HB2014

East Lansing, MI 10-14 November 2014

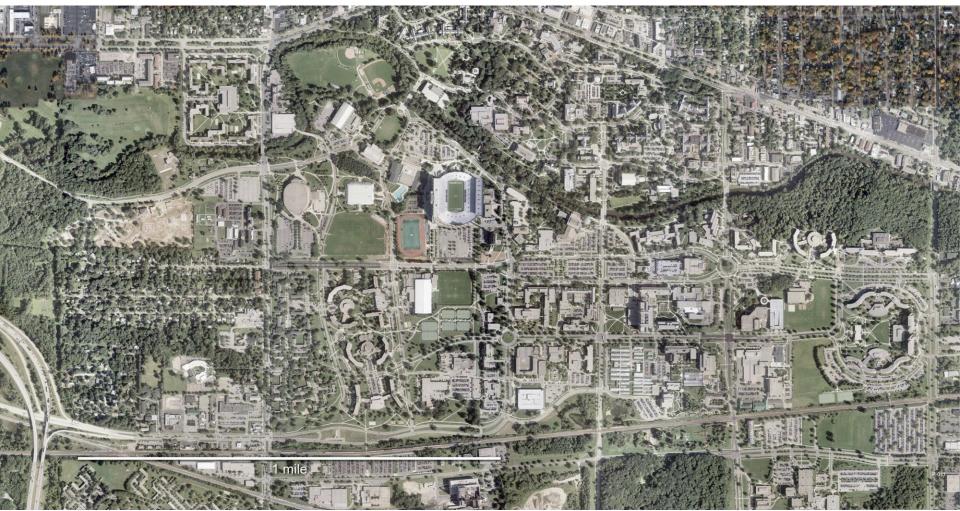
54th ICFA Advanced Beam Dynamics

Workshop on High-Intensity, High Brightness and High Power Hadron Beams



Michigan State University

Public Research University established in 1855 | Elected Board of Trustees | 5,200 acres | 538 buildings | \$1.9B annual budget | 11,100 employees | 49,300 students

