

# **Halo2010 Symposium**

**Monday 06 December 2010 - Thursday 09 December 2010**

**Shonan Village Center  
Programme**

## Table of contents

Monday 06 December 2010	4
Reception	4
Tuesday 07 December 2010	5
Welcome	5
Nucleon Density Distributions of Unstable Nuclei Studied via Reaction Cross Sections	5
Measurements of total reaction cross section, momentum distribution and proton correlation for the $^{23}\text{Al}$ and neighboring nuclei	5
Laser Trapping and Probing of He-6 and He-8	5
Break	5
Exploring neutron-rich nuclear structures through beta-delayed decay of spin-polarized isotopes	5
Isobaric analog states of neutron rich nuclei	5
(p,n) reaction as a tool for extracting Gamow-Teller strengths in unstable nuclei	5
Lunch	5
Reaction Theory for Rare Isotopes	5
Studies of very neutron-rich nuclei at GANIL/SPIRAL	5
Two-particle correlations in continuum dipole transitions in Borromean nuclei	5
Break	5
Collisions around the Coulomb barrier induced by halo nuclei: some recent experimental results	5
Dynamical role of halo nucleons in nuclear reactions	6
Interaction cross sections and the Glauber model	6
Neutron halo in deformed nuclei from a relativistic Hartree-Bogoliubov model	6
Poster Session	6
Wednesday 08 December 2010	7
Structure of unstable nuclei revealed through nuclear moments	7
Direct mass measurements of He, Li, and Be-halo nuclei	7
Halos in Covariant Density Functional Theory	7
Break	7
Theoretical studies of reactions with drip-line nuclei	7
Neutron halo; what we have learned and what we want to learn	7
Group Photo/Lunch	7
Very exotic light nuclear system - from R3B/LAND towards R3B/FAIR	7
Observation of neutron halos in the excited states of nuclei	7
Invariant-mass spectroscopy of unbound states via the breakup reactions of the neutron dripline nucleus $^{14}\text{Be}$	7
Break	7
Beta Decays and Isobaric Analog States of Exotic Light Nuclei	7
A Unified Description of Bound and Unbound States	7

Roles of tensor and pairing correlations in neutron drip-line nuclei	7
Banquet	7
Thursday 09 December 2010	8
Vector analyzing power measurement for proton elastic scattering from neutron-rich helium isotopes	8
Electro-production of neutron rich hypernuclei	8
Halo nuclei and shell evolution by nuclear forces	8
Break	8
Pairing correlations in low-density neutron matter and unitary Fermi gas from lattice EFT calculations	8
Coulomb breakup and soft E1 excitation of halo nuclei	8
The dipole response of neutron-halo and neutron-skin nuclei	8
Closing	8

## **Monday 06 December 2010**

**Reception - Auditorium (06 December 18:00-20:00)**

## Tuesday 07 December 2010

### Welcome - Auditorium (09:00-09:10)

- Speakers: Prof. SHIMOURA, S.

### Nucleon Density Distributions of Unstable Nuclei Studied via Reaction Cross Sections - Auditorium (09:10-09:40)

- Speakers: Dr. FUKUDA, M.

### Measurements of total reaction cross section, momentum distribution and proton correlation for the $^{23}\text{Al}$ and neighboring nuclei - Auditorium (09:40-10:10)

- Speakers: Prof. MA, Y.G.

### Laser Trapping and Probing of He-6 and He-8 - Auditorium (10:10-10:40)

- Speakers: Dr. MUELLER, P.

### Break - Auditorium (07 December 10:40-11:10)

### Exploring neutron-rich nuclear structures through beta-delayed decay of spin-polarized isotopes - Auditorium (11:10-11:40)

- Speakers: Prof. SHIMODA, T.

### Isobaric analog states of neutron rich nuclei - Auditorium (11:40-12:10)

- Speakers: Prof. TERANISHI, T.

### (p,n) reaction as a tool for extracting Gamow-Teller strengths in unstable nuclei - Auditorium (12:10-12:40)

- Speakers: Prof. SATOU, Y.

### Lunch - Auditorium (07 December 12:40-14:20)

### Reaction Theory for Rare Isotopes - Auditorium (14:20-14:50)

- Speakers: Prof. BERTULANI, C.A.

### Studies of very neutron-rich nuclei at GANIL/SPIRAL - Auditorium (14:50-15:20)

- Speakers: Dr. BEAUMEL, D.

### Two-particle correlations in continuum dipole transitions in Borromean nuclei - Auditorium (15:20-15:50)

- Speakers: Dr. HAGINO, K.

### Break - Auditorium (07 December 15:50-16:20)

### Collisions around the Coulomb barrier induced by halo nuclei: some recent experimental results - Auditorium (16:20-16:50)

- Speakers: Dr. FIGUERA, P.

**Dynamical role of halo nucleons in nuclear reactions - Auditorium (16:50-17:20)**

- Speakers: Prof. YABANA, K.

