Illinois Accelerator Research Center

Developing breakthroughs in accelerator science and translating them into applications for the nation's health, wealth and security.

The Office, Technical and Education building of the Illinois Accelerator Research Center at Fermilab provides 47,000-square-foot of space for staff and industrial partners, who will have access to know-how and industrial and technical areas at the laboratory.

The Illinois Accelerator Research Center, or IARC, provides a state-of-the-art facility for accelerator research, industrialization and training. Scientists and engineers from Fermilab, Argonne and Illinois universities will work side-by-side with industrial partners to develop breakthroughs in accelerator technology and new applications in energy and environment, medicine, industry, national security and discovery science. Funding for the IARC facility is provided by the Illinois Department of Commerce and Economic Opportunity and the U.S. Department of Energy's Office of High Energy Physics.

The IARC Facility

Located on the Fermilab campus, this facility houses 83,000 square feet of technical, office and meeting space. It provides space for both laboratory staff as well as industrial partners to work side-by-side to solve complex problems.

IARC will have areas for test accelerators, cryogenics infrastructure, temperature controlled workspaces, high-capacity electrical power systems and industrial cooling water.

The facility will be optimized for use by private industry and the development of advanced accelerator technology.

Opportunities for Illinois

In a unique partnership between the Illinois Department of Commerce and Economic Opportunity and the U.S. Department of Energy's Office of High Energy Physics, IARC will provide the opportunity for Illinois to become a world leader in development of industrial accelerator technology.

IARC is already attracting high-tech companies, and will train Illinois citizens to develop advanced technology with applications in industry, energy, environment and medicine.

IARC will attract top scientists and engineers from existing industries as well as host entrepreneurs as they launch new companies to pursue the exciting opportunities created by technologies developed in the pursuit of basic science.

More Information

More information is available at:

http://iarc.fnal.gov

IARC will help Illinois become a world leader in accelerator technology.

Users of the IARC facility will also get access to Fermilab's industrial and technical complexes, including the Advanced Superconducting Test Facility.

Mission

IARC's mission is to partner with industry to translate technology developed in the pursuit of science into the next generation of industrial accelerators, products, and applications.

Vision

IARC's vision is to be the preeminent technology source for accelerator based products and services, serving as the seed for industry growth.

Unique tools

Physicists have been inventing new types of accelerators to propel charged particles for more than 80 years. Today, besides their role in scientific discovery, scientists estimate that more than 30,000 accelerators are at work worldwide. They contribute to $500 billion per year in products and services, in areas ranging from diagnosing and treating disease to cheaper, greener alternatives to traditional industrial processes. Accelerators also provide exciting new opportunities to solve problems of national importance such as prevention of acid rain, screening cargo for national security, or destruction of nuclear waste while at the same time spawning major new industries.

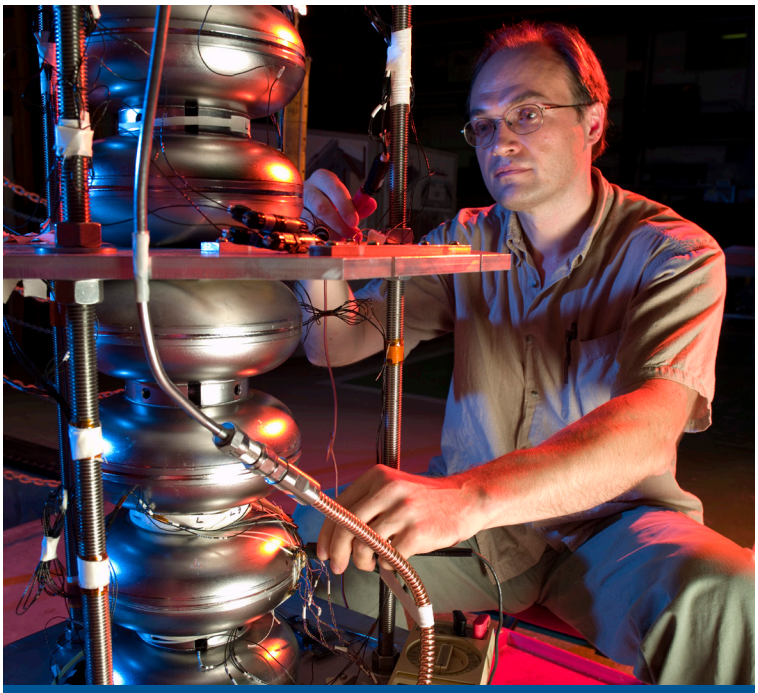
Benefits for Illinois

With Fermilab and nearby Argonne National laboratory as the largest concentration of accelerator scientists and engineers in the world, Northern Illinois is uniquely positioned to become a global center for accelerator science and development. IARC presents an unparalleled opportunity to develop and share the known and still unexplored benefits of particle accelerators. With a strong focus on industrialization of these technologies, IARC will attract high-tech companies and train Illinois citizens in advanced technologies.

IARC will bring economic benefits to Kane and DuPage counties. Federal funding for accelerator development will support about 200 Illinois high-tech jobs. The number of new industrial jobs created in Illinois as a result of industrial accelerator development at IARC is potentially much larger.

Impact on Illinois Universities

Regional universities, including the University of Chicago, University of Illinois, Illinois Institute of Technology, Northern Illinois University and Northwestern University, all have active research programs at Fermilab and Argonne. By providing state-of-the-art facilities for visiting scientists, students and entrepreneurs, IARC will strengthen Fermilab's and Argonne's links to Illinois universities and industry and harness their creative energy to create new accelerator technology based applications and industries.



Superconducting radio-frequency technology is at the heart of future proposed particle accelerators. The Illinois Accelerator Research Center will give Fermilab and its industrial partners an opportunity to pursue these next-generation particle accelerators, while collaborating with local universities to train a new generation of scientists, engineers and technical staff in accelerator technology.