

## Session Program

27-30 Jun 2022



# Annual Meeting of the Swiss Physical Society 2022

## *Nuclear, Particle- & Astrophysics*

Université de Fribourg  
Pérolles II

# Monday 27 June

17:15

## Nuclear, Particle- & Astrophysics: I: Astroparticle Physics

Session | Location: Room G 140

17:15–17:30

### **[301] The future space-borne High Energy cosmic-Radiation Detection facility**

**Speaker**

Jennifer Maria Frieden

17:30–17:45

### **[302] Helium Flux Measurement with the DAMPE Detector using Machine Learning Techniques**

**Speaker**

Arshia Ruina

17:45–18:00

### **[303] Very-high-energy emission from gamma-ray bursts detected by MAGIC**

**Speaker**

Satoshi Fukami

18:00–18:15

### **[304] What can variability of quasar microlensing light curve can tell us about its structure ?**

**Speaker**

Eric Gérard Guy Paic

18:15–18:30

### **[305] Dark Matter Effective Field Theory and an Application to Vector Dark Matter**

**Speaker**

Jason Aebischer

18:30–18:45

### **[306] Dark matter direct detection with the XENONnT experiment**

**Speaker**

Giovanni Volta

18:45–19:00

### **[307] The DARWIN observatory for dark matter and neutrino physics**

**Speaker**

Michelle Galloway

19:00–19:15

### **[308] Xenoscope - a full-scale vertical demonstrator for the DARWIN observatory**

**Speaker**

Mr Alexander Bismark

19:15

## Tuesday 28 June

14:00

### Nuclear, Particle- & Astrophysics: II: Flavour Anomalies

Session | Location: Room G 140

14:00-14:15

**[315] Search for the lepton flavour violating  $B_{0s} \rightarrow e \pm \mu \mp$  and  $B^0 \rightarrow e \pm \mu \mp$  decays with LHCb Run 2 data**

**Speaker**

Sebastian Schulte

14:15-14:30

**[312] QED corrections in  $\bar{B}^0 \rightarrow \bar{K}^0 \ell \ell$ : comparing PHOTOS to a Monte Carlo based on a fully differential NLO computation.**

**Speaker**

Davide Lancierini

14:30-14:45

**[313] Update on the angular analysis of  $B^0 \rightarrow K^{*0} e^+ e^-$  decays at LHCb**

**Speaker**

Zhenzi Wang

14:45-15:00

**[314] Machine Learning Techniques for selecting Forward Electrons  $(2.5 < \eta < 3.2)$  with the ATLAS High Level Trigger**

**Speaker**

Meinrad Moritz Schefer

15:00-15:15

**[311] Lepton Flavour universality test in  $b \rightarrow s \ell \ell$  decays at LHCb**

**Speaker**

Sara Celani

15:15-15:30

**[316] Mu3e looking for rare muon decays**

**Speaker**

Yannick Demets

15:30-15:45

**[317] Precision timing in the Mu3e experiment towards the search for the muon decay to three electrons**

**Speaker**

Yannick Demets

15:45-16:00

**[318] Studies of semileptonic charged-current decays of b-hadrons**

**Speaker**

Abhijit Mathad

16:00-16:15

**[319] Searching for single third generation Leptoquarks with  $bb + \tau$  final state using the ATLAS detector****Speaker**

Roman Mueller

16:15-16:30

**[320] The PIONEER precision pion decay experiment****Speaker**

Damian Goeldi

16:30

17:00

**Nuclear, Particle- & Astrophysics: III: Neutrinos: SM and BSM**

Session | Location: Room G 140

17:00-17:15

**[321] The LEGEND experiment to search for neutrinoless double beta decay****Speaker**

Dr Pin-Jung Chiu

17:15-17:30

**[322] Search for long-lived heavy neutral leptons in leptonic final states with displaced vertices at the CMS experiment****Speaker**