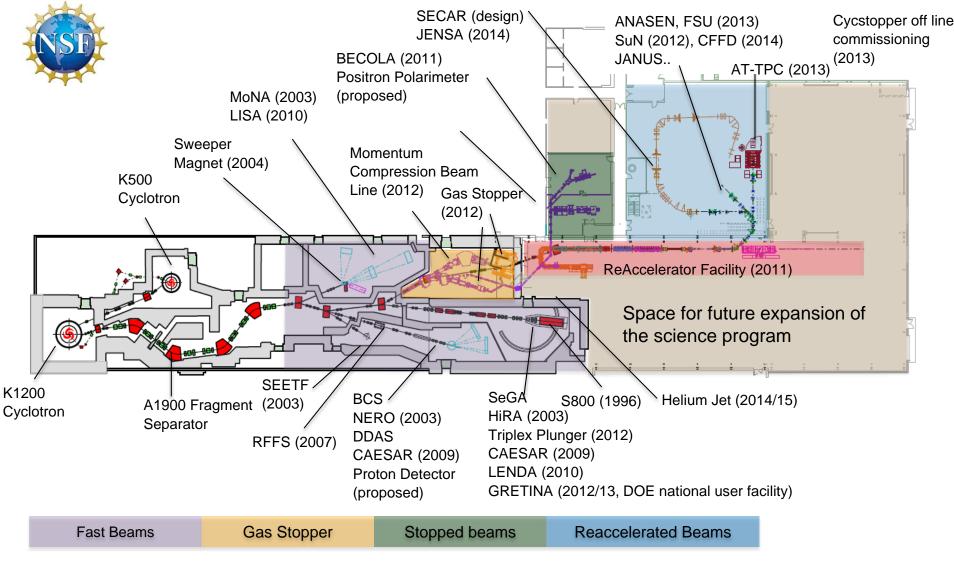


Accelerator-Based Nuclear Science at Michigan State University since 1960's

1958 MSU hires first accelerator expert	1978 NSAC recommends national user facility at MSU	2001 Research with fast rare isotope beams from CCF	2010 DOE approves CD-1 for FRIB
I 1961 I NSF approves sector focused K50 cyclotron I I I I I I I I I I I I I I I I I I I	I 1982 I Research with I stable beams I from K500 I I I I 1989 I I Research I I Research I I With stable beams from I I K1200 I I I	2002 Infrastructure for SRF linac R&D I I I I I I I I I I I I I I I I I I I	2013 I DOE approves I CD-2/3A for FRIB
N SU C	I I I I I I 1977 I I NSF approves I I K500 I ' cyclotron I SF approves Research with uperconducting I rare isotope b velotron magnet I from A1200 rototype	facility (CCF)	selects MSU CD-4; FRIB ablish FRIB Operations



NSCL: NSF-Funded National User Facility for Rare Isotope Science until FRIB Complete

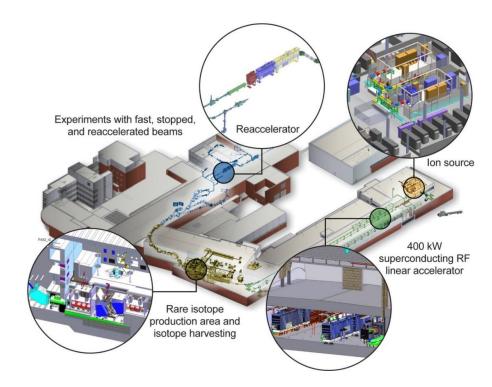


Tour on Friday (14 November)

Facility for Rare Isotope Beams (FRIB): A DOE-SC Scientific User Facility

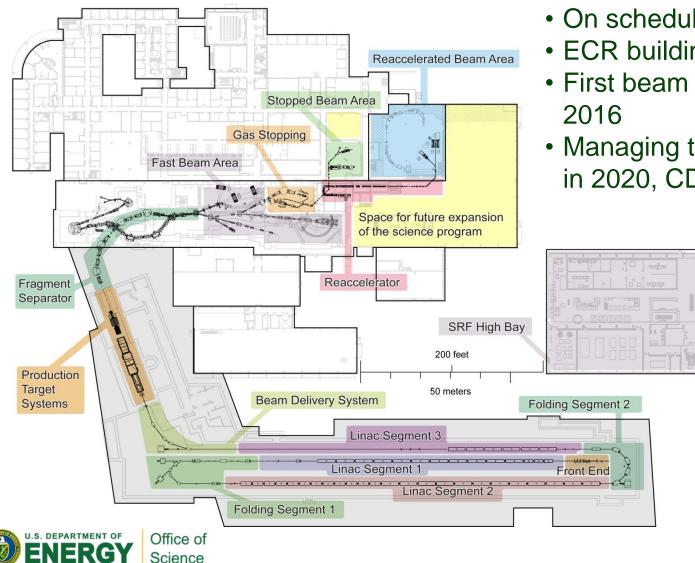
- Funded with financial assistance from DOE Office of Science (DOE–SC) with cost share and contributions and from Michigan State University (MSU)
- Supporting mission of Office of Nuclear Physics (SC-26) in DOE-SC
- MSU selected in 2008 after competitive announcement
- Total Project Cost \$730M
 - DOE share \$635.5M
 - MSU cost share \$94.5M
 - In addition to TPC MSU contributions \$212M





- Key features
 - 400 kW beam power for all ions (5x10^{13 238}U/s)
 - Separation of isotopes in-flight
 - Fast, stopped, reaccelerated beams

FRIB Civil Construction Started in March, Technical Construction in September



- On schedule and budget
- ECR building ready in 2015
- First beam from ion source in 2016
- Managing to early completion in 2020, CD-4 in 2022

FRIB Civil Construction Nine Weeks Ahead of Schedule



FRIB construction site on 7 November 2014 – cameras at <u>frib.msu.edu</u> Tour on Friday (14 November)

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- Thank you to the International Organizing Committee
- Thank you to the Local Organizing Committee
- Regret that eleven registrants did not receive visas in time to participate in person
 - Will look into what we can do as an academic institution committed to open exchange of ideas with over 1,200 international scholars from 90 countries and 7,000 international students
- Have a productive meeting and a good time in East Lansing