Muonic Atoms at PSI2022

Report of Contributions

https://indico.psi.ch/e/13154

Contribution ID: **1** Type: **not specified**

Short Welcome

Friday 14 October 2022 09:30 (10 minutes)

Primary authors: ANTOGNINI, Aldo (ETH); HAGELSTEIN, Franziska (PSI - Paul Scherrer Institut)

Presenters: ANTOGNINI, Aldo (ETH); HAGELSTEIN, Franziska (PSI - Paul Scherrer Institut)

Session Classification: Welcome Session

Contribution ID: **2** Type: **not specified**

Introduction

Friday 14 October 2022 09:40 (30 minutes)

Presenter: PASCALUTSA, Vladimir

Session Classification: Welcome Session

Contribution ID: **3** Type: **not specified**

Contributions to the 1s hyperfine structure of light muonic atoms

Friday 14 October 2022 10:30 (30 minutes)

Primary author: INDELICATO, Paul (Laboratoire Kastler Brossel, CNRS)

Presenter: INDELICATO, Paul (Laboratoire Kastler Brossel, CNRS)

Session Classification: Ground-State Hyperfine Splitting in Muonic Atoms

Contribution ID: **4** Type: **not specified**

CREMA experiment

Friday 14 October 2022 11:00 (30 minutes)

Primary author: ANTOGNINI, Aldo (ETH)

Presenter: ANTOGNINI, Aldo (ETH)

Session Classification: Ground-State Hyperfine Splitting in Muonic Atoms

Contribution ID: **5** Type: **not specified**

The FAMU experiment: measurement of the ground-state hyperfine splitting in muonic hydrogen

Friday 14 October 2022 11:30 (30 minutes)

Primary author: VACCHI, Andrea (INFN Trieste Italy)

Presenter: VACCHI, Andrea (INFN Trieste Italy)

Session Classification: Ground-State Hyperfine Splitting in Muonic Atoms

Contribution ID: **6** Type: **not specified**

Muonic helium atom hyperfine splitting measurement at J-PARC

Friday 14 October 2022 12:00 (30 minutes)

Primary author: STRASSER, Patrick (KEK)

Presenter: STRASSER, Patrick (KEK)

Session Classification: Ground-State Hyperfine Splitting in Muonic Atoms

Contribution ID: **7** Type: **not specified**

Nuclear recoil corrections for the extended nucleus (remote talk)

Friday 14 October 2022 14:30 (30 minutes)

Primary author: PACHUCKI, Krzysztof (Institute of Theoretical Physics, University of Warsaw)

Presenter: PACHUCKI, Krzysztof (Institute of Theoretical Physics, University of Warsaw)

Session Classification: Atomic Theory + BSM

Contribution ID: **8** Type: **not specified**

TBA

Primary author: TBA

Presenter: TBA

Session Classification: Atomic Theory + BSM

Contribution ID: **9** Type: **not specified**

Hyperfine structure in muonic systems and conceivable signs of New Physics (remote talk)

Friday 14 October 2022 15:30 (30 minutes)

Primary author: JENTSCHURA, Ulrich

Presenter: JENTSCHURA, Ulrich

Session Classification: Atomic Theory + BSM

Contribution ID: **10** Type: **not specified**

Muonic vs. electronic dark forces

Friday 14 October 2022 15:00 (30 minutes)

Primary author: PESET, Clara

Presenter: PESET, Clara

Session Classification: Atomic Theory + BSM

Contribution ID: **11** Type: **not specified**

HBChPT

Friday 14 October 2022 16:30 (30 minutes)

Primary author: PINEDA, Antonio

Presenter: PINEDA, Antonio

Session Classification: Two-Photon Exchange

Contribution ID: **12** Type: **not specified**

BChPT / pionless EFT

Friday 14 October 2022 17:00 (30 minutes)

Primary author: LENSKY, Vadim (jGU Mainz)

Presenter: LENSKY, Vadim (jGU Mainz)

Session Classification: Two-Photon Exchange

Contribution ID: **13** Type: **not specified**

Dispersive approach

Friday 14 October 2022 17:30 (30 minutes)

Primary author: GORSHTEYN, Misha

Presenter: GORSHTEYN, Misha

Session Classification: Two-Photon Exchange

Contribution ID: **14** Type: **not specified**

Nuclear structure corrections in light muonic atoms

Friday 14 October 2022 18:00 (30 minutes)

