DEVELOPMENT OF THE HOLIFIELD RADIOACTIVE ION BEAM FACILITY[1]

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The Holifield Radioactive Ion Beam Facility (HRIBF) construction project has been completed and the first radioactive ion beam has been successfully accelerated. The project, which began in 1992, has involved numerous facility modifications. The Oak Ridge Isochronous Cyclotron has been converted from an energy booster for heavy ion beams to a light ion accelerator with internal ion source. A target-ion source and mass analysis system have been commissioned as key components of the facility's radioactive ion beam injector to the 25MV tandem electrostatic accelerator. Beam transport lines have been completed, and new diagnostics for very low intensity beams have been developed. Work continues on a unified control system. Development of research quality radioactive beams for the nuclear structure and nuclear astrophysics communities continues.

The HRIBF was formally dedicated on December 12, 1996, and approved for high intensity operation as a National User Facility, the first of its kind in North America. This paper details facility development to date.

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