

Program

February 19(Tuesday)

18:00-20:00 Reception [Kinkei(金鷄) on 2F]

Februaru 20(Wednesday)

Session I – Chair: Y. Yamazaki [Hagoromo(羽衣) on 2F]

- 8:30- 8:40 Welcome
Y. Yamazaki
- 8:40- 9:10 Antimatter Factory 1
Y. Yamaguchi
- 9:10- 9:40 Testing the validity of the equivalence principle with antimatter:
the AEGIS experiment 2
G. Testera
- 9:40-10:10 Production of cold antihydrogen for precision studies 3
A. Kellerbauer
- 10:10-10:50 Baryogenesis and its implications to fundamental physics 4
M. Yoshimura

10:50-11:10 Coffee Break

Session II – Chair: D. Horváth [Hagoromo(羽衣) on 2F]

- 11:10-11:40 Accelerating universe, WEP violation and antihydrogen atoms 5
Y. Fujii
- 11:40-12;10 A new path to measure antimatter free fall 6
P. Pérez
- 12:10-12:40 SPAN-Spectroscopy by Atomic Neutrinos 7
N. Sasao

12:40-14:00 Lunch

Session III – Chair: J. Hangst [Hagoromo(羽衣) on 2F]

- 14:00-14:30 Precision measurements of the positronium decay rate and Energy level 8
S. Asai
- 14:30-14:50 Tests of CP and CPT symmetry with positronium 9
T. Namba
- 14:50-15:20 Positronium molecules and many-positron systems 10
D. B. Cassidy
- 15:20-15:50 The Quenching of ortho-Positronium 11
T. Hyodo

15:50-16:20 Coffee Break

Session IV – Chair: M. C. Fujiwara [Hagoromo(羽衣) on 2F]

16:20-17:00	Plasma Tools for Antimatter Physics C. M. Surko	12
17:00-17:30	Antiproton Compression and Radial Measurements J. Fajans	13
17:30-17:50	Electrons Confined with an Axially Symmetric Magnetic Mirror Field H. Higaki	14
17:50-18:20	Ionization of Noble Gases by Charged-Particle Impact K. Bartschat	15

February 21(Tuesday)

Session V – Chair: S. Asai [Hagoromo(羽衣) on 2F]

8:00- 8:30	Antiprotonic helium and <i>CPT</i> invariance D. Horváth	16
8:30- 8:50	Determination of the antiproton-to-electron mass ratio by high precision spectroscopy of $\bar{p}\text{He}^+$ atoms N. Ono	17
8:50- 9:10	The Hyperfine Structure of Antiprotonic Helium and the Antiproton Magnetic Moment T. Pask	18
9:10- 9:40	Conclusions from recent pionic-atom experiments D. Gotta	19
9:40-10:10	Search for double-strangeness production in $p\bar{p}$ - p annihilation at CERN/AD J. Zmeskal	20

10:10-10:30 Coffee Break

Session VI – Chair: J. Ullrich [Hagoromo(羽衣) on 2F]

10:30-11:00	Interactions of laser-cooled atoms in a high-magnetic-field atom trap G. Raithel	21
11:00-11:30	Rydberg Atom Formation in Cold (Anti) plasmas T. Pohl	22
11:30-12:00	Giant Dipole States of Single-Electron and Multi-Electron Systems in Crossed Electric and Magnetic Fields P. Schmelcher	23
12:00-12:30	Atomic Physics Research with Highly Charged Ions and Exotic Nuclei at the Future FAIR Facility T. Stöhlker	24
12:30-13:00	Particle Physics Techniques in Cold Antimatter Studies M. C. Fujiwara	25

13:20-18:30 **Excursion** (with lunch box)

Bus will leave “Okinawa Harborview Crowne Plaza” at 13:20.

Hotel – Gyokusendou(玉泉洞) Cave – Syuri Castle(首里城) – Hotel
13:20 18:30

19:30-21:30 **Banquet** [Kinkei(金鷄) on 2F]

20:00-20:20 Challenges of RIKEN Science to the Future and Antimatter
K. Kaya (Director, RIKEN Discovery Research Institute)

21:30-22:10 A Particle Physicist looks at Global Warming 26
J. Eades

February 22(Friday)

Session VII – Chair: J. Walz [Hagoromo(羽衣) on 2F]

8:30- 9:00 First attempts at antihydrogen trapping in ALPHA 27
J. S. Hangst
9:00- 9:30 Trapping Antihydrogen A different mixing approach 28
P. Bowe
9:30-10:00 Antihydrogen Production in Positron Beam Ion Trap 29
T. Itahashi
10:00-10:30 Measurement of the Ground-State Hyperfine Splitting of Antihydrogen 30
B. Juhász

10:30-10:50 Coffee Break

Session VIII – Chair: G. Testera [Hagoromo(羽衣) on 2F]

10:50-11:20 Cryogenic Particle Accumulation for ATRAP Antihydrogen Experiments 31
C. Storry
11:20-11:50 Solid-state continuous Lyman-alpha source for laser-cooling of antihydrogen
and the prospect of antihydrogen gravity measurements 32
J. Walz
11:50-12:20 Antihydrogen production 33
E. Lodi Rizzini
12:20-12:50 Laser ionization of muonium for low-energy muon source 34
Y. Matsuda

12:50-14:10 Lunch

Session IX – Chair: C. M. Surko [Hagoromo(羽衣) on 2F]

14:10-14:40 Ionization of noble gas atoms in slow antiproton collisions 35
H. Knudsen

14:40-15:10	A new time-dependent scattering theory: application to the capture of antiprotons by hydrogen atoms and helium atoms X. M. Tong	36
15:10-15:40	Atomic Collision Experiments with Ultra-Low-Energy Antiprotons H. A. Torii	37
15:40-16:00	Observation of Ultra-Slow Antiprotons with Micro-Channel Plate H. Imao	38
16:00-16:30 Coffee Break		
Session X – Chair: H. Sadeghpour [Hagoromo(羽衣) on 2F]		
16:30-17:00	Sub-Femtosecond Correlated Dynamics Probed with Antiprotons J. Ullrich	39
17:00-17:30	Low-energy scattering of antihydrogen by helium and molecular hydrogen E. A. G. Armour	40
17:30-18:00	Annihilation and rearrangement in atom-antihydrogen collisions S. Jonsell	41
18:00-18:30	Status and opportunities of FLAIR E. Widmann	42
18:30-18:40	Closing remark H. Sadeghpour	

(evening: FLAIR meeting, E. Widmann)