Presenter: LI MULI, Simone

Session Classification: Two-Photon Exchange

Contribution ID: **15** Type: **not specified**

Electron scattering: status and prospects

Saturday 15 October 2022 09:00 (30 minutes)

Primary author: VANDERHAEGHEN, Marc

Presenters: VANDERHAEGHEN, Marc; VANDERHAEGHEN, Marc (University Mainz)

Session Classification: Electron Scattering

Contribution ID: **16** Type: **not specified**

Dispersive analysis of proton form factors & recoil correction to hyperfine splitting (remote talk)

Saturday 15 October 2022 09:30 (30 minutes)

Primary author: LIN, Yong-Hui

Presenter: LIN, Yong-Hui

Session Classification: Electron Scattering

Contribution ID: **17** Type: **not specified**

The Proton Spin Structure Function g2p Contribution to Hyperfine Splitting

Saturday 15 October 2022 10:00 (30 minutes)

Primary author: SLIFER, Karl

Presenter: SLIFER, Karl

Session Classification: Electron Scattering

Contribution ID: **18** Type: **not specified**

Polarisabilities from real Compton scattering

Saturday 15 October 2022 10:30 (30 minutes)

Primary author: MCGOVERN, Judith

Presenter: MCGOVERN, Judith

Session Classification: Polarizabilities

Contribution ID: **19** Type: **not specified**

Measurements of the nucleon generalized spin polarizabilities (remote talk)

Saturday 15 October 2022 15:30 (30 minutes)

Primary author: DEUR, Alexandre

Presenter: DEUR, Alexandre

Session Classification: Polarizabilities

Contribution ID: **20** Type: **not specified**

Recent results on Compon scattering at MAMI and on the extraction of the proton polarizabilities

Saturday 15 October 2022 11:30 (30 minutes)

Primary author: MORNACCHI, Edoardo

Presenter: MORNACCHI, Edoardo

Session Classification: Polarizabilities

Contribution ID: **21** Type: **not specified**

Compton Scattering and the Proton Polarizabilities (Higs)

Saturday 15 October 2022 12:00 (30 minutes)

Primary authors: DOWNIE, Evangeline (George Washington University); DOWNIE, Evangeline (George Washington University)

Presenters: DOWNIE, Evangeline (George Washington University); DOWNIE, Evangeline (George Washington University)

Session Classification: Polarizabilities

Contribution ID: **22** Type: **not specified**

The muX experiment: muonic atom spectroscopy with microgram target material

Saturday 15 October 2022 12:30 (30 minutes)

Primary author: KNECHT, Andreas (Paul Scherrer Institut)

Presenter: KNECHT, Andreas (Paul Scherrer Institut)

Session Classification: Physics Beyond Light Muonic Atoms

Contribution ID: **23** Type: **not specified**

Theory of heavy muonic atoms and access to the nuclear properties

Saturday 15 October 2022 13:00 (30 minutes)

Primary authors: ORESHKINA, Natalia (Max Planck Institute for Nuclear Physics); ORESHKINA, Natalia S. (MPIK Heidelberg)

Presenters: ORESHKINA, Natalia (Max Planck Institute for Nuclear Physics); ORESHKINA, Natalia S. (MPIK Heidelberg)

Session Classification: Physics Beyond Light Muonic Atoms

Contribution ID: **24** Type: **not specified**

Hydrogen molecular ion spectroscopy

Saturday 15 October 2022 16:30 (30 minutes)

Primary author: KARR, Jean-Philippe

Presenter: KARR, Jean-Philippe

Session Classification: Physics Beyond Light Muonic Atoms

Contribution ID: **25** Type: **not specified**

Theoretical modeling of charge radii of heavy nuclei (remote talk)

Saturday 15 October 2022 17:00 (30 minutes)

Presenter: NAZAREWICZ, Witold

Session Classification: Physics Beyond Light Muonic Atoms

Contribution ID: **26** Type: **not specified**

Spectroscopy of light muonic atoms with MMC calorimeters

Saturday 15 October 2022 16:00 (30 minutes)

Primary author: OHAYON, Ben (ETH Zurich)

Presenter: OHAYON, Ben (ETH Zurich)

Session Classification: Physics Beyond Light Muonic Atoms

Contribution ID: **27** Type: **not specified**

Muonic Atom Theory Initiative

Saturday 15 October 2022 17:30 (20 minutes)

Session Classification: Closing Discussion