

Session Program

August 30, 2021 to September 3, 2021



Joint Annual Meeting of ÖPG and SPS 2021

Nuclear, Particle- & Astrophysics

University of Innsbruck
Technikerstr. 25, Viktor-Franz-Hess-Haus, AT-6020 Innsbruck

Tue, August 31

1:30 PM

Nuclear, Particle- & Astrophysics: I: Flavour Anomalies

Session | Location: Room B

13:30 - 13:45 **[301] Flavour anomalies in $b \rightarrow sll$ meson decays: a review**

Speaker

Elena Graverini

13:45 - 14:00

[302] Lepton flavour universality tests in charged-current b-quark decays

Speaker

Annarita Buonauro

14:00 - 14:15

[303] Discovering Lepton Flavour Universality Violating New Physics

Speaker

Andreas Crivellin

14:15 - 14:30

[304] On R_{K^*} and the global significance of new physics in $b \rightarrow sll$ decays

Speaker

Davide Lancerini

14:30 - 14:45

[305] A new approach in the search for New Physics in $b \rightarrow sl+l-$ decays

Speaker

Michele Atzeni

14:45 - 15:00

[306] Angular analysis of $B^0 \rightarrow K^{*0} e^+ e^-$ decays at LHCb

Speaker

Zhenzi Wang

15:00 - 15:15

[307] Test of lepton flavour universality in $B^+ \rightarrow K^+ l^+ l^-$ decays in high dilepton invariant mass squared region

Speaker

Mr Vadym Denysenko

15:15 - 15:30

[308] Search for New Physics in baryons decay at LHCb

Speaker

Martina Ferrillo

15:30 - 15:45

[309] Search for Lepton Flavour Universality Violation at CMS

Speaker

Federica Riti

15:45 - 16:00

【310】 Highlights from CP-violation in B-decays and Lepton Flavour violation measurements with the ATLAS experiment**Speaker**

Emmerich Kneringer

4:00 PM

4:30 PM

Nuclear, Particle- & Astrophysics: II: High Energy Physics I

Session | Location: Room B

16:30 - 16:45

【311】 Combined Constraints on First Generation Leptoquarks**Speaker**

Luc Schnell

16:45 - 17:00

【312】 Global Analysis of Leptophilic Z' Bosons**Speaker**

Fiona Kirk

17:00 - 17:15

【313】 QCD Constraints on the Hadronic Light-by-Light Contribution to the Muon $g - 2$ **Speaker**

Jan Lütke

17:15 - 17:30

【314】 Holographic QCD and the anomalous magnetic moment of the muon**Speaker**

Josef Leutgeb

17:30 - 17:45

【329】 A relevant correction for direct measurement of electron's g-factor**Speaker**

Benjamin Koch

17:45 - 18:00

【315】 Study of a very rare decay with multiple leptons in the final state at the LHCb experiment**Speaker**

Sonia Amina Bouchiba

18:00 - 18:15

【316】 Measuring the decay $B^+ \rightarrow \rho^0 \mu^+ \nu_{\mu}$ at LHCb**Speaker**

Veronica Soelund Kirsebom

18:15 - 18:30

【317】 Amplitude analysis of $B \rightarrow K \pi \pi \gamma$ decays at LHCb**Speaker**

Marie Bachmayer

18:30 - 18:45

【318】 Measuring $\mathcal{B}(B^0 \rightarrow K^{*0} \tau^+ \tau^-)$ via the double-loop process $B^0 \rightarrow K^{*0} \tau^+ \tau^- (\rightarrow \mu^+ \mu^-)$

Speaker

Martin Andersson

18:45 - 19:00

[319] On the difference between the FOPT and CIPT approach for the hadronic tau decay rate

Speaker

Christoph Regner

7:00 PM

Wed, September 1

2:00 PM

Nuclear, Particle- & Astrophysics: III: High Energy II and Flavor Physics

Session | Location: Room B

14:00 - 14:30 **【321】 Large charge, semiclassics and superfluids**

Speaker

Dr Gabriel Francisco Cuomo

14:30 - 14:53 **【322】 Glueballs and Gauge / Gravity Duality**

Speaker

Frederic Brünner

14:53 - 15:15

【323】 Measurement of the prompt χ_{c1} and χ_{c2} polarizations at CMS

Speaker

Thomas Madlener

15:15 - 15:30

【324】 Measurement of the Branching Fraction and Kinematic Variables of $B^0 \rightarrow D^{*+} \ell^+ \nu_{\ell}$ using the Belle II data

Speaker

Daniel Dorner

15:30 - 15:45

【325】 Measurement of the Cabibbo-Kobayashi-Maskawa matrix element $|V_{cb}|$ using the decay $B^- \rightarrow D^0 \ell^- \nu_{\ell}$ at Belle II

