

# RIBF ULIC Symposium/mini-WS Report

\* English only

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Title	[RIBF ULIC mini-WS "Systematic study of nuclear radii -Theory and Experiment-"
Date	Dec. 28, 2012
Place	Meeting Room 203, RIBF Building 2F, RIKEN Nishina Center
Language	<input checked="" type="checkbox"/> English <input type="checkbox"/> Japanese
HP address	<a href="http://indico.riken.jp/indico/conferenceDisplay.py?confId=983">http://indico.riken.jp/indico/conferenceDisplay.py?confId=983</a>
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	[Breakdown] Travel expense and Accommodation fee		
	Hiroyuki Sagawa: 19,520	Toshimi Suda: 20,820	
	Kaori Kaki: 13,800	Akira Iwamoto: 9,880	
	Hideki Iimura: 11,480		
Co-hosting / any financial support from other organization(s)	-		

Summary of discussions and its (expected) results:

We discussed the current status of nuclear radius study experimentally and theoretically. Details as follows.

Experiments (presenters):

Interaction cross section and Reaction cross section (Yamaguchi, Nishimura)

Proton elastic scatterings (Zenihiro, Matsuda, Otsu)

Electron scatterings (Suda)

Lazar spectroscopy (Iimura)

Theories (presenters):

FRDM systematics (Moller)

Black sphere model (Kohama)

Relativistic Impulse Approximation (Kaki)

HFB, Three-body model (Sagawa)

The current and future experimental facilities were presented. Many new results and proposals were shown by experimentalists. We aim eventually to merge precise information of proton and neutron radii and shape including unstable nuclei with some basic nuclear matter information and comprehensive mass formulas. Namely, we would like to find out some new information of Skin, Halo, Deformation, Spin-orbit interactions and Pairing correlations in the radius study. In this sense, the radius study has been expanded now to exotic nuclei: light -> medium heavy -> heavy nuclei. The new problems have been extensively and vividly discussed during the workshop. The importance of getting

quantitative information on EoS , the symmetry energy coefficients S and L , and also the incompressibility  $K_{\infty}$  was pointed out.

We will continue our study in line with the discussion and may have the next workshop in 2013.

Participants list(Name, Affiliation):

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Tadaaki Tamae	Tohoku Univ.
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Please attach other documents as needed.