**Interaction cross sections and the Glauber model - Auditorium (17:20-17:40)**

- Speakers: Dr. KOHAMA, A.

**Neutron halo in deformed nuclei from a relativistic Hartree-Bogoliubov model - Auditorium (17:40-18:00)**

- Speakers: Prof. ZHOU, S.G.

**Poster Session - Auditorium (07 December 19:00-21:00)**

time	[id] title	presenter
19:00	[40] Enhancement in ${}^6\text{He}+{}^{64}\text{Zn}$ fusion cross-section at energies below the barrier: static or dynamic effects?	Dr. SCUDERI, Valentina
19:10	[41] Measurement of reaction cross section for ${}^7\text{Li}$ using the solid hydrogen target	MORIGUCHI, Tetsuaki
19:20	[44] Neutron Density Distributions of Nickel Isotopes Analyzed in Terms of Relativistic Impulse Approximation	KAKI, Kaori
19:30	[45] The study of the unstable nuclei by means of the heavy ion double charge exchange reaction	Dr. TAKAHISA, Keiji
19:40	[47] ${}^2_2\text{R}_z$ structure and monopole strength in ${}^{12}\text{C}$	Dr. YOSHIDA, tooru
19:50	[48] Inclusive Coulomb and nuclear breakup of ${}^{31}\text{Ne}$ and ${}^{22}\text{C}$	Mr. KOBAYASHI, Nobuyuki
20:00	[49] Study of $N = 14$ shell gap in nuclei around ${}^{20}\text{C}$	Mr. YUAN, Cenxi
20:10	[50] Spectroscopy of ${}^9\text{He}$ via the $({}^{18}\text{O}, {}^{18}\text{Ne})$ reaction by high resolution spectrograph Grand Raiden at RCNP	Dr. MATSUBARA, hiroaki

## Wednesday 08 December 2010

### Structure of unstable nuclei revealed through nuclear moments - Auditorium (09:00-09:30)

- Speakers: Prof. MATSUTA, K.

### Direct mass measurements of He, Li, and Be-halo nuclei - Auditorium (09:30-10:00)

- Speakers: Prof. DILLING, J.

### Halos in Covariant Density Functional Theory - Auditorium (10:00-10:30)

- Speakers: Prof. MENG, J.

### Break - Auditorium (08 December 10:30-11:00)

### Theoretical studies of reactions with drip-line nuclei - Auditorium (11:00-11:30)

- Speakers: Dr. ESBENSEN, H.

### Neutron halo; what we have learned and what we want to learn - Auditorium (11:30-12:30)

- Speakers: Prof. TANIHATA, I.

### Group Photo/Lunch - Auditorium (08 December 12:30-14:30)

### Very exotic light nuclear system - from R3B/LAND towards R3B/FAIR - Auditorium (14:30-15:00)

- Speakers: Dr. SIMON, H.

### Observation of neutron halos in the excited states of nuclei - Auditorium (15:00-15:30)

- Speakers: Prof. OGLOBLIN, A.A.

### Invariant-mass spectroscopy of unbound states via the breakup reactions of the neutron dripline nucleus $^{14}\text{Be}$ - Auditorium (15:30-16:00)

- Speakers: Dr. KONDO, Y.

### Break - Auditorium (08 December 16:00-16:30)

### Beta Decays and Isobaric Analog States of Exotic Light Nuclei - Auditorium (16:30-17:00)

- Speakers: Prof. SUZUKI, T.

### A Unified Description of Bound and Unbound States - Auditorium (17:00-17:30)

- Speakers: Prof. KATO, K.

### Roles of tensor and pairing correlations in neutron drip-line nuclei - Auditorium (17:30-18:00)

- Speakers: Dr. MYO, T.

### Banquet - Auditorium (08 December 18:30-20:30)

## Thursday 09 December 2010

**Vector analyzing power measurement for proton elastic scattering from neutron-rich helium isotopes -**  
**Auditorium (09:00-09:30)**

- Speakers: Dr. SAKAGUCHI, S.

**Electro-production of neutron rich hypernuclei -** Auditorium (09:30-10:00)

- Speakers: Prof. NAKAMURA, S.N.

**Halo nuclei and shell evolution by nuclear forces -** Auditorium (10:00-10:30)

- Speakers: Prof. OTSUKA, T.

**Break -** Auditorium (09 December 10:30-11:00)

**Pairing correlations in low-density neutron matter and unitary Fermi gas from lattice EFT**  
**calculations -** Auditorium (11:00-11:30)

- Speakers: Dr. ABE, T.

**Coulomb breakup and soft E1 excitation of halo nuclei -** Auditorium (11:30-12:00)

- Speakers: Prof. NAKAMURA, T.

**The dipole response of neutron-halo and neutron-skin nuclei -** Auditorium (12:00-12:30)

- Speakers: Prof. AUMANN, T.

**Closing -** Auditorium (12:30-12:40)