



独立行政法人理化学研究所 仁科加速器研究センター

第169回 RIBF核物理セミナー

RIKEN Nishina Center for Accelerator Based Science

The 169<sup>th</sup> RIBF Nuclear Physics Seminar

Dynamics approach to synthesis of superheavy elements

Prof. Yoshihiro Aritomo

(Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology)

Using a dynamical model, I would like to discuss the possibility of synthesizing new superheavy elements. As a dynamical model, we employ Langevin equations based on the fluctuation-dissipation theorem.

In order to synthesize the double magic superheavy nucleus, like as  $^{298}\text{Fl}$ , we must generate more neutron-rich compound nuclei (for example  $^{304}\text{Fl}$ ) because of the neutron emissions from excited compound nuclei. Such neutron rich compound nucleus has advantages to achieving a high survival probability, comparison with  $^{292}\text{Fl}$  and  $^{298}\text{Fl}$ . In the seminar, I would like to explain this mechanism of decay process, and also discuss the way to produce such neutron rich compound nuclei.

Oct. 29(Tues.), 2013 13:30~  
RIBF Hall, RIBF bldg. 2F, RIKEN

*Contact: Nuclear Physics Seminar Organizing Committee*

*[npsoc@ribf.riken.jp](mailto:npsoc@ribf.riken.jp)*

*<http://ribf.riken.jp/~seminar/>*