

MSU to become home to \$550 million nuclear physics facility

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Michigan State University will be home to a \$550 million federal nuclear physics facility, beating out a prestigious national laboratory for the one-of-a-kind project that promises to boost the state's economy and the university's prestige.

The U.S. Department of Energy announced today that MSU is its choice for the Facility for Rare Isotope Beams, or FRIB, the biggest nuclear physics upgrade ever at the university and one that will solidify its spot as a world leader in rare isotope research, leaders say.

"The Department of Energy's new Facility for Rare Isotope Beams at Michigan State University promises to vastly expand our understanding of nuclear astrophysics and nuclear structure," said Acting Associate Director of the Office of Science for Nuclear Physics Eugene Henry.

"This capability will allow physicists to study the nuclear reactions that power stars and stellar explosions, explore the structure of the nuclei of atoms and the forces that bind them together, test current theories about the fundamental nature of matter, and play a role in developing new nuclear medicines and techniques."

Gaining the project is welcome news to the state's beleaguered economy. The facility would create \$1 billion in spending in Michigan and 400 new jobs over a decade, as well as \$187 million in taxes over 20 years, according to economist Patrick Anderson.

Michigan lawmakers were overjoyed at the decision, the product of years of lobbying.

"A massive effort to highlight Michigan State University's unique capability paid off for MSU, Michigan, and the nation," said Sen. Carl Levin, D-Detroit. "At a moment in our history when Michigan needs signs of hope, today's decision by the Department of Energy to build the Facility on Rare Isotope Beams at MSU fills the bill. It is the best news for Michigan in a long time."

Congress still needs to approve funds for conduction.

"In Michigan we know that this will create good paying jobs for Michigan, provide outstanding educational opportunities for our next generation of scientists, and open the door for scientific breakthroughs," said Rep. Mike Rogers, R-Brighton, whose congressional district includes MSU's East Lansing campus.

Construction on the state-of-the-art technology is expected to take seven years with the facility fully functioning by 2017, leaders have said. The operating budget for MSU's National Superconducting Cyclotron Laboratory, which currently conducts rare isotope research, would grow from about \$20 million annually from the federal government to about \$50-\$60 million, MSU President Lou Anna Simon has said.

Simon, MSU scientists, students and state leaders had been lobbying hard for the facility. The university was in stiff competition with the U.S. Department of Energy's own lab, Argonne National Laboratory in Illinois. Both presented detailed plans to the U.S. Department of Energy selection committee. In October, committee members toured MSU's National Superconducting Cyclotron Laboratory, which would house the new technology.

MSU's lab currently conducts rare isotope research and it considered a leader in the field. However, the technology used to conduct the research has become outdated and MSU leaders feared that without the project MSU's lab would "drift into oblivion," according to Konrad Gelbke, director of MSU's lab. With FRIB, MSU would be home to a new high power linear accelerator, speeding up the time it takes to do experiments.

With rare isotope research, scientists use big instruments to study something minute -- the center of atom. Scientists create isotopes -- different forms of an element -- that are not otherwise found on Earth. The idea is that by studying these rare isotopes, scientists will have a better understanding such things as how elements were formed and what happens inside the stars.

The research has practical applications for medical diagnostic equipment to treat cancer patients and for creating ways to test nuclear weapons without denotation.

Now faced with competition from labs around the world, the U.S. Department of Energy had ranked the FRIB project as the nation's third highest science facility project.

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