



独立行政法人理化学研究所 仁科加速器研究センター

第168回 RIBF核物理セミナー

RIKEN Nishina Center for Accelerator Based Science

The 168th RIBF Nuclear Physics Seminar

Exclusive Measurements of Proton-Induced Quasi-Free Scattering Reactions
in Inverse and Complete Kinematics

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A novel experimental method for investigating quasi-free single-nucleon knockout reactions in inverse and complete kinematics is foreseen as an ideal way to study single-particle structure of exotic and stable nuclei. First results from the observation of $(p,2p)$ and (p,pn) reactions with a benchmark ^{12}C beam @ 400 MeV/u impinging on a proton target will be presented. The reaction manifests itself in a strongly correlated outgoing nucleon pair, while the $(A-1)$ residual system carries redundant spectroscopic information about the single-particle state involved into the reaction. The latest results from the in-flight gamma-ray spectroscopy and the invariant-mass reconstruction of the final states will be presented together with the observed two-nucleon angular correlations and the recoil-momentum measurements.

Aug. 12 (Mon.), 2013 10:00~
RIBF Hall, RIBF bldg. 2F, RIKEN

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