Speaker

Philipp Horak

15:45 - 16:00

【326】 Measurement of q^2 moments in inclusive $B \rightarrow X \ell \nu$ decays and determination of the Cabibbo-Kobayashi- Maskawa matrix element V_{cb} at Belle II

Speaker

Manca Mrvar

16:00 - 16:15

【327】 Measurement of the VH production mode in the $H \rightarrow b\bar{b}$ decay channel in proton-proton collision data at $\sqrt{s} = 13$ TeV

Speaker

Christina Reissel

16:15 - 16:30

【328】 Identifying the Higgs boson production in the $t\bar{t}H(bb)$ channel using quantum classifiers

Speaker

Vasileios Belis

4:30 PM

2:00 PM

Nuclear, Particle- & Astrophysics: V: Astroparticles I

Session | Location: Room D

14:00 - 15:15 **FAKT - TASK Award talks**

15:15 - 15:45

[341] DARWIN - a next-generation observatory for dark matter and neutrino physics**Speaker**

Laura Baudis

Location

Room D

15:45 - 16:00

[342] The upgraded low-background germanium counting facility Gator for high-sensitivity γ -ray spectrometry**Speaker**

Mr Alexander Bismark

Location

Room D

16:00 - 16:15

[343] POLAR-2: Towards a Large Scale Gamma-ray Polarimetry**Speaker**

Johannes Hulsman

Location

Room D

16:15 - 16:30

[344] Invisible Nucleon Decays in the XENON1T experiment**Speaker**

Giovanni Volta

Location

Room D

4:30 PM

5:00 PM

Nuclear, Particle- & Astrophysics: IV: Accelerator

Session | Location: Room B

17:00 - 17:15

[331] High-Field Magnet Development for Accelerators in CHART MagDev**Speaker**

Bernhard Auchmann

17:15 - 17:30

[332] High Temperature Superconducting Undulator Development at PSI/CHART**Speaker**

Xiaoyang Liang

17:30 - 17:45

[333] Developing a new collaborative software framework for FCC-ee simulations**Speaker**

Felix Simon Carlier

17:45 - 18:00

[334] Precision Luminosity Measurement at the LHC

Speaker

Joanna Wanczyk

18:00 - 18:15

[335] Ion Laser InterAction Mass Spectrometry - providing utmost isotope abundance sensitivity**Speaker**

Dr Martin Martschini

18:15 - 18:30

[336] Relative Formation Probabilities for Fluoride and Oxyfluoride Anions Containing U, Np, Pu and Am in Accelerator Mass Spectrometry Measurements at VERA**Speaker**

Andreas Wiederin

18:30 - 18:45

[337] Increasing the ionization yield for the detection of ^{236}U and ^{233}U by AMS**Speaker**

Michael Kern

18:45 - 19:00

[338] Determination of ^{135}Cs and ^{137}Cs by Accelerator Mass Spectrometry**Speaker**

Alexander Wieser

19:00 - 19:15

[339] AMS of ^{90}Sr at the sub-fg-level using laser photodetachment at VERA**Speaker**

Oscar Marchhart

7:15 PM

5:00 PM

Nuclear, Particle- & Astrophysics: VI: Astroparticles II

Session | Location: Room D

17:00 - 17:15

[351] LEGEND - The Large Enriched Germanium Experiment for Neutrinoless Double Beta Decay**Speaker**

Yannick Müller

17:15 - 17:30

[352] Cosmic ray Sub-Iron and Nickel nuclei fluxes measurement from AMS-02 data**Speaker**

Erwan Robyn

17:30 - 17:45

[353] The XENONnT detector and physics programme**Speaker**

Mr Ricardo Peres

17:45 - 18:00

[354] Cosmic-ray propagation under consideration of spatially resolved source distributions

Speaker
Ms Julia Thaler

18:00 - 18:15 **【355】 Search for astrophysical sources of neutrinos with IceCube**

Speaker
Francesco Lucarelli

18:15 - 18:30 **【356】 UHECR Acceleration in FR-0 Jetted Active Galaxies**

Speaker
Dr Lukas Merten

18:30 - 18:45

【357】 Multi-messenger characterization of Mrk501 during historically low X-ray and gamma-ray activity

Speaker
Lea Alina Heckmann

6:45 PM

Thu, September 2

2:30 PM

Nuclear, Particle- & Astrophysics: IX: Detector

Session | Location: Room D

14:30 - 14:45

【381】 Completing the data transmission chain for the HL-LHC ATLAS ITk Pixel detector

Speaker

Thierry Guillaume Harte

14:45 - 15:00

【382】 Silicon strip sensors for the CMS Tracker Phase-2 Upgrade

Speaker

Konstantinos Damanakis

15:00 - 15:15

【383】 Silicon sensor development for the High Granularity Calorimeter of the CMS experiment at CERN

Speaker

Maximilian Babeluk

15:15 - 15:30

【384】 The upgrade of the CMS Electromagnetic Calorimeter for the High-Luminosity LHC

Speaker

Luigi Marchese

15:30 - 15:45

【385】 Micro-lens enhanced silicon photomultiplier arrays for the LHCb SciFi Tracker

Speaker

Carina Tripl

15:45 - 16:00

【386】 The SND@LHC data acquisition system

Speaker

Ettore Zaffaroni

16:00 - 16:15

【387】 Powering the opto-electrical conversion system for the data transmission of the ATLAS Inner Tracker detector at the HL-LHC

Speaker

Jan Andreas Kunzmann

16:15 - 16:30

【388】 CMS Phase-1 pixel detector readiness for the next LHC Run

Speaker

Lars Noehte

4:30 PM

2:30 PM

Nuclear, Particle- & Astrophysics: VII: Low Energy I

Session | Location: Room B

14:30 - 14:45

[362] Ultracold neutron production and extraction from the solid deuterium moderator of the PSI UCN source**Speaker**

Ingo Rienäcker

14:45 - 15:00

[363] Muonic atom spectroscopy with radioactive targets**Speaker**

Stergiani Marina Vogiatzi

15:00 - 15:15

[364] High Intensity Muon Beam project (HIMB): how to improve the most intense muon beam in the world**Speaker**

Giovanni Dal Maso

15:15 - 15:30

[365] A final cooling scheme for muon colliders: a door opener for future discovery machines**Speaker**

Bernd Michael Stechauner

15:30 - 15:45

[366] Development of a high-brightness ultra-cold muon beam for future precision experiments with muons and muonium**Speaker**

Ryoto Iwai

15:45 - 16:00

[367] Muonium Spectroscopy**Speaker**

Irene Cortinovis

16:00 - 16:15

[368] Investigation of muonium emitters at room temperature**Speaker**

Jonas Nuber

4:30 PM

5:00 PM

Nuclear, Particle- & Astrophysics: VIII: Dark Sector and Low Energy II

Session | Location: Room B

17:00 - 17:15

[371] Exploring coherent neutrino-nucleus scattering with NUCLEUS experiment**Speaker**

Dr Vasile Mihai Ghete

17:15 - 17:30

[372] Latest results of NA64 searching for Dark Sectors at the CERN SPS**Speaker**

Benjamin Banto Oberhauser

17:30 - 17:45

【373】 Searches for Dark Sectors Weakly Coupled to Muons at the NA64 μ experiment at CERN**Speaker**

Henri Hugo Sieber

17:45 - 18:00

【374】 Sp(4) SIMP Dark Matter on the Lattice**Speaker**

Fabian Zierler

18:00 - 18:15

【375】 ArDM - The only Dual-Phase Tonne-scale Liquid Argon Dark Matter Detector**Speaker**

Alexander Martin Stauffer

18:15 - 18:30

【376】 Measurement of the Lamb shift of Antihydrogen atoms in GBAR**Speaker**

Philipp Peter Blumer

18:30 - 18:45

【377】 Black Holes, Entropy and Holography**Speaker**

Raphaela Wutte

18:45 - 19:00

【378】 Novel Developments in R-Matrix Theory**Speaker**

Prof. Helmut Leeb

7:00 PM

5:00 PM

Nuclear, Particle- & Astrophysics: X: High Energy Physics III

Session | Location: Room D

17:00 - 17:15

【391】 Measurement of the Higgs boson production in the associated vector boson production mode where the vector boson decays leptonically and the Higgs boson decays to a pair of bottom quarks**Speaker**

Krunal Bipin Gedia

17:15 - 17:30

【392】 Measurement of the inclusive and differential $t\bar{t}\gamma$ cross sections and EFT interpretation in the single-lepton channel at CMS**Speaker**

Lukas Lechner

17:30 - 17:45

【393】 EFT measurements using top quarks with CMS**Speaker**

Dennis Schwarz

17:45 - 18:00

【394】 SMEFT results in Higgs sector from CMS experiment**Speaker**

Suman Chatterjee

18:00 - 18:15

【395】 Top mass calibration for Monte-Carlo event generators

Speaker

Oliver Jin

18:15 - 18:30

【396】 zfit: scalable pythonic fitting

Speaker

Jonas Eschle

18:30 - 18:45

【397】 Towards Colour Flow Evolution at Two loops

Speaker

Ines Ruffa

18:45 - 19:00

【398】 Generalization abilities of translationally equivariant neural networks

Speaker

Daniel Schuh

7:00 PM