Anna Mascellani

17:30-17:45

**[323] Inclusive search for HNLs at LHCb with Run 2 data****Speaker**

Serhii Cholak

17:45-18:00

**[324] Search for long-lived Heavy Neutral Leptons in B-meson decays****Speaker**

Anne-Mazarine Lyon

18:00-18:15

**[325] Neutrino physics at the LHC****Speaker**

Elena Graverini

18:15-18:30

**[326] The SND@LHC detector****Speaker**

Ettore Zaffaroni

18:30-18:45

**[327] ArCLight: Development of a novel light detector for modular liquid Argon detectors****Speaker**

Anja Gauch

18:45-19:00

**[328] First light detection with an Optical TPC****Speaker**

Mr Robert Mihai Amarinei

19:00

## Wednesday 29 June

14:30

### Nuclear, Particle- & Astrophysics: IV: New Physics Searches

Session | Location: Room G 140

14:30–15:00

#### **[331] Precision measurement of neutral charm meson mixing parameters at LHCb**

**Speaker**

Guillaume Max Pietrzyk

15:15–15:30

#### **[333] Search for Supersymmetry with tbMET final states using full ATLAS Run2 data**

**Speaker**

Meghranjana Chatterjee

15:30–15:45

#### **[334] Searching for R-Parity Violating Supersymmetry with the ATLAS Detector**

**Speaker**

Lea Halser

15:45–16:00

#### **[335] B-jet tagging with fast tracking at the ATLAS trigger**

**Speaker**

Stefano Franchellucci

16:00–16:15

#### **[336] Search for CP violation in ttH and tH production in multilepton channels**

**Speaker**

Sascha Pascal Liechti

16:15–16:30

#### **[337] First test run results at the NA64 $\mu$ experiment at CERN**

**Speaker**

Benjamin Banto Oberhauser

16:30

17:00

### Nuclear, Particle- & Astrophysics: V: Precision Measurements

Session | Location: Room G 140

17:00–17:15

#### **[341] Positronium 1S-2S and 2S-2P precision spectroscopy**

**Speaker**

Mr Lucas de Sousa Borges

17:15–17:30

#### **[342] LEMING: A gravity experiment with muonium atoms**

**Speaker**

Jesse Zhang

17:30–17:45

#### **[343] Muonic atom spectroscopy with radioactive targets**

**Speaker**

Stergiani Marina Vogiatzi

17:45-18:00

**[344] Measurement of multiple scattering of positrons for the Muon Electric Dipole Moment Experiment****Speaker**

Mr Timothy Hume

18:00-18:15

**[345] The LHCb magnetic field map****Speaker**

Marie Bachmayer

18:15-18:30

**[346] 3D real-time monitoring of the LHCb SciFi tracker using BCAMs****Speaker**

Maria Vieites Diaz

18:30-18:45

**[347] Model-independent measurement of charm-mixing parameters in  $D^0 \rightarrow K^0_S \pi^+ \pi^-$** **Speaker**

Surapat Ek-In

18:45-19:00

**[348]  $\Lambda^+_c$  polarization measurement with the LHCb detector at the LHC****Speaker**

Elisabeth Maria Niel

19:00

## Thursday 30 June

14:15

### Nuclear, Particle- & Astrophysics: VI: Detectors and Performance

Session | Location: Room G 140

14:15–14:45

#### **[351] Next generation silicon pixel sensors: towards picosecond timing**

**Speaker**

Magdalena Muenker

14:45–15:00

#### **[352] The 100 $\mu$ PET project: Pioneering ultra-high-resolution molecular imaging**

**Speaker**

Jihad Saidi

15:00–15:15

#### **[353] FCC-ee vertex detector requirements and performance simulation**

**Speaker**

Armin Ilg

15:15–15:30

#### **[354] The W-Si high precision pre-shower detector of the FASER experiment at the LHC**

**Speaker**

Theo Moretti

15:30–15:45

#### **[355] Irradiation of ATLAS Itk Pixel Data Transmission Components at the Bern Cyclotron**

**Speaker**

Aaron Paul O'Neill

15:45–16:00

#### **[356] The Optosystem: Performance of the electrical-to-optical data conversion system for the ATLAS Itk Pixel upgrade**

**Speaker**

Mr Daniele Dal Santo

16:15

16:45

### Nuclear, Particle- & Astrophysics: VI: Detectors and Performance

Session | Location: Room G 140

16:45–17:00

#### **[357] Event reconstruction at 30 MHz - the LHCb experience**

**Speaker**

Michel De Cian

17:00–17:15

#### **[358] The PLUME luminosity monitor for LHCb**

**Speaker**

Maarten Van Dijk

17:15-17:30

**[359] Deep Learning Measurement of Non-Fiducial Electrons Cosmic Rays Using on the DAMPE Experiment.**

**Speaker**

Enzo Putti-Garcia

17:30-17:45

**[360] Development of a Penetrating particle ANalyzer (PAN) demonstrator and the results from beam tests**

**Speaker**

Tomoya Iizawa

17:45