Studies of Exotic Nuclei using Coulomb Excitation at HRIBF

ALFREDO GALINDO-URIBARRI, Oak Ridge National Laboratory, CLARION-BAREBALL COLLABORATION — We describe highlights of single-step Coulomb-excitation experiments done at the Holifield Radioactive Ion Beam Facility (HRIBF) using pioneer techniques, methods and instrumentation developed specifically for this purpose during the last decade and a half. These experiments were aimed to the study of neutron-rich nuclei primarily at or near the magic numbers. HRIBF was the premier ISOL facility for the production of high quality and purity radioactive ion beams for 15 years until April 2012. We discuss topics such as the study of measurements of B(E2), Q values, and g factors of low-lying states along important isotopic and isotonic chains using new particle-gamma instrumentation and techniques. We give a brief description of future plans.

1This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics.