



Managed by Fermi Research Alliance, LLC for the U.S. Department of Energy Office of Science



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**Commission to Review the Effectiveness
of the National Energy Laboratories**

DOE Mission for Basic Science

- DOE is seen as a global champion for basic discovery science
- DOE mission-driven approach to R&D continues to be effective in advancing U.S. leadership in science and technology
- DOE Office of High Energy Physics is the national steward for particle physics, accelerator science, and accelerator technology
- Community driven national strategy developed by a joint DOE-NSF FACA committee provides specific roadmap for agencies, labs, and universities
 - Latest “P5 plan” seen as a model for strategic planning and prioritization within realistic budget constraints, while maximizing opportunities for breakthrough science.



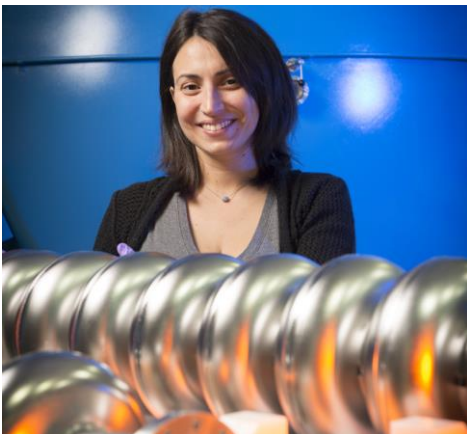
Building for Discovery

Strategic Plan for U.S. Particle Physics in the Global Context

Report of the Particle
Physics Project
Prioritization Panel (P5)

Fermilab unique capabilities

- Fermilab is a single program laboratory acting as the gateway to particle physics discovery for over 4,000 scientists and 120 universities
- Fermilab is the primary science, technology, and facility platform for maintaining a U.S. competitive advantage in the global field of particle physics.....including accelerator user facility
- Fermilab's academic culture nurtures young researchers to become leaders in basic science at U.S. universities
- Science requirements drive investments to produce cutting-edge technical capabilities with accelerators, detectors, and data handling

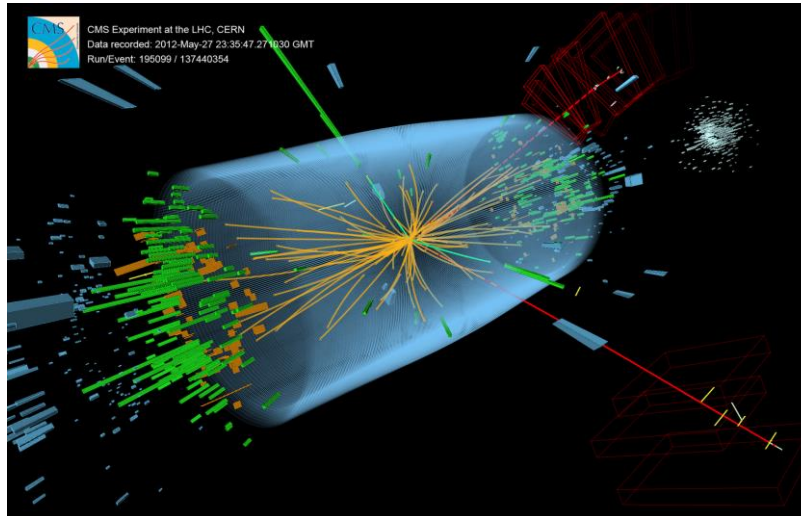


Fermilab's leading expertise in superconducting accelerator systems combines with Jefferson Lab, Argonne, Berkeley Lab, and SLAC to build LCLS-II

International collaboration, International competition

- The best and the brightest from 34 countries are attracted to work through international collaborations on discovery experiments at Fermilab, from quarks and neutrinos to dark matter and dark energy
- Fermilab contributions to the accelerator, particle detectors, and computing were essential to the discovery of the Higgs boson
- Today Fermilab's world-leading expertise in leading edge superconducting magnets combines with Brookhaven and Berkeley Lab to upgrade the Large Hadron Collider at CERN

Higgs boson
event at LHC



11 Tesla
magnet test
at Fermilab

Fermilab scientific strategy

- Pursue exciting science that pulls in the best minds from U.S. institutions and around the globe
- Maintain the technological edge in core areas that makes us a strong partner in international collaborations and a unique enabler of this science for U.S. universities
- Mount leading experiments that are competitive in timescale and scope with the rest of the world....neutrinos

Fermilab has strong support from the DOE Office of Science and from the national community “P5 plan” for this approach.