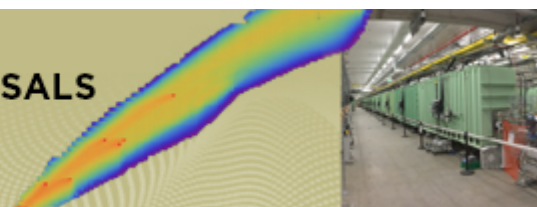




FRIB LABORATORY ADAPTS AND ADVANCES UNDER **COVID CONSTRAINTS**

We hope this newsletter finds you well during these ongoing uncertain times. As COVID-19 continues to impact how we live and work, we adjust FRIB Laboratory operations accordingly in compliance with all Michigan and MSU regulations and requirements. Our mission remains the same — to complete FRIB and enable users to make discoveries. What's changed are the constraints COVID-19 has placed on how we deliver it. Just as you are doing in your respective workplaces, we are rising to the challenge. [Read more](#)

FRIB ISSUES **FIRST CALL FOR PROPOSALS** FOR FRIB BEAM TIME



Marking an exciting step toward commencing scientific user operation, FRIB issued its first Call for Proposals on 13 November. With this call, we invite proposals for beam time to be considered at the first meeting of the FRIB Program Advisory Committee (PAC1) scheduled for May 2021. All proposals for review by FRIB PAC1 need to be submitted online by 5 p.m. EST on 22 February 2021, to allow for scientific and technical review of the proposals prior to the PAC1 meeting. Read more about the process and requirements on the [Call for Proposals page](#). The call comes after the [FRIB First Experiments Proposal Preparation Workshop](#) in May, which 460 attendees participated in throughout the week.

U.S. DEPARTMENT OF ENERGY DESIGNATES FRIB AS DOE OFFICE OF SCIENCE **USER FACILITY**



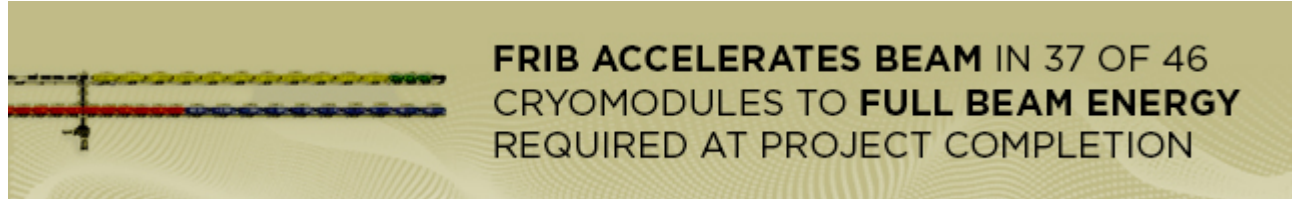
On 29 September, the U.S. Department of Energy designated FRIB as a DOE Office of Science user facility. U.S. Secretary of Energy Dan Brouillette announced the designation at a special ceremony held outdoors at MSU, under a tent adjacent to FRIB. [Read more](#)



The 2020 Low Energy Community Meeting (LECM) was held online 10-12 August. Members of the low-energy nuclear physics community remotely attended the meeting. LECM included plenary sessions and fifteen working group sessions, in addition to the FRIB Theory Alliance annual meeting held during two of the working group periods.

[Read more](#)

TECHNICAL PROGRESS



Capping ten years of work, FRIB accelerated an argon-36 beam through 37 of 46 superconducting cryomodules to 204 million electron-volts per nucleon or 57 percent of the speed of light on 19 March. FRIB was designed to accelerate heavy ions to more than 200 MeV/nucleon, and with this FRIB has now demonstrated the accelerator Key Performance Parameter (KPPs) required at project completion.

[Read more](#)



FRIB completed assembly and testing of all baseline cryomodules on 11 June. The baseline cryomodules contain superconducting resonators that accelerate FRIB's heavy-ion beam while operating at temperatures a few degrees above absolute zero. On 23 June, the final beta=0.53 cryomodule was moved into the linear accelerator tunnel. It is the final of 46 cryomodules total in the tunnel. [Read more](#)

INSTRUMENT UPDATES

GRETA: The U.S. Department of Energy Office of Science has approved the project baseline (Critical Decision 2, the integrated scope, cost, and schedule) and the start of construction (Critical Decision 3) for the Gamma-Ray Energy Tracking Array (GRETA) project, a new high-resolution gamma-ray detector system that will be used at FRIB.

[Read more](#)

HRS: The U.S. Department of Energy Office of Science (DOE-SC) Office of Project Assessment conducted a DOE-SC Independent Project Review of the High Rigidity Spectrometer (HRS) project 28-30 April. The review was held through remote participation. The review's purpose was to determine if the project has fulfilled the requirements for Critical Decision 1 (CD-1), the second step in the DOE's staged project approval process. [Read more](#)

SECAR: The U.S. Department of Energy Office of Nuclear Physics Facilities and Project Management Division and the National Science Foundation Nuclear Physics Program held the annual progress review

of the SEparator for CApture Reactions (SECAR) recoil separator project 11-12 June. SECAR will be a recoil separator that is optimized for measurements of capture reactions of importance for nuclear astrophysics. [Read more](#)

SOLARIS: In January, FRIB partnered with Argonne National Laboratory to plan the development of SOLARIS, a dual-mode spectrometer for a broad range of reactions studies at FRIB using reaccelerated beams. SOLARIS brings together two demonstrated technologies developed for the FRIB era over the last decade. [Read more](#)

FRIBUO AND FRIB-TA UPDATES

FRIB USERS ORGANIZATION: The FRIB Users Organization Executive Committee has an update on some of the goings-on in the recent months, including elections, and the Low Energy Community Meeting. [Read more](#)

FRIB THEORY ALLIANCE: The FRIB Theory Alliance continues its commitment to FRIB science by attracting and growing the pool of young talented scientists. This year's events have included a summer school, new board members, new appointments, and much more. [Read more](#)

CONGRATULATIONS TO OUR COMMUNITY MEMBERS

DOE-SC EARLY CAREER RESEARCH PROGRAM AWARDS: Three scientists who will perform research at FRIB have received U.S. Department of Energy Office of Science (DOE-SC) Early Career Research Program awards. Ronald Fernando Garcia Ruiz, an assistant professor at the Massachusetts Institute of Technology, Kyle Leach, an assistant professor of physics at the Colorado School of Mines, and Alessandro Lovato, a physicist in Argonne National Laboratory's Physics division, were awarded for their proposals. [Read more](#)

FRIB VISITING SCHOLAR PROGRAM FOR EXPERIMENTAL SCIENCE 2020: Ronald Fernando Garcia Ruiz from the Massachusetts Institute of Technology and Mark Spieker from Florida State University are the scholarship recipients for the FRIB Visiting Scholar Program for Experimental Science 2020. FRIB initiated the FRIB Visiting Scholar Program for Experimental Science in 2016. The goal of the program is to encourage and help junior researchers to establish a research program at FRIB. [Read more](#)

DO YOU HAVE ADDITIONAL GOOD NEWS? LET US KNOW! Email communications@frib.msu.edu.

JEFFERSON LAB WORKSHOP EXPLORES FUTURE OF ARTIFICIAL INTELLIGENCE IN NUCLEAR PHYSICS

In March, nuclear physicists using artificial intelligence (AI) technologies participated in a workshop at Jefferson Lab. The workshop brought together experimentalists and theorists representing a broad spectrum of nuclear physics research to produce a white paper on the current status and future direction of AI in nuclear science. [Read more](#)

FRIB LABORATORY HAPPENINGS

DR. CHRIS FALL VISIT: On 13 February, FRIB hosted Dr. Chris Fall, director of the U.S. Department of Energy's Office of Science. Dr. Fall visited Michigan State University (MSU), where he was welcomed by

MSU President Samuel L. Stanley Jr., M.D. While at FRIB, Dr. Fall toured FRIB with Laboratory Director Thomas Glasmacher and Senior Vice President for Research and Innovation Stephen Hsu, and he met laboratory graduate students. [Read more](#)

THANK YOU TO OUR CONTRIBUTORS THIS ISSUE: Jill Berryman, Heather Crawford, Ben Kay, Michelle P. Kuchera, Jorge Piekarewicz

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Please email questions, comments, and contributions to communications@frib.msu.edu.



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Michigan State University establishes and operates FRIB as a user facility for the [Office of Nuclear Physics](#) in the [U.S. Department of Energy Office of Science](#).