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The Facility for Rare Isotope Beams

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The Facility for Rare Isotope Beams (FRIB) is a major new scientific user facility under construction on the campus of the Michigan State University in USA for nuclear science research with beams of rare isotopes. With a total construction cost of \$730 million, the project has passed the 92% complete mark and is managed toward early completion in 2021. With design average beam power two orders of magnitude higher than operating heavy-ion facilities, FRIB stands at the power frontier of the accelerator family. Commissioning is planned for spring 2020 with heavy ion beams as heavy as $A/Z \sim 7$, which are to be accelerated to energies above 200 MeV/u by about 270 superconducting radiofrequency resonators contained in 39 cryomodules in the first two segments of the Linac. Development work is launched also for facility upgrade doubling the primary beam energy to 400 MeV/u. This paper summarizes the science, status, and prospects of FRIB project. *Work supported by the U.S. Department of Energy Office of Science under Cooperative Agreement DE-SC0000661. #wei@frib.msu.edu