



独立行政法人理化学研究所 仁科加速器研究センター  
第106回RIBF核物理セミナー

RIKEN Nishina Center for Accelerator Based Science  
The 106th RIBF Nuclear Physics Seminar

Relativistic Impulse Approximation Analysis of Unstable Calcium & Nickel Isotopes:  $^{60-74}\text{Ca}$  &  $^{48-82}\text{Ni}$

Dr. Kaori Kaki ( Department of Physics, Shizuoka University)

Recent relativistic mean-field calculations have provided nuclear distributions of Ca and Ni isotopes whose neutron numbers are much larger than their atomic numbers. We calculate observables of proton elastic scattering from these unstable isotopes and discuss relations between observables and nuclear distributions of such unstable nuclei.

The calculations are based on relativistic impulse approximation (RIA) at incident proton energies from 100 through 500 MeV where predictions of RIA have been shown to provide good agreement with experimental data. To validate the use of optimal factorization and first-order calculations at these energies, contributions from the Fermi motion of the target nuclei and multiple scattering are estimated and compared with results calculated without these effects.

Oct. 12 (Tue), 2010 13:30-  
RIBF Hall, RIKEN

*The seminar will be given in English.*

Contact: RIBF Nuclear Physics Seminar Organizer  
[seminar@ribf.riken.jp](mailto:seminar@ribf.riken.jp)  
<http://ribf.riken.jp/~seminar>