FOR IMMEDIATE RELEASE

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StarLight network adds high-performance optical fiber link to Fermilab

A new high-performance optical fiber link will connect the Department of Energy’s Fermi National Accelerator Laboratory (Fermilab) with the StarLight optical access point on Northwestern University’s Chicago campus—enabling a potential five-hundredfold increase in the laboratory’s network connections to U.S. and international science communities.

StarLight is a high-performance network exchange for many worldwide research and educational wide-area networks. The new connection has the potential to improve Fermilab’s computer network connectivity, currently provided by the DOE’s Energy Sciences Network at 622 megabits per second, to 330 gigabits per second.

The International Center for Advanced Internet Research (iCAIR), a branch of Northwestern University Information Technology, develops and manages StarLight in partnership with the University of Illinois at Chicago, Argonne National Laboratory and major international networks. “The StarLight community is pleased that Fermilab has joined us as a partner in creating the next generation of U.S. and international advanced networking,” said iCAIR director Joe Mambretti.

A 92-kilometer optical fiber connects Fermilab, a particle physics laboratory located in Chicago’s western suburbs, with the StarLight facility, enhancing Fermilab’s high-speed connectivity with universities and institutions around the world. Such advanced networks are necessary in the global field of particle physics; scientists from 31 countries currently collaborate on Fermilab experiments.

Fermilab will initially link with its research partners through StarLight at 10 gigabits per second—16 times its current rate. This new link with international researchers will be required for upcoming particle physics experiments such as those at the Large Hadron Collider at CERN in Geneva, Switzerland.

The connection to StarLight will enhance Fermilab’s ability to conduct research in computer science as well as particle physics. The laboratory plays a leading role in developing data grid software that will enable experiments to distribute data worldwide.

Among the networks that connect through StarLight are: I-WIRE, a state-wide advanced research optical network; LHCNet, a DOE funded link to CERN for LHC large scale science; CA*net4, which connects Chicago with all major Canadian universities and research institutions; Abilene, which connects universities and research laboratories across the U.S.; the DOE UltraScience Net; and the National Lambda Rail, a cross-country fiber-optic infrastructure for research and experimentation in networking technologies and applications.
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**The International Center for Advanced Internet Research (iCAIR)** accelerates leading-edge innovation and enhanced global communications through advanced Internet technologies, in partnership with the international community, and national partners ([www.icair.org](http://www.icair.org)).