

The 14th International Workshop on Fundamental Physics Using Atoms (FPUA2022)

November 24th (Thu.) **IMI Conference Room, Kyushu University Ito campus**

Session 1: 13:00 - 13:55 Chair: Yuichi Ichikawa (Kyushu Univ.)

Yuichi Ichikawa (Kyushu Univ.)	5
Opening	
Koji Yoshimura (Okayama Univ.)	20 + 5
“Recent Progress in Nuclear Clock Research”	
Ayaki Sunaga (Kyoto Univ.)	20 + 5
“ダークマター探索を目指した同位体シフトの相対論計算”	

Break 15'

Session 2: 14:10 – 15:15 Chair: Tsutomu Mibe (KEK)

Kota Yanase (CNS, Univ. Tokyo)	20 + 5
“Theoretical uncertainty on the nuclear Schiff moments of ¹²⁹ Xe and ¹⁹⁹ Hg”	
Sota Ando (Kyushu Univ.)	10 + 5
“Development of nuclear spin maser toward the EDM measurement”	
Mirai Fukase (CNS, Univ. Tokyo)	20 + 5
“Search for permanent EDM using Fr atom”	

Break 15'

Session 3: 15:30 – 17:10 Chair: Koji Yoshimura (Okayama Univ.)

Kichiji Hatanaka (RCNP, Osaka Univ.)	20 + 5
“Precision nEDM measurement at TRIUMF”	
Go Ichikawa (KEK)	20 + 5
“Search for short-range fifth force using whispering gallery state of neutrons”	
Shunsuke Endo (JAEA)	20 + 5 (online)
“時間反転対称性の破れ探索に向けた中性子入射反応におけるスピン-角相関項の測定”	
Ritsuya Hosokawa (Kyushu Univ.)	20 + 5 (online)
“Status of neutron lifetime measurement with cold neutron beam at J-PARC”	

November 25th (Fri.)

IMI Conference Room, Kyushu University Ito campus

Session 4: 9:50 - 11:05 Chair: Masato Senami (Kyoto Univ.)

Takashi Yamanaka (Kyushu Univ.) 20 + 5

“J-PARC muon g-2/EDM experiment”

Ryoto Iwai (KEK) 20 + 5

“MuSEUM: Precise measurement of the hyperfine splitting in muonium at J-PARC”

Hiroto Kokubo (Ibaraki Univ.) 20 + 5 (online)

“ミュオンペニングトラップのための電極設計とビーム輸送の検討”

Break 15'

Session 5: 11:20 – 12:25 Chair: Akihiro Yoshimi (Okayama Univ.)

Patrick Strasser (KEK) 20 + 5

“New Muonic Helium HFS Measurements at J-PARC”

Kazuhito Suzuki (KMI, Nagoya Univ.) 20 + 5 (online)

“Precision laser-spectroscopy of the muonium 1S-2S transition at J-PARC”

Wataru Saga (Okayama Univ.) 10 + 5

“Two-layer target simulation for muonium 1S-2S spectroscopy”

Lunch Time 12:25 - 13:30

Session 6: 13:30 – 14:55 Chair: Yasuhiro Sakemi (CNS, Univ. Tokyo)

Amar Vutha (Univ. of Toronto) 30 + 5

“EDM searches using solid-phase systems”

Takatoshi Aoki (Univ. Tokyo) 20 + 5 (online)

“Quantum sensing of the electron electric dipole moment using ultracold entangled Fr atoms”

Ayami Hiramoto (Okayama Univ.) 20 + 5 (online)

“ACME III electron EDM search”

Break 15'

Session 7: 15:00 – 15:50 Chair: Ayaki Sunaga (Kyoto Univ.)

Naoya Kuroda (Kyoto Univ.) 20 + 5

“Enhancement of the parity-violating energy difference of chiral molecules by breaking the cancellation among orbitals due to electron excitation”

Yuki Miyamoto (Okayama Univ.) 20 + 5

“Toward fundamental physics using cold molecules”

Closing