

HRIBF Highlight FY 2006: IRIS2 Project Commences

The Injector for Radioactive Ion Species 2 (IRIS2) upgrade to the Holifield Radioactive Ion Beam Facility (HRIBF) began in April 2006. This \$4.735M addition will lead to new radioactive ion beam (RIB) species for the experimental program, higher RIB intensities, higher quality RIB beams, and increased operating hours. It will help to advance the state of the art of Isotope Separator On-Line (ISOL) RIB production effectively and efficiently without negative impact on the research program at HRIBF. In addition to important benefits as a stand-alone project, IRIS2 forms step two of a comprehensive HRIBF upgrade plan that will significantly improve facility reliability and productivity.

The IRIS2 Project involves the fabrication of a second RIB production (injector) system that is similar in many ways to the existing RIB production system (IRIS1), yet provides considerable space for expansion to accommodate new beam production, preparation, and purification techniques that are difficult or impossible to implement with IRIS1. As with IRIS1, beams produced with the IRIS2 system can be post-accelerated by the HRIBF 25 MV tandem electrostatic accelerator and delivered to any of several experimental end stations. Existing shielded space will accommodate all aspects of the project, so no civil construction is required. The primary components of the project are a 250kV dc high voltage platform system, an injector beam transport line and first-stage mass separator located on the platform system, and a beam transport line from the platform system to an existing beam transport line that contains an isobar separator. The IRIS2 Project is scheduled for completion by March 2009.

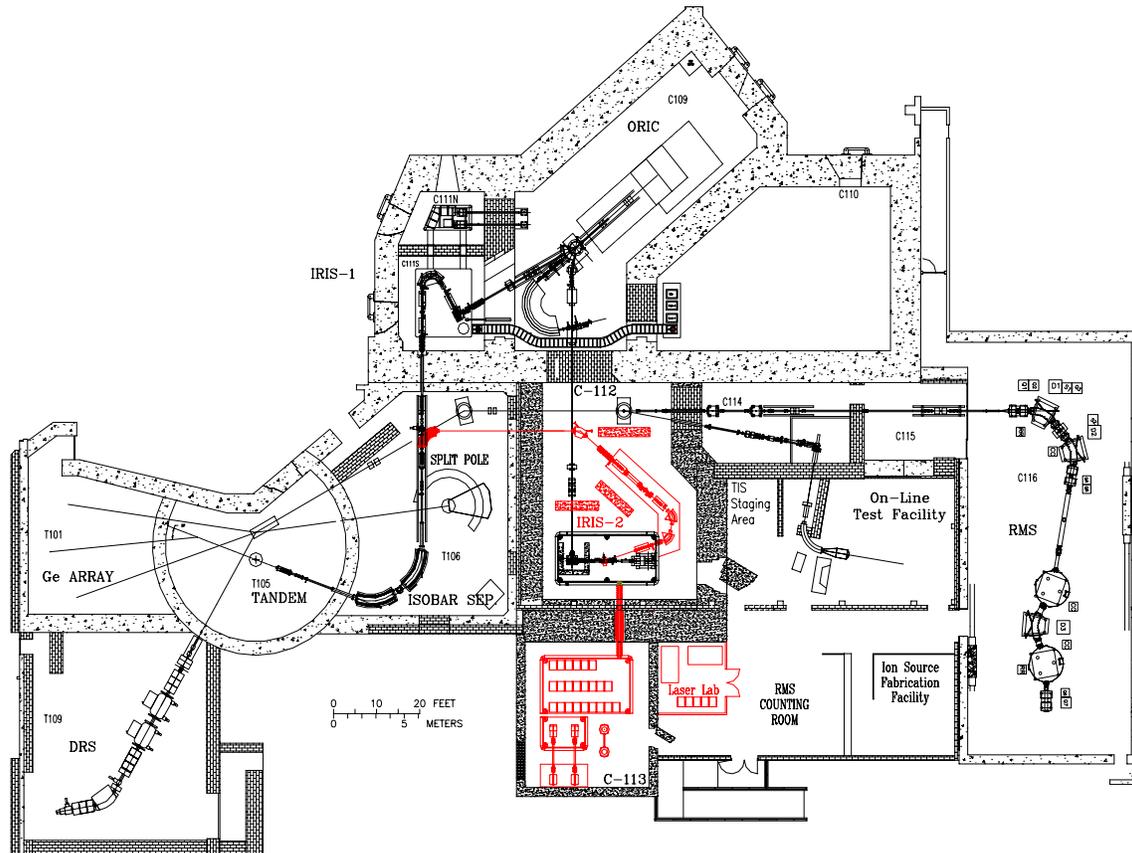


Figure 1: Plan View of the IRIS2 Configuration