The 12th International Workshop on Fundamental Physics Using Atoms (FPUA2020)

January 9 (Thu.) Okochi Hall, RIKEN Wako campus

Session 1: 10:30 - 12:05 Chair: Yasuhiro Sakemi (CNS, University of Tokyo)

Yuichi Ichikawa (RIKEN)
Opening address 5

John Doyle (Harvard University / Okayama University) 35 + 5
“PeV Physics with peV Polyatomic Molecules - Recent Progress Report”

Takashi Higuchi (RCNP, Osaka University) 20 + 5
“Production of ultra-cold neutrons at TRIUMF and prospects for a neutron EDM measurement”

Yuki Miyamoto (Okayama University) 20 + 5
“Coherence amplification and fundamental physics in rare earth doped crystals”

Lunch time 12:05 - 13:30

Session 2: 13:30 – 14:35 Chair: Hiroki Nagahama (CNS, University of Tokyo)

Stefan Ulmer (RIKEN / CERN) 35 + 5
“BASE: High-Precision Comparisons of the Fundamental Properties of Antiprotons and Protons”

Motoki Sato (University of Tokyo) 20 + 5
“Magnet Stabilization at BASE”

Break 20’

Session 3: 15:05 – 16:10 Chair: Utako Tanaka (Osaka University)

Jun Kobayashi (Kyoto University / JST PRESTO) 35 + 5
“Test for the stability of electron-to-proton mass ratio using ultracold molecules”

Haruki Torii (Tokyo Institute of Technology) 20 + 5
“Electronic Excitations of Atoms Encapsulated in the C60 Fullerene for Radiative Emission of Neutrino Pair”

Break 20’

Session 4: Short Talks 16:30 – Chair: Yuichi Ichikawa (RIKEN)

Akira Fujieda (Okayama University) ~10
“Ba-ion spectroscopy experiment for high-intensity γ-ray source using heavy ions”

Hiroyuki Kaino (Okayama University) ~10
“Search for VUV signal from isomer level of Th-229 using synchrotron radiation X-ray”

Naohiro Tomiyama (Tokyo Metropolitan University) ~10
“Reconsideration of the electronic term of the Schiff moment in diamagnetic molecules”

Yusuke Ueno (Kyoto University) ~10
"Isotope-selective loading of Yb^+ in a RF trap by photoionization for precise measurement of isotope shifts"

Hiroki Saito (Osaka University) ~10

“Design of an on-chip ion trap operating with a single control voltage”

Ce Zhang (Peking University) ~10

“Preparation for phase-0 experiment of muonium ionization with 1S-2S excitation”

Get-together party@1st cafereria 18:00 - 20:00

January 10 (Fri.) Okochi Hall, RIKEN Wako campus

Session 5: 10:30 - 11:20 Chair: Tsutomu Mibe (KEK)
Koji Yoshimura (Okayama University) 20 + 5

“Measurement of ultra-low energy level of Thorium-229 Isomer with high intense X-ray beam”

Sohtaro Kanda (KEK) 20 + 5

“Cascade de-excitation and spin-exchange collisions of muonic hydrogen atom”

Break 20’

Session 6: 11:40 – 12:30 Chair: Takahiko Masuda (Okayama University)
Takahiro Hiraki (Okayama University) 20 + 5

“Precise laser spectroscopy of muonium”

Shun Seo (University of Tokyo) 20 + 5

“Precise spectroscopy of muonium hyperfine structure using Kr-He mixture gas”

Lunch Time 12:30 - 13:30

Session 7: 13:30 – 14:30 Chair: Akihiro Yoshimi (Okayama University)
Takatoshi Aoki (University of Tokyo) 20 + 5

“Electron EDM search and study of parity non-conservation effect using laser cooling of Fr to probe new physics beyond the standard model”

Yutaka Shikano (Keio University) 20 + 5

“Axion Detection by Superconducting Qubit”

Noboru Sasao (Okayama University) 10

Closing remarks

FYI:
RIKEN Seminar 15:00 – 16:30 @ 3F meeting room, Ikenohata Building, RIKEN Wako campus
Akira Furusawa (University of Tokyo)

“Large-scale optical quantum computing with quantum teleportation” (in Japanese)