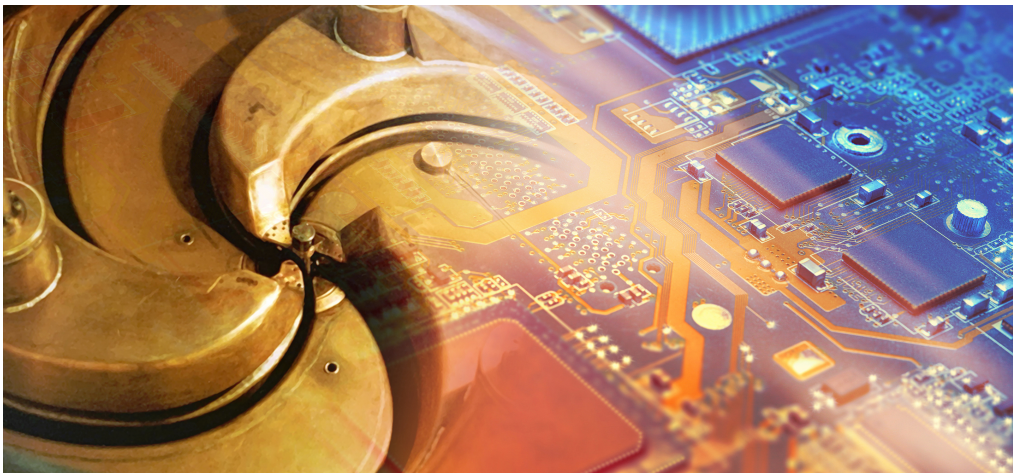


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## MSU to refurbish world's first superconducting cyclotron for chip testing



**MSU's decades-long tradition of heavy-ion accelerator expertise tapped to help meet current national shortfall of testing capacity for advanced microelectronics, including for space-based applications**

[Michigan State University](#) (MSU) will build on its 60-year track record in accelerator-based nuclear physics leadership by refurbishing the history-making K500 cyclotron and installing it as the heart of a new chip-testing facility for next-generation semiconductor devices. The facility establishment, supported by a \$14.2 million contract funded by the [U.S. Department of Defense Test Resource Management Center](#) (TRMC) and awarded through the [U.S. Department of Defense Missile Defense Agency](#) (MDA), will be based at the [Facility for Rare Isotope Beams](#) (FRIB). The facility will help meet the current national shortfall of testing capacity for advanced microelectronics, including those used for commercial spaceflight, 5/6G wireless technology and autonomous vehicles.

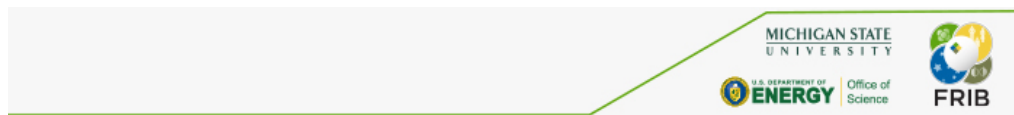
The new East Lansing facility will be what amounts to the third act for the K500,

“This new FRIB-adjacent facility at MSU will provide the United States several thousand additional hours of capacity for chip testing annually,” said MSU Interim President Teresa K. Woodruff, Ph.D. “We are ready to leverage a six-decade-long investment by the National Science Foundation in basic nuclear science at MSU for a new purpose that is so central to this critical industry, to U.S. competitiveness, and to national security.”

Among the most immediate goals is the testing of electronic components for use in space, where levels of ionizing radiation are much higher than at the Earth’s surface and where devices must operate for years or even decades with little if any maintenance. The MSU proposal for funding was in direct response to the 2018 National Academies report, “Testing at the Speed of Light,” which outlined a critical national shortfall of testing capacity of space-bound electronic components. [READ MORE](#)



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*Michigan State University operates FRIB as a user facility for the U.S. Department of Energy Office of Science (DOE-SC), supporting the mission of the DOE-SC Office of Nuclear Physics.*

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