VERSION 1 – Last updated 12 August 2011

**About Fermilab**

Fermilab is America’s only national laboratory fully dedicated to particle physics research. By building some of the most complex, most powerful and largest particle accelerators and detectors in the world, scientists at Fermilab expand mankind’s understanding of matter, energy, space and time, capturing imaginations and inspiring future generations.

Fermilab’s 1,925 employees and 2,300 scientific users carry out a world-leading program of discovery at the three interrelated frontiers of particle physics: the Energy, Intensity and Cosmic Frontiers.

At the Energy Frontier, particle accelerators produce high-energy collisions that signal new phenomena. Fermilab supports the continuing analysis of data collected by the experiments at the Tevatron collider, enables more than 1,000 U.S. scientists to engage in research at the Large Hadron Collider, and carries out R&D on accelerator and detectors for future colliders.

At the Intensity Frontier, scientists use intense beams from particle accelerators to explore neutrino interactions and ultra-rare processes in nature. Fermilab’s accelerator complex produces the world’s most intense high-energy beam of neutrinos, whose unique properties appear to be at the crux of many questions about the universe. Ongoing R&D prepares Fermilab to break new ground in research on revelatory rare phenomena with the muon-to-electron conversion, or Mu2e, and g-2 experiments.

At the Cosmic Frontier, scientists use the cosmos as a laboratory to investigate the fundamental laws of physics. Fermilab scientists bring the perspectives and techniques of particle physics to the search for dark matter and dark energy, and to the construction and operation of large-scale ground and space telescopes.

Technologies developed at Fermilab sustain advanced scientific research and spur innovation to meet the challenges of America’s future. Fermilab is an R&D center for superconducting radio frequency cavities, the technology of choice for the next generation of accelerators. Fermilab is constructing the most advanced R&D center for SRF technology in the United States, which will be used to test components for future accelerators and will be a unique user facility for advanced accelerator R&D. At the Illinois Accelerator Research Center, which will begin construction in the fall of 2012, scientists and engineers from national laboratories, universities and industry will work side by side to develop breakthroughs in accelerator technology and apply them to energy and environment, medicine, industry, national security and discovery science.

Fermilab inspires and trains the next generation of scientists and engineers. In 2010, more than 100 Ph.D. degrees were received based on work done at Fermilab, and about 38,000 K-12 students either participated in activities at Fermilab or were visited in their classrooms by Fermilab staff.

Fermi Research Alliance manages Fermilab for the Department of Energy. FRA is an alliance of the University of Chicago and the Universities Research Association, a consortium of 86 universities. FRA combines the depth and commitment of the University of Chicago with the broad involvement of URA universities for the benefit of Fermilab, the particle physics community and the nation.

**About the Plan for Fermilab**

This Plan for Fermilab has its roots in the 2007 Fermilab Steering Group Report. Fermilab Director Pier Oddone convened the Fermilab Steering Group in early 2007 to obtain input from a broad spectrum of the U.S. particle and accelerator physics communities, and to prepare a report that would serve as input to the Fermilab Director, Particle Physics Project Prioritization Panel, High Energy Physics Advisory Panel and the funding agencies as they considered options for new particle accelerators and detectors in the United States. A number of key events have occurred in particle physics over the last four years, including the successful startup of the Large Hadron Collider, delay in timeline for key decisions regarding the International Linear Collider, and the decision in January 2011 to shut down the Tevatron Collider. These events have guided Fermilab in its implementation of the recommendations of the Steering Group Report, and have led to the development of this updated Plan for Fermilab. This plan maintains the national’s leadership in particle physics, and keeps the laboratory and the United States on the path to discovery at the frontiers of particle physics.