

KGU Yokohama Autumn School of Nuclear Physics

KGU Kannai Media Center, Kanto Gakuin University (KGU),
Yokohama, Japan, October 9 - October 10, 2008

October 9

The timetable for each talk includes 5 minutes for discussion.

9:55–10:00 Opening **T. Yamada** (Kanto Gakuin Univ.)

(Welcome letter from the president of Kanto Gakuin University, Prof. K. Matsui)

α -condensation (I) –chair: A. Tohsaki

10:00–10:30 **Y. Funaki** (RIKEN)
Alpha clustering and condensation in ^{16}O

10:30–11:00 **M. Itoh** (CYRIC)
Experimental studies for α -condensed states

11:00–11:25 **N. Itagaki** (Univ. of Tokyo)
Application of THSR wave function using Monte Carlo Technique

Coffee Break

α -condensation (II) –chair: S. Ohkubo

11:45–12:15 **P. Schuck** (IPN, Orsay)
Alpha-particle condensation in finite and infinite systems

Lunch

α - and nucleon- correlation (I) –chair: H. Horiuchi

13:45–14:15 **S. Ohkubo** (Kochi Women's Univ.)
Rainbow scattering and cluster structure in nuclei

14:15–14:40 **Y. Kikuchi** (Hokkaido Univ.)
 $^3\alpha$ breakup reaction of ^{12}C

14:40–15:05 **T. Yamada** (Kanto Gakuin Univ.)
Monopole Excitation to Cluster States

Coffee Break

α - and nucleon- correlation (II) –chair: P. Schuck

- 15:25–15:50 **M. Takashina** (RCNP)
Folding model analysis and cluster structure of the $^{12}\text{C}(0_2^+)$ state
- 15:50–16:15 **C. Barbieri** (RINEN)
Asymmetry dependence of spectroscopic factors
- 16:15–16:40 **Y. Taniguchi** (RCNP)
Cluster structures in ^{28}Si

Coffee Break

Astrophysics and strangeness physics–chair: H. Tamura

- 17:00–17:25 **M. Kamimura** (RIKEN)
Stau-catalyzed big-bang nucleosynthesis and nuclear cluster model
- 17:25–17:50 **P. Avogadro** (RIKEN)
Vortices in the inner crust of neutron stars
- 17:50–18:20 **T. Motoba** (Osaka Electro-Communication Univ.)
Typical hypernuclear structures and the production reactions
- 19:00– **Banquet** (Shigoroku Saikan in Chinatown)

October 10

Strangeness physics–chair: M. Kamimura

- 9:15– 9:45 **H. Tamura** (Tohoku Univ.)
Present Status and Future Prospects of Hypernuclear Physics
- 9:45–10:10 **H. Nemura** (RIKEN)
Hyperon-nucleon forces calculated from lattice QCD
- 10:10–10:35 **Y. Akaishi** (RIKEN)
Structure of K^-pp and super strong nuclear force
- 10:35–11:00 **T. Koike** (RIKEN)
Formation of deeply-bound K^-pp state in $^3\text{He}(\text{In-flight } K^-, n)$ reaction spectrum

Coffee Break

Ab-initio approach to nuclear structure—chair: K. Ikeda

- 11:20—11:50 **W. Horiuchi** (Niigata Univ.)
Inversion doublets of $3N+N$ cluster structure in excited states of ${}^4\text{He}$
- 11:50—12:15 **K. Katō** (Hokkaido Univ.)
Light Nuclear Structure in Brueckner-AMD
- 12:15—12:40 **T. Myo** (Osaka Institute of Technology)
Tensor correlation in He and Li isotopes based on the tensor optimized shell model with unitary correlation operator

Lunch

Nuclear reaction and molecular structure in nuclei (I) —chair: K. Katō

- 14:00—14:25 **T. Nakatsukasa** (RIKEN)
TDDFT approach to photoabsorption in even-even nuclei
- 14:25—14:50 **H. Ong** (RCNP)
Anomalously hindered E2 strengths in ${}^{16,18}\text{C}$
- 14:50—15:15 **M. Ito** (RIKEN)
Covalent Isomeric State in ${}^{12}\text{Be}$ induced by Two-Neutron Transfers

Coffee Break

Nuclear reaction and molecular structure in nuclei (II) —chair: Y. Akaishi

- 15:30—15:55 **M. Kimura** (Hokkaido Univ.)
Variety of Molecular Structure in Neutron-Rich Nuclei
- 15:55—16:20 **T. Suhara** (Kyoto Univ.)
Structure of excited states in ${}^{14}\text{C}$
- 16:20—16:45 **T. Matsumoto** (RIKEN)
Coupled-channels analyses of ${}^6\text{He}$ breakup reactions
- 16:45—17:00 **K. Ikeda** (RIKEN)
Remarks on the development on the cluster dynamics in nuclear many body systems (tentative)

Concluding talk—chair: T. Yamada

- 17:00—17:05 **H. Horiuchi** (RCNP)