

## **The Facility for Rare Isotope Beams**

M. Thoennessen

*Department of Physics & Astronomy and National Superconducting Cyclotron Laboratory  
Michigan State University, East Lansing, MI 48824, USA*

Contact email: *thoennessen@nscl.msu.edu*

The next generation radioactive beam facility in the U.S. is the Facility for Rare Isotope Beams (FRIB) which is currently being established at Michigan State University. FRIB is based on a 200 MeV/u 400kW superconducting linear accelerator. Initial capabilities include fragmentation of fast heavy-ion beams combined with gas stopping and reacceleration. The science program of FRIB will cover discoveries about the properties of rare isotopes in order to better understand the physics of nuclei, nuclear astrophysics, fundamental interactions, and applications for society. The final design of the conventional facilities — the tunnel and support buildings — is complete and the final design of the technical systems — accelerator and experimental equipment — is underway and anticipated to be complete in 2014. The present status and future scientific discovery potential of FRIB will be discussed.

FRIB is supported by the U.S. Department of Energy Office of Science under Cooperative Agreement DE-SC0000661.