

Tuesday, 29 November 2022 16:05 (20 minutes)

Presenter: NISHIMURA, Satsuki (Kyushu University)

Session Classification: Short talks 2-B

Contribution ID: 31

Type: **not specified**

Modular symmetry in the SMEFT

Tuesday, 29 November 2022 11:45 (20 minutes)

Presenter: OTSUKA, Hajime (Kyushu University)

Session Classification: Short talks 1-B

Contribution ID: 32

Type: **not specified**

Gravitational positivity bounds on dark photons

Thursday, 1 December 2022 17:45 (20 minutes)

Presenter: SATO, Sota (Kobe University)

Session Classification: Short talks 8-B

Contribution ID: 33

Type: **not specified**

Impact of first-order phase transitions on dark matter production in the scotogenic model

Tuesday, 29 November 2022 15:45 (20 minutes)

Presenter: SHIBUYA, Hiroto (Kanazawa University)

Session Classification: Short talks 2-A

Contribution ID: 34

Type: **not specified**

How can we obtain a large muon EDM?

Wednesday, 30 November 2022 17:45 (20 minutes)

Presenter: SHIGEKAMI, Yoshihiro (Tsung-Dao Lee Institute)

Session Classification: Short talks 5-A

Contribution ID: 35

Type: **not specified**

Experimental testability of GUT model including the mirror particles

Thursday, 1 December 2022 16:05 (20 minutes)

Presenter: TAKESHITA, Shonosuke (Hiroshima University)

Session Classification: Short talks 7-A

Contribution ID: 36

Type: **not specified**

Non-resonant new physics search at the LHC for the $b \rightarrow c\tau\nu$ anomalies

Wednesday, 30 November 2022 11:25 (20 minutes)

Presenter: TAKEUCHI, Michihisa (Sun Yat-sen University)

Session Classification: Short talks 3-A

Contribution ID: 37

Type: **not specified**

Primordial black holes as a probe of electroweak phase transition

Wednesday, 30 November 2022 15:45 (20 minutes)

Presenter: TANAKA, Masanori (Osaka University)

Session Classification: Short talks 4-B

Contribution ID: 38

Type: **not specified**

Swampland program from amplitudes: gravitational positivity bounds

Thursday, 1 December 2022 17:25 (20 minutes)

Presenter: TOKUDA, Junsei (CTPU, IBS)

Session Classification: Short talks 8-B

Contribution ID: 39

Type: **not specified**

Entropy constraints on effective field theory

Thursday, 1 December 2022 18:05 (20 minutes)

Presenter: UEDA, Daiki (Peking University)

Session Classification: Short talks 8-B

Contribution ID: 40

Type: **not specified**

Accelerating Expansion of the Universe by Porcupinefish spacetime

Wednesday, 30 November 2022 17:25 (20 minutes)

Presenter: WATABIKI, Yoshiyuki (Tokyo Institute of Technology)

Session Classification: Short talks 5-B

Contribution ID: 41

Type: **not specified**

Lepton flavor violating deep-inelastic scattering by (pseudo-)scalar mediator

Wednesday, 30 November 2022 15:45 (20 minutes)

Presenter: YAMANAKA, Masato (Yokohama National University)

Session Classification: Short talks 4-A

Contribution ID: 42

Type: **not specified**

Unstable Nambu-Goldstone modes

Thursday, 1 December 2022 18:05 (20 minutes)

Presenter: YOKOKURA, Ryo (KEK)

Session Classification: Short talks 8-A

Contribution ID: 43

Type: **not specified**

Superheavy Dark Matter Production from Symmetry Restoration First-Order Phase Transition During Inflation

Tuesday, 29 November 2022 16:05 (20 minutes)

Presenter: ZHOU, Siyi (Kobe University)

Session Classification: Short talks 2-A

Contribution ID: 44

Type: **not specified**

New physics scale search from elastic scatterings at muTRISTAN

Wednesday, 30 November 2022 17:25 (20 minutes)

Presenter: TAKAURA, Hiromasa (KEK)

Session Classification: Short talks 5-A

Contribution ID: 45

Type: **not specified**

Understanding Jet Classification with Deep Learning

Wednesday, 30 November 2022 11:45 (20 minutes)

Presenter: FURUICHI, Amon (KEK)

Session Classification: Short talks 3-A

Contribution ID: 46

Type: **not specified**

Impact of radiative corrections on decays of the CP-odd Higgs boson

Thursday, 1 December 2022 17:25 (20 minutes)

Presenter: AIKO, Masashi (KEK)

Session Classification: Short talks 8-A

Contribution ID: 47

Type: **not specified**

Coleman-Weinberg Abrikosov-Nielsen-Olesen strings

Thursday, 1 December 2022 17:45 (20 minutes)

Presenter: HAMADA, Yu (KEK)

Session Classification: Short talks 8-A

Contribution ID: 48

Type: **not specified**

Opening up neutrino Majorana mass operators

Wednesday, 30 November 2022 18:05 (20 minutes)

Presenter: FRIDELL, Kåre (KEK)

Session Classification: Short talks 5-A

Contribution ID: 49

Type: **not specified**

Primordial black hole portal to the dark sector

Tuesday, 29 November 2022 09:00 (40 minutes)

Primary author: TSENG, Po-Yen (National Tsing Hua University)

Presenter: TSENG, Po-Yen (National Tsing Hua University)

Session Classification: plenary 1: Po-Yen Tseng

Contribution ID: 50

Type: **not specified**

Dark Matter Detection with Trapped Electrons and Ions

Tuesday, 29 November 2022 09:40 (40 minutes)

Presenter: GRAHAM, Peter (Stanford University)

Session Classification: Plenary 2: Peter Graham

Contribution ID: 51

Type: **not specified**

XENONnT and XMASS, direct dark matter detection experiments

Tuesday, 29 November 2022 10:40 (40 minutes)

Presenter: MORIYAMA, Shigetaka (ICRR, Tokyo University)

Session Classification: Plenary 3: Shigetaka Moriyama

Contribution ID: 52

Type: **not specified**

Sensitivity on Two-Higgs Doublet Models from Higgs-Pair Production via 4b Final State

Tuesday, 29 November 2022 13:20 (40 minutes)

Presenter: CHEUNG, Kingman (National Tsing Hua University)

Session Classification: Plenary 4: Kingman Cheung

Contribution ID: 53

Type: **not specified**

Sub-GeV Non-Abelian Vector Dark Matter in the Gauged Two Higgs Doublet model

Tuesday, 29 November 2022 14:00 (40 minutes)

Presenter: TRAN, Van Que (Tsung-Dao Lee Institute)

Session Classification: Plenary 5: Van Que Tran

Contribution ID: 54

Type: **not specified**

Continuum Dark Matter

Tuesday, 29 November 2022 15:00 (40 minutes)

Presenter: LEE, Seung J. (Korea University)

Session Classification: Plenary 6: Seung J. Lee

Contribution ID: 55

Type: **not specified**

Axion Fragmentation

Tuesday, 29 November 2022 16:40 (40 minutes)

Presenter: SATO, Ryosuke (Osaka University)

Session Classification: Plenary 7: Ryosuke Sato

Contribution ID: 56

Type: **not specified**

First Results from the LZ Dark Matter Experiment

Tuesday, 29 November 2022 17:20 (40 minutes)

Presenter: SHAW, Sally (Edinburgh)

Session Classification: Plenary 8: Sally Shaw

Contribution ID: 57

Type: **not specified**

Landscape of the energy frontier experiments: near and far

Wednesday, 30 November 2022 09:00 (40 minutes)

Presenter: OIDE, Hideyuki (KEK-IPNS)

Session Classification: Plenary 9: Hideyuki Oide

Contribution ID: 58

Type: **not specified**

What can Deep Learning teach us about Particle Physics?

Wednesday, 30 November 2022 09:40 (40 minutes)

Presenter: NACHMAN, Benjamin (LBL)

Session Classification: Plenary 10: Benjamin Nachman

Contribution ID: 59

Type: **not specified**

Recent Results on B-Physics from Belle II

Wednesday, 30 November 2022 10:40 (40 minutes)

Presenter: SATO, Yo (KEK)

Session Classification: Plenary 11: Yo Sato

Contribution ID: **60**

Type: **not specified**

On the connection between black hole ringdown and images

Wednesday, 30 November 2022 13:20 (40 minutes)

Presenter: CHEN, Che-Yu (Academia Sinica)

Session Classification: Plenary 12: Che-Yu Chen

Contribution ID: 61

Type: **not specified**

Testing Astrophysical Model from the shadow of the Supermassive Black Holes

Wednesday, 30 November 2022 14:00 (40 minutes)

Presenter: MIZUNO, Yosuke (Tsung-Dao Lee Institute, Shanghai Jiao-Tong U)

Session Classification: Plenary 13: Yosuke Mizuno

Contribution ID: 62

Type: **not specified**

Freeze-in and freeze-out of sterile neutrino dark matter

Wednesday, 30 November 2022 15:00 (40 minutes)

Presenter: SCHMIDT, Michael (University of New South Wales)

Session Classification: Plenary 14: Michael Schmidt

Contribution ID: 63

Type: **not specified**

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

Wednesday, 30 November 2022 16:40 (40 minutes)

Presenter: TSUMURA, Koji (Kyushu University)

Session Classification: Plenary 15: Koji Tsumura

Contribution ID: 64

Type: **not specified**

New search strategies for Axion-like Particles

Thursday, 1 December 2022 09:00 (40 minutes)

Presenter: PARK, Jong-Chul (Chungnam National University)

Session Classification: Plenary 16: Jong-Chul Park

Contribution ID: 65

Type: **not specified**

QCD Axion Search with ILC Beam Facility

Presenter: FUKUDA, Hajime (University of Tokyo)

Session Classification: Plenary 17: Hajime Fukuda

Contribution ID: **66**

Type: **not specified**

Dark matter physics with dark Higgs boson

Thursday, 1 December 2022 10:40 (40 minutes)

Presenter: KIM, Jongkuk (Korea Institute for Advanced Study)

Session Classification: Plenary 18: Jongkuk Kim

Contribution ID: 67

Type: **not specified**

New approaches for the direct detections of light dark matter and cosmic neutrino background

Thursday, 1 December 2022 13:20 (40 minutes)

Presenter: CHAO, Wei (Beijing Normal University)

Session Classification: Plenary 19: Wei Chao

Contribution ID: **68**

Type: **not specified**

Overcome the thresholds of Dark Matter Searches

Thursday, 1 December 2022 14:00 (40 minutes)

Presenter: GE, Shao-Feng (Shanghai Jiaotong University)

Session Classification: Plenary 20: Shao-Feng Ge

Contribution ID: **69**

Type: **not specified**

CMB imprints of non-canonical anisotropic inflation

Thursday, 1 December 2022 15:00 (40 minutes)

Presenter: DO, Tuan Quoc (Phenikaa Institute for Advanced Study)

Session Classification: Plenary 21: Tuan Quoc Do

Contribution ID: 70

Type: **not specified**

Self-Organised Localisation

Thursday, 1 December 2022 16:40 (40 minutes)

Presenter: YOU, Tevong (King's College London)

Session Classification: Plenary 22: Tevong You

Contribution ID: 71

Type: **not specified**

Rotating scalar fields in the early universe

Friday, 2 December 2022 09:00 (40 minutes)

Presenter: HARIGAYA, Keisuke (The University of Chicago)

Session Classification: Plenary 23: Keisuke Harigaya

Contribution ID: 72

Type: **not specified**

Inelastic nuclear scattering from neutrinos and dark matter

Friday, 2 December 2022 09:40 (40 minutes)

Presenter: NEWSTEAD, Jayden (University of Melbourne)

Session Classification: Plenary 24: Jayden Newstead

Contribution ID: 73

Type: **not specified**

Perspectives on understanding the substructure of multiquark hadrons in lattice QCD

Friday, 2 December 2022 10:40 (40 minutes)

Presenter: FRANCIS, Anthony (National Yang Ming Chiao Tung University)

Session Classification: Plenary 25: Anthony Francis

Contribution ID: 74

Type: **not specified**

Tests and Consequences of the Existence of a Dark Photon

Friday, 2 December 2022 11:20 (40 minutes)

Presenter: THOMAS, Anthony (University of Adelaide)

Session Classification: Plenary 26: Anthony Thomas

Contribution ID: 75

Type: **not specified**

Renormalization group improvement for thermally resummed effective potential

Friday, 2 December 2022 13:20 (40 minutes)

Presenter: SENAHA, Eibun (Science and Technology Advanced Institute)

Session Classification: Plenary 27: Eibun Senaha

Contribution ID: 76

Type: **not specified**

Axio-dilaton wormholes and their puzzling low energy effects

Friday, 2 December 2022 14:00 (40 minutes)

Presenter: SOLER, Pablo (University of Oviedo)

Session Classification: Plenary 28: Pablo Soler

Contribution ID: 77

Type: **not specified**

Gravitational Positivity and (Beyond) the Standard Model

Friday, 2 December 2022 14:40 (40 minutes)

Presenter: NOUMI, Toshifumi (Kobe University)

Session Classification: Plenary 29: Toshifumi Noumi

Contribution ID: 78

Type: **not specified**

closing

Friday, 2 December 2022 15:20 (5 minutes)

Presenter: NOJIRI, Mihoko (KEK)

Session Classification: Closing