Facility for Rare Isotope Beams
Importance for Michigan, America – June 2017

FRIB is an Important Part of Michigan's Future

The Facility for Rare Isotope Beams (FRIB) represents a game changer for the Michigan economy. It's a $730 million project, much of it in construction. From construction through operation, FRIB is expected to generate accumulated wages totaling $1.7 billion and add $4.4 billion to the state's economy, according to the MSU Center for Economic Analysis. That's construction, spinoff, and annual U.S. Department of Energy operational funding when FRIB begins operations. The study's payroll analysis shows that FRIB will create up to 1,500 Michigan jobs at the height of the construction phase, and about 1,000 permanent jobs during operations. The State of Michigan's $94.5 million investment in FRIB is expected to generate $205 million in tax revenues and $831 million in additional gross state product through 2040. Additionally, there will be economic benefits from some 800 scientists from around the world coming to Michigan annually.

MSU's graduate program in nuclear science is ranked No. 1 by *U.S. News & World Report*. Each year, about 10 percent of the nation's nuclear science PhD awardees are educated at MSU.

FRIB will provide economic benefits as a research destination and will improve quality of life for Michigan residents through discoveries with medical and industrial applications.

There is every reason to believe that FRIB will attract important private-sector economic development. That has happened around other national labs. MSU is working closely with local economic developers to ensure they are aware of FRIB and its potential.

It's also a cultural game changer. It shows that Michigan is serious about being part of the knowledge economy, and can build the new machines needed to push the frontiers of science.

FRIB is an Important Research Tool for America

Michigan State University is establishing FRIB as a scientific user facility for the Office of Nuclear Physics in the U.S. Department of Energy Office of Science (DOE-SC). FRIB is funded by the DOE-SC, MSU and the State of Michigan. Located on campus and operated by MSU, FRIB will provide intense beams of rare isotopes (that is, short-lived nuclei not normally found on Earth). FRIB will enable scientists to make discoveries advancing our knowledge of the physics of atomic nuclei, nuclear astrophysics, fundamental properties of matter, and practical applications of rare isotopes benefiting society in fields such as medicine, materials science, national security, and industry.

FRIB is a core piece of U.S. research infrastructure with broad benefits to other sciences, medicine, materials science, national security, and industry. FRIB will provide researchers with more than 1,000 new rare isotopes never before produced on Earth. This will enable us to answer key scientific questions, ranging from the origins of stars and the universe to how to diagnose and cure diseases, optimize nuclear reactors, and destroy nuclear waste.

FRIB will help develop the next generation nuclear science workforce, critical to U.S. economic competitiveness, energy security, nuclear security, and nonproliferation efforts. If we do not move forward with this, facilities in other nations will attract the best and brightest scientists and researchers. This will hurt our national economic competitiveness.

MICHIGAN STATE UNIVERSITY

U.S. DEPARTMENT OF ENERGY | Office of Science

FRIB