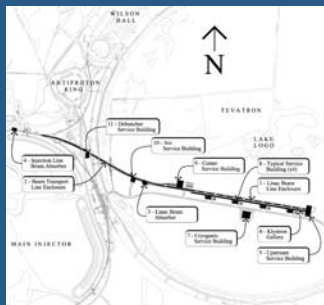


Highlights from our blog

Project X collaboration forms, project moves forward

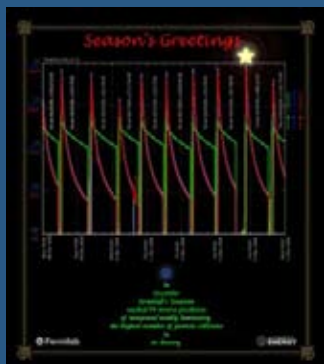
December 18, 2008



Project X, a Fermilab-hosted international accelerator facility, could break ground as soon as 2013. Accelerator experts from around the world gathered at Fermilab last month to work toward establishing a formal collaboration and further plans for Fermilab's proposed proