

**Rare Processes and Precision
Frontier Townhall Meeting**

Report of Contributions

Contribution ID: 1

Type: **not specified**

Rare η and η' decays

Friday, 2 October 2020 12:50 (12 minutes)

Presenter: GONZALEZ-SOLIS, Sergi (Indiana University)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 2

Type: **not specified**

The JLab Eta Factory (JEF) Experiment

Friday, 2 October 2020 13:14 (12 minutes)

Presenter: GAN, Liping (University of North Carolina)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 3

Type: **not specified**

The REDTOP experiment

Friday, 2 October 2020 13:02 (12 minutes)

Presenter: MAZZACANE, Anna (Fermilab)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 4

Type: **not specified**

Rare kaon decays

Friday, 2 October 2020 13:26 (12 minutes)

Presenter: AEBISCHER, Jason (University of California San Diego)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 5

Type: **not specified**

Radiative kaon decays

Friday, 2 October 2020 13:38 (12 minutes)

Presenter: KNECHT, Marc (University of Marseille)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 6

Type: **not specified**

Novel EFT connections between K and B physics

Friday, 2 October 2020 13:50 (12 minutes)

Presenter: GUADAGNOLI, Diego (LAPTh-CNRS)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 7

Type: **not specified**

Hadronic contributions to the anomalous magnetic moment of the muon

Friday, 2 October 2020 13:52 (8 minutes)

Presenter: LEHNER, Christoph

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 8

Type: **not specified**

Rare kaon decays from lattice QCD

Friday, 2 October 2020 14:02 (12 minutes)

Presenter: PORTELLI, Antonin (University of Edinburgh)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 9

Type: **not specified**

Rare decays at the CERN high-intensity kaon beam facility

Friday, 2 October 2020 14:14 (12 minutes)

Presenter: MOULSON, Matthew (INFN Frascati)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: **10**

Type: **not specified**

KOTO step-2 experiment

Friday, 2 October 2020 14:26 (12 minutes)

Presenter: WORCESTER, Elizabeth (BNL)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 11

Type: **not specified**

Strange decays at LHCb

Friday, 2 October 2020 15:05 (12 minutes)

Presenter: DETTORI, Francesco (INFN Cagliari)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 12

Type: **not specified**

Physics potential of a high-luminosity J/ψ factory

Friday, 2 October 2020 15:17 (12 minutes)

Presenter: KUPSC, Andrzej (Uppsala University)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 13

Type: **not specified**

Testing LFU and CKM unitarity with rare pion decays

Friday, 2 October 2020 15:29 (12 minutes)

Presenter: BRYMAN, Douglas (University of British Columbia)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 14

Type: **not specified**

Unitarity of CKM matrix, $|V_{ud}|$, rad.corrections and semileptonic FFs

Friday, 2 October 2020 15:53 (12 minutes)

Presenter: GUPTA, Rajan (Los Alamos National Lab)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 15

Type: **not specified**

The quest for explaining top-row CKM unitarity deficit

Friday, 2 October 2020 15:41 (12 minutes)

Presenter: SENG, Chien Yeah (Bonn University)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 16

Type: **not specified**

High-precision determination of V_{us} and V_{ud} from lattice QCD

Friday, 2 October 2020 16:05 (12 minutes)

Presenter: GUELPERS, Vera (University of Southampton)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 17

Type: **not specified**

Physics prospects of Belle/Belle II

Friday, 2 October 2020 10:10 (25 minutes)

Presenter: PRELL, Soeren (Iowa State University)

Session Classification: Plenary: across-the-TG topics

Contribution ID: **18**

Type: **not specified**

Physics prospects at BES III and future tau-charm factories

Friday, 2 October 2020 10:35 (25 minutes)

Presenter: ZHOU, Xiaorong (University of Science and Technology of China)

Session Classification: Plenary: across-the-TG topics

Contribution ID: **19**

Type: **not specified**

Physics prospects at LHCb

Friday, 2 October 2020 11:00 (25 minutes)

Presenter: STONE, Sheldon (Syracuse University)

Session Classification: Plenary: across-the-TG topics

Contribution ID: 20

Type: **not specified**

Physics prospects at FCCee

Friday, 2 October 2020 11:25 (25 minutes)

Presenter: GONZALEZ SUAREZ, Rebeca (University of Nebraska)

Session Classification: Plenary: across-the-TG topics

Contribution ID: **21**

Type: **not specified**

PIP-II

Friday, 2 October 2020 11:50 (25 minutes)

Presenter: POZDEYEV, Eduard

Session Classification: Plenary: across-the-TG topics

Contribution ID: 22

Type: **not specified**

Rare and Precision aspects of Lattice QCD

Friday, 2 October 2020 12:15 (25 minutes)

Presenter: VAN DE WATER, Ruth (Fermilab)

Session Classification: Plenary: across-the-TG topics

Contribution ID: 23

Type: **not specified**

Welcome to R&P Town Hall meeting

Friday, 2 October 2020 10:00 (10 minutes)

Presenter: PETROV, Alexey (Wayne State University)

Session Classification: Plenary: across-the-TG topics

Contribution ID: 24

Type: **not specified**

Lattice QCD calculations of K and pion decay parameters & first-row CKM unitarity tests

Friday, 2 October 2020 16:17 (12 minutes)

Presenter: EL-KHADRA, Aida (University of Illinois at Urbana-Champaign)

Session Classification: RF2: Weak decays of strange and light quarks

Contribution ID: 25

Type: **not specified**

Using lattice QCD for the hadronic contributions to the muon $g - 2$

Friday, 2 October 2020 13:44 (8 minutes)

Presenter: GOTTLIEB, Steven (Indiana Univ.)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 26

Type: **not specified**

Calculations of nucleon electric dipole moments on a lattice with chiral fermions

Friday, 2 October 2020 14:18 (8 minutes)

Presenter: IZUBUCHI, Taku (Brookhaven National Laboratory)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 27

Type: **not specified**

Test of the Standard Model and Search for Physics Beyond* Opportunities for Fundamental Physics using Small-scale Storage Ring Experiments

Friday, 2 October 2020 12:50 (8 minutes)

Presenter: RATHMANN, Frank (Forschungszentrum Jülich)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 28

Type: **not specified**

The Proton Storage Ring EDM Experiment (srEDM)

Friday, 2 October 2020 12:58 (8 minutes)

Presenter: MORSE, William (BNL)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 29

Type: **not specified**

Potential storage ring and Muon Campus experiments

Friday, 2 October 2020 13:06 (8 minutes)

Presenter: CRNKOVIC, Jason

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: **30**

Type: **not specified**

Upgraded Low-Energy Muon Facility at Fermilab

Friday, 2 October 2020 13:14 (12 minutes)

Presenter: JOHNSTONE, Carol (Fermilab)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 31

Type: **not specified**

Neutron beta decay in the test of the Unitarity of the CKM matrix

Friday, 2 October 2020 14:26 (8 minutes)

Presenters: BAESSLER, Stefan (University of Virginia); BAESSLER, Stefan

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 32

Type: **not specified**

Searches for Exotic Short-range Gravity and Weakly Coupled Spin-Dependent Interactions using Slow Neutrons

Friday, 2 October 2020 16:13 (12 minutes)

Presenter: SNOW, W. M. (Indiana University)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 33

Type: **not specified**

Lorentz and CPT Tests with Low-Energy Precision Experiments

Friday, 2 October 2020 15:10 (8 minutes)

Presenter: LEHNERT, Ralf

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 34

Type: **not specified**

Atomic/nuclear clocks and precision spectroscopy measurements for dark matter and dark sector searches

Friday, 2 October 2020 15:26 (8 minutes)

Presenter: SAFRONOVA, Marianna (University of Delaware)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 35

Type: **not specified**

Optically levitated sensors for precision tests of fundamental physics and Doped Cryocrystals for Ultrasensitive EDM Measurements

Friday, 2 October 2020 15:52 (13 minutes)

Presenter: GERACI, Andrew (Northwestern University)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 36

Type: **not specified**

Probing fundamental physics with highly-coherent nuclear spins

Friday, 2 October 2020 15:34 (8 minutes)

Presenter: TERRANO, William (Technical University of Munich)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 37

Type: **not specified**

Mechanical tests of the gravity-quantum interface

Friday, 2 October 2020 16:25 (8 minutes)

Presenter: SUDHIR, Vivishek

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: **38**

Type: **not specified**

Searches for new sources of CP violation using molecules as quantum sensors

Friday, 2 October 2020 15:18 (8 minutes)

Presenter: HUTZLER, Nick (Caltech)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 39

Type: **not specified**

Strong CP and Neutrino Masses: A Common Origin of Two Small Scales

Friday, 2 October 2020 14:34 (8 minutes)

Presenter: LIU, Da (UC, Davis)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 40

Type: **not specified**

Dedicated Experiment Exploring Gravitational Effects on CP Violation

Friday, 2 October 2020 16:05 (8 minutes)

Presenter: PALLADINO, Anthony

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 41

Type: **not specified**

Opportunities and New Physics Implications for $(g - 2)_{e,\mu}$

Friday, 2 October 2020 14:00 (8 minutes)

Presenter: SAAD, Shaikh (Oklahoma State University)

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 42

Type: **not specified**

Study of pion and η decays

Friday, 2 October 2020 13:36 (8 minutes)

Presenter: HUSEK, Tomas

Session Classification: RF3: Fundamental Physics in Small Experiments

Contribution ID: 43

Type: **not specified**

Testing LFU at the Z pole

Friday, 2 October 2020 12:50 (10 minutes)

LOI EF/SNOWMASS21-EF3_EF0-RF1_RF0-163

Presenter: LI, Lingfeng (Jockey Club Institute for Advanced Study, The Hong Kong University of Science and Technology)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 44

Type: **not specified**

Exploring new physics with $B_c \rightarrow \tau \nu$

Friday, 2 October 2020 13:10 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0-035

Presenter: ZHENG, Taifan (School of physics, Nanjing University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 45

Type: **not specified**

CKM measurements and CPV in b decays at Belle II

Friday, 2 October 2020 13:20 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0_S.Prell-037

Presenter: GAZ, Alessandro (KMI, Nagoya University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 46

Type: **not specified**

CKM measurements and CPV in b decays at LHCb

Friday, 2 October 2020 15:50 (10 minutes)

LOI RF/SNOWMASS21-RF-EF-IF-CompF-001

Presenter: BLUSK, Steven (Syracuse University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 47

Type: **not specified**

CPV study in b -baryon hadronic decays using $SU(3)$ symmetry

Friday, 2 October 2020 13:40 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0-063

Presenter: ROY, Shibasis (IMSc Chennai)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 48

Type: **not specified**

High Precision SM Predictions for Quark Flavor Observables

Friday, 2 October 2020 13:50 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0_Lenz_Siegen-054

Presenter: LENZ, Alexander (University of Siegen)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 49

Type: **not specified**

Weak decays of b and c quarks

Friday, 2 October 2020 14:15 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0-TF5_TF0-CompF2_CompF0_Witzel_Oliver-068

Presenter: Dr WITZEL, Oliver (University of Colorado Boulder)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 50

Type: **not specified**

CPT-Symmetry Studies Involving Quarks

Friday, 2 October 2020 14:25 (10 minutes)

LOI RF/SNOWMASS21-RF2_RF1-EF9_EF8-095

Presenter: BERGER, Mike (Indiana University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 51

Type: **not specified**

Charm physics at LHCb

Friday, 2 October 2020 14:35 (10 minutes)

LOI RF/SNOWMASS21-RF-EF-IF-CompF-001

Presenters: WILLIAMS, Mark (Fermilab); WILLIAMS, Mark (CERN)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 52

Type: **not specified**

Charm physics at Belle II

Friday, 2 October 2020 14:45 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF4_BelleII-030 and LOI RF/SNOWMASS21-RF1_RF0_Bennett-021

Presenter: BENNETT, Jake (The University of Mississippi)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 53

Type: **not specified**

Rare b decays at LHCb

Friday, 2 October 2020 15:05 (10 minutes)

LOI RF/SNOWMASS21-RF-EF-IF-CompF-001

Presenter: ARCHILLI, Flavio (Heidelberg University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 54

Type: **not specified**

Rare b decays at Belle II

Friday, 2 October 2020 15:15 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0_S.Prell-037

Presenter: SCHWARTZ, Alan (University of Cincinnati)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 55

Type: **not specified**

Rare "b" Decays as Probes of New Physics

Friday, 2 October 2020 15:40 (10 minutes)

LOI TF/SNOWMASS21-TF6_TF0-RF1_RF0_Wolfgang_Altmannshofer-074

Presenter: ALTMANNSHOFER, Wolfgang (UC Santa Cruz)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 56

Type: **not specified**

High precision determinations of $|V_{xb}|$ from a close theory-experiment collaboration

Friday, 2 October 2020 16:00 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0-TF5_TF6-CompF2_CompF0_Vaquero-116

Presenter: DEY, Biplab (CCNU Wuhan)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 57

Type: **not specified**

Precision theory inputs for $|V_{cb}|$ and LFUV observables

Friday, 2 October 2020 16:10 (10 minutes)

LOI TF/SNOWMASS21-TF5_TF0-RF1_RF0_Andrew_Lytle-010

Presenter: LYTLE, Andrew (University of Glasgow)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 58

Type: **not specified**

Precision Lattice QCD in Support of BSM Searches

Friday, 2 October 2020 16:20 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0-EF5_EF0-TF5_TF0-CompF2_CompF0_DeTar-047

Presenter: KRONFELD, Andreas (Fermilab)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 59

Type: **not specified**

Lattice-QCD studies of inclusive B -meson decays

Friday, 2 October 2020 16:30 (10 minutes)

LOI TF/SNOWMASS21-TF5_TF6-RF1_RF0-CompF2_CompF0-020

Presenter: JAY, William

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: **60**

Type: **not specified**

Rare charm decays

Friday, 2 October 2020 14:55 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF0_Dominik_Mitzel-021

Presenter: MITZEL, Dominik (CERN)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: **61**

Type: **not specified**

Triple-Product Asymmetries

Friday, 2 October 2020 16:40 (10 minutes)

LOI RF/SNOWMASS21-RF1_RF5_Bhujyo_Bhattacharya-023

Presenter: Prof. BHATTACHARYA, Bhubanjyoti (Lawrence Technological University)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: **62**

Type: **not specified**

Search for Muonium to Antimuonium Conversion

Friday, 2 October 2020 12:50 (12 minutes)

Presenter: TANG, Jian (Sun Yat-Sen University)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: **63**

Type: **not specified**

Rare muon decays and light new physics

Friday, 2 October 2020 16:16 (12 minutes)

Presenter: REDIGOLO, Diego (CERN)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 64

Type: **not specified**

Theory challenges and opportunities of Mu2e-II

Friday, 2 October 2020 15:04 (12 minutes)

Presenter: BORREL, Leo (Caltech)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 65

Type: **not specified**

Searching for muon-to-positron Conversion at Upcoming Experiments and the Process of Radiative Muon Capture

Friday, 2 October 2020 13:14 (12 minutes)

Presenter: MACKENZIE, Michael

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: **66**

Type: **not specified**

Physics of muonium and anti-muonium oscillations

Friday, 2 October 2020 13:02 (12 minutes)

Presenter: PETROV, Alexey (Wayne State University)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 67

Type: **not specified**

The Mu2e, COMET and DeeMe experiments

Friday, 2 October 2020 14:02 (12 minutes)

Presenter: MIDDLETON, Sophie

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: **68**

Type: **not specified**

The MEG II experiment and its future developments

Friday, 2 October 2020 13:26 (12 minutes)

Presenter: PAPA, Angela (Paul Scherrer Institut)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: **69**

Type: **not specified**

Mu2e-II

Friday, 2 October 2020 14:14 (17 minutes)

Presenter: CHISLETT, Rebecca

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 70

Type: **not specified**

Beam Delivery for Mu2e-II in the PIP-II Era

Friday, 2 October 2020 14:31 (12 minutes)

Presenter: PREBYS, Eric (UC Davis)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 71

Type: **not specified**

Upgraded Low-Energy Muon Facility at Fermilab

Friday, 2 October 2020 15:16 (12 minutes)

Presenter: JOHNSTONE, Carol (Fermilab)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 72

Type: **not specified**

A New Charged Lepton Flavor Violation Program at Fermilab

Friday, 2 October 2020 13:50 (12 minutes)

Presenter: BERNSTEIN, Robert (Fermilab)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 73

Type: **not specified**

A Phase Rotated Intense Source of Muons (PRISM) for a mu-e Conversion Experiment

Friday, 2 October 2020 15:28 (12 minutes)

Presenter: PASTERNAK, Jaroslaw (Imperial College/RAL-STFC)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 74

Type: **not specified**

A new experiment for the $\mu \rightarrow e \gamma$ search

Friday, 2 October 2020 13:38 (12 minutes)

Presenter: TASSIELLI, Giovanni Francesco (INFN LE, Universita' G. Marconi, Fermilab)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 75

Type: **not specified**

Charged Lepton Flavour Violation at the FCC-ee

Friday, 2 October 2020 15:52 (12 minutes)

Presenter: DAM, Mogens (Niels Bohr Institute, Copenhagen University)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 76

Type: **not specified**

CLFV in tau decays

Friday, 2 October 2020 15:40 (12 minutes)

Presenter: BANERJEE, Swagato (University of Louisville)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 77

Type: **not specified**

CLFV in heavy state decays

Friday, 2 October 2020 16:04 (12 minutes)

Presenter: PAGAN GRISO, Simone (Lawrence Berkeley National Laboratory)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 78

Type: **not specified**

Discussion

Friday, 2 October 2020 16:28 (22 minutes)

Session Classification: RF5: Charged Lepton Flavor Violation (electrons, muons and taus)

Contribution ID: 79

Type: **not specified**

Neutrino Minimal Standard Model — a unified theory of microscopic and cosmic scales

Friday, 2 October 2020 15:58 (7 minutes)

NF/SNOWMASS21-NF3_NF1-EF9_EF0-RF4_RF6-CF1_CF3-TF11_TF9-AF5_AF0-195.pdf

Presenter: DREWES, Marco (Louvain)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **80**

Type: **not specified**

Neutrino mass models at colliders in a post-ESU era

Friday, 2 October 2020 13:06 (7 minutes)

https://www.snowmass21.org/docs/files/summaries/RF/SNOWMASS21-RF5_RF0-EF8_EF9-NF2_NF3-TF7_TF0-CompF2_CompF0_Ruiz_Richard-118.pdf

Presenter: RUIZ, Richard (Universite catholique de Louvain)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **81**

Type: **not specified**

Free Neutron-antineutron Transformation Searches at the European Spallation Source's Large Beamport

Friday, 2 October 2020 12:58 (7 minutes)

RF/SNOWMASS21-RF4_RF0_Joshua_Barrow-110.pdf

Presenter: DUNNE, Katherine

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **82**

Type: **not specified**

Ongoing Science Program of Super-Kamiokande

Friday, 2 October 2020 12:50 (7 minutes)

NF/SNOWMASS21-NF4_NF1-RF4_RF0-CF7_CF1_SUPERK-050.pdf

Presenter: KEARNS, Ed (Boston University)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **83**

Type: **not specified**

The Baryon Asymmetry Of The Universe

Friday, 2 October 2020 13:14 (7 minutes)

TF/SNOWMASS21-TF8_TF9-EF9_EF0-NF3_NF0-RF4_RF0-CF7_CF0-024.pdf

Presenter: ELOR, Gilly

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **84**

Type: **not specified**

High-pressure xenon gas time-projection chambers for neutrinoless double-beta decay searches

Friday, 2 October 2020 13:22 (7 minutes)

IF/SNOWMASS21-IF8_IF0-NF5_NF0-RF4_RF0_RGuenette-086.pdf

Presenter: GUENETTE, Roxanne (Harvard University)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 85

Type: **not specified**

Neutrinoless double beta decay in effective field theory and simplified models

Friday, 2 October 2020 13:30 (7 minutes)

RF/SNOWMASS21-RF4_RF0-NF3_NF2-TF11_TF0-051.pdf

Presenter: DEKENS, Wouter (Los Alamos)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **86**

Type: **not specified**

Toward Sensitivity to the Neutrino Normal Hierarchy with Quantum Calorimetry

Friday, 2 October 2020 13:38 (7 minutes)

NF/SNOWMASS21-NF5_NF3-RF4_RF0-CF1_CF0-IF1_IF2-UF3_UF0_Speller-182.pdf

Presenter: SPELLER, Danielle (Johns Hopkins University)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 87

Type: **not specified**

Nuclear Matrix Elements for BSM Searches from Lattice QCD

Friday, 2 October 2020 13:46 (7 minutes)

TF/SNOWMASS21-TF5_TF0-NF6_NF0-RF4_RF5-CompF2_CompF0_Phiala_Shanahan-064.pdf

Presenter: DETMOLD, William (MIT)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **88**

Type: **not specified**

Kilotonne-scale Xe TPCs for $0\nu\beta\beta$ searches at 1030 yr half-life sensitivity

Friday, 2 October 2020 13:54 (7 minutes)

NF/SNOWMASS21-NF5_NF3-RF4_RF0-IF8_IF0_Moore-027.pdf

Presenter: HEFFNER, Michael (Lawrence Livermore National Laboratory)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 89

Type: **not specified**

The Neutrino Physics program of the Global Argon Dark Matter Collaboration

Friday, 2 October 2020 14:24 (7 minutes)

NF/SNOWMASS21-NF5_NF4-RF4_RF0_Savarese-127.pdf

Presenter: SAVARESE, Claudio (Princeton University)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: **90**

Type: **not specified**

Barium Tagging in Xenon Gas for Neutrinoless Double Beta Decay

Friday, 2 October 2020 14:32 (7 minutes)

NF/SNOWMASS21-NF5_NF10-RF4_RF0-IF9_IF8_Ben_Jones-048.pdf

Presenter: JONES, Benjamin (UTA)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 91

Type: **not specified**

Barium tagging for a nEXO upgrade and future 136Xe 0nbb detectors

Friday, 2 October 2020 14:40 (7 minutes)

NF/SNOWMASS21-NF5_NF3-RF4_RF0-IF8_IF0_William_Fairbank-120.pdf

Presenter: FAIRBANK, Bill

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 92

Type: **not specified**

Bridging particle and nuclear physics for neutrinoless double beta decay with EFTs

Friday, 2 October 2020 14:48 (7 minutes)

TF/SNOWMASS21-TF11_TF0-NF5_NF0-RF4_RF0-053.pdf

Presenter: MEREGHETTI, Emanuele (Los Alamos National Laboratory)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 93

Type: **not specified**

Opportunities and signatures of non-minimal Heavy Neutral Leptons

Friday, 2 October 2020 14:56 (7 minutes)

NF/SNOWMASS21-NF2_NF3-EF9_EF0-RF4_RF6-CF1_CF0-TF8_TF11_Matheus_Hostert-041.pdf

Presenter: HOSTERT, Matheus (University of Minnesota)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 94

Type: **not specified**

BSM Physics at the Electron Ion Collider: Searching for Heavy Neutral Leptons

Friday, 2 October 2020 15:04 (7 minutes)

EF/SNOWMASS21-EF7_EF0-NF2_NF3-RF4_RF0_Brian_Batell-114.pdf

Presenter: XIE, Keping (University of Pittsburgh)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 95

Type: **not specified**

The Necessity of DUNE Intranuclear Baryon Minus Lepton Number-Violating Searches for a World-Leading, Complementary Physics Program

Friday, 2 October 2020 15:12 (7 minutes)

RF/SNOWMASS21-RF4_RF0-NF3_NF10_Joshua_Barrow-107.pdf

Presenter: BARROW, Joshua (The University of Tennessee)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 96

Type: **not specified**

$\Delta B = 2$: A State of the Field, and Looking Forward

Friday, 2 October 2020 15:20 (7 minutes)

RF/SNOWMASS21-RF4_RF6-NF3_NF10-TF2_TF5_Joshua_Barrow-105.pdf

Presenter: WAGMAN, Michael (Fermilab)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 97

Type: **not specified**

Discovery and Exclusion Potential of Future Colliders for Supersymmetry Signatures

Friday, 2 October 2020 15:50 (7 minutes)

EF/SNOWMASS21-EF8_EF0-RF4_RF0_UPenn-199.pdf

Presenter: THOMSON, Evelyn (University of Pennsylvania)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 98

Type: **not specified**

The Hyper-Kamiokande Experiment

Friday, 2 October 2020 16:06 (7 minutes)

NF/SNOWMASS21-NF0_NF0-RF4_RF0-CF1_CF0_HyperK-187.pdf

Presenter: WENDELL, Roger (Kyoto University)

Session Classification: RF4: Baryon and Lepton Number Violating Processes

Contribution ID: 99

Type: **not specified**

Testing Lepton Flavor Universality at Z Pole

Friday, 2 October 2020 13:14 (12 minutes)

Presenter: LI, Lingfeng (Jockey Club Institute for Advanced Study, The Hong Kong University of Science and Technology)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **100**

Type: **not specified**

Physics Potential of a Super Tau-Charm Facility

Friday, 2 October 2020 13:02 (12 minutes)

Presenter: PENG, Haipeng

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **101**

Type: **not specified**

Precision Experiments at Super Charm-Tau Facility

Friday, 2 October 2020 12:50 (12 minutes)

Presenter: VOROBYEV, Vitaly (Budker INP)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **102**

Type: **not specified**

Hadron-Hadron Spectroscopy

Friday, 2 October 2020 13:26 (12 minutes)

Presenter: KARLINER, Marek

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **103**

Type: **not specified**

Diquark Structures in Hadron Spectroscopy

Friday, 2 October 2020 13:38 (12 minutes)

Presenter: SANTOPINTO, Elena

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **104**

Type: **not specified**

US LHCb

Friday, 2 October 2020 14:00 (12 minutes)

Presenter: POLYAKOV, Ivan (Syracuse University)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **105**

Type: **not specified**

Hadron Spectroscopy with Lattice QCD

Friday, 2 October 2020 14:12 (12 minutes)

Presenter: PRELOVSEK, Sasa (University of Ljubljana)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **106**

Type: **not specified**

XYZP Spectroscopy at a Charm Photoproduction Factory

Friday, 2 October 2020 14:24 (12 minutes)

Presenter: PILLONI, Alessandro (ECT*)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **107**

Type: **not specified**

Physics in the Tau-Charm Region at BESIII

Friday, 2 October 2020 14:36 (12 minutes)

Presenter: MITCHELL, Ryan (Indiana University)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **108**

Type: **not specified**

Hadron Spectroscopy at Belle II

Friday, 2 October 2020 14:48 (12 minutes)

Presenter: FULSOM, Bryan (Pacific Northwest National Laboratory)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **109**

Type: **not specified**

Hadron Spectroscopy at the Electron Ion Collider

Friday, 2 October 2020 15:10 (12 minutes)

Presenter: STEVENS, Justin (William & Mary)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: **110**

Type: **not specified**

Hadron Spectroscopy with the GlueX Experiment

Friday, 2 October 2020 15:22 (12 minutes)

Presenter: DOBBS, Sean (FSU)

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: 111

Type: **not specified**

Need for Amplitude Analysis in the Discovery of New Hadrons

Friday, 2 October 2020 15:34 (12 minutes)

Presenter: BLIN, Astrid

Session Classification: RF7: Hadron Spectroscopy

Contribution ID: 112

Type: **not specified**

Searching for $B_s^0 \rightarrow \phi \nu \nu$ and other $b \rightarrow s \nu \nu$ processes at CEPC

Friday, 2 October 2020 13:00 (10 minutes)

LOI EF/SNOWMASS21-EF3_EF0-RF1_RF0-IF3_IF6-077

Presenter: WANG, Yudong (IHEP Beijing)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: **113**

Type: **not specified**

Charm physics at BESIII and at STCF

Friday, 2 October 2020 13:30 (10 minutes)

LOI RF/SNOWMASS21-RF7_RF1_STCF-013 and LOI RF/SNOWMASS21-RF0_RF0_BESIII-071

Presenter: LYU, Xiaorui (UCAS Beijing)

Session Classification: RF1: Weak decays of b and c quarks

Contribution ID: 114

Type: **not specified**

Long-lived particles at Belle II

Friday, 2 October 2020 12:50 (10 minutes)

Presenter: WESTHOFF, Susanne (Heidelberg University)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: **115**

Type: **not specified**

Dark sectors at LHCb

Friday, 2 October 2020 13:00 (10 minutes)

Presenter: ILTEN, Philip (Massachusetts Institute of Technology)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 116

Type: **not specified**

Dark sector searches at the CERN high-intensity kaon beam facility

Friday, 2 October 2020 13:10 (10 minutes)

Presenter: SPADARO, Tommaso

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: **117**

Type: **not specified**

Dark Sector studies with KOTO

Friday, 2 October 2020 13:20 (10 minutes)

Presenter: TUNG, Yu-Chen

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: **118**

Type: **not specified**

Probing the Dark Sector at Kaon Factories

Friday, 2 October 2020 13:30 (10 minutes)

Presenter: TOBIOKA, Kohsaku

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: **119**

Type: **not specified**

The massless dark photon as a benchmark model

Friday, 2 October 2020 13:40 (10 minutes)

Presenter: FABBRICHESI, Marco

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 120

Type: **not specified**

Searches for Transformations of Neutrons to Sterile Neutrons and Antineutrons at ORNL and ESS

Friday, 2 October 2020 13:50 (10 minutes)

Presenter: BARROW, Joshua (The University of Tennessee)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 121

Type: **not specified**

Physics potential with MEGII-fwd

Friday, 2 October 2020 14:00 (10 minutes)

Presenter: ZUPAN, Jure (U. Cincinnati)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 122

Type: **not specified**

Fixed-Target Searches for New Physics with O(1 GeV) Proton Beams at Fermi National Accelerator Laboratory & Fixed-Target Searches for New Physics with O(10 GeV) Proton Beams at Fermi National Accelerator Laboratory & FNAL Booster Storage Ring

Friday, 2 October 2020 14:10 (20 minutes)

Presenter: TOUPS, Matthew (FNAL)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 123

Type: **not specified**

Dark sector studies at Belle II

Friday, 2 October 2020 15:00 (10 minutes)

Presenter: FLOOD, Kevin

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 124

Type: **not specified**

DarkQuest and LongQuest at the 120 GeV Fermilab Main Injector

Friday, 2 October 2020 15:10 (10 minutes)

Presenter: LIU, Ming (Los Alamos)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 125

Type: **not specified**

Accelerator Probes of Millicharged Particles & Dark Matter

Friday, 2 October 2020 15:20 (10 minutes)

Presenter: TSAI, Yu-Dai (Fermilab)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 126

Type: **not specified**

Searching for new light hidden particles with η and η' mesons

Friday, 2 October 2020 15:30 (10 minutes)

Presenter: TULIN, Sean (York University)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 127

Type: **not specified**

Photon-beam experiments and new light physics

Friday, 2 October 2020 15:40 (10 minutes)

Presenter: JAEGLE, Igal (University of Florida)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 128

Type: **not specified**

Beam Dump eXperiments with electron beams

Friday, 2 October 2020 15:50 (10 minutes)

Presenter: BATTAGLIERI, Marco (INFN-GE)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: **129**

Type: **not specified**

Light dark matter searches with positrons

Friday, 2 October 2020 16:00 (10 minutes)

Presenter: BATTAGLIERI, Marco (INFN-GE)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 130

Type: **not specified**

Scientific Opportunities with the CBETA Accelerator

Friday, 2 October 2020 16:10 (10 minutes)

Presenter: FRISCIC , Ivica

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 131

Type: **not specified**

The Heavy Photon Search Experiment

Friday, 2 October 2020 16:20 (10 minutes)

Presenter: BRAVO, Cameron (SLAC)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 132

Type: **not specified**

Light Dark Matter eXperiment & Muon Missing Momentum experiment,

Friday, 2 October 2020 16:30 (15 minutes)

Presenter: TRAN, Nhan (FNAL)

Session Classification: RF6: Dark Sector Studies at High Intensities

Contribution ID: 133

Type: **not specified**

The CMS Contribution to Snowmass

Friday, 2 October 2020 15:46 (12 minutes)

Presenter: PAPADIMITRIOU, Vaia (Fermilab)

Session Classification: RF7: Hadron Spectroscopy