# RIBF ULIC Symposium/mini-WS Report

*** English only**

Date: 2012/1/4

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| Title | [RIBF-ULIC-miniWS-011] Polarization phenomenon in proton elastic scattering from unstable nuclei |
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| HP address | http://indico.riken.jp/indico/conferenceDisplay.py?confId=632 |
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| Financial support from ULIC | Total : 85,620 JPY<br>[Breakdown] Traveling fee<br>Kaori Kaki: 12,840JPY<br>Kosho Minomo: 36,720JPY<br>Satoshi Sakaguchi: 36,060 JPY |
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Summary of discussions and its (expected) results:

Several theoretical approaches to the polarization phenomenon in proton-elastic scattering from neutron-rich helium isotopes were discussed. Prof. Elster presented a t-matrix folding calculation in which the cluster structure of 6He is taken into account. An optical potential based on the Watson first order multiple scattering ansatz is extended to accommodate the internal dynamics of a cluster model for the 6He nucleus. She also introduced a new challenge to treat the scattering from non-closed shell nucleus. Prof. Kaki introduced two calculations: one is based on a relativistic impulse approximation while the other is on the Glauber theory. It was demonstrated that some unknown contributions to the analyzing power should exist at 71 MeV/A. She suggested that higher energy data at backward angular region would be effective in determining the density distribution of 6He. According to the results of the discussions, we exchanged opinions on new experimental data that should be taken in the next step. A consensus was obtained that the data at RIBF energy of 200-300 MeV/A will be more suited than those at 71 MeV/A to discuss the relation between nuclear structure and elastic-scattering observables.

Participants list(Name, Affiliation):

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Please attach other documents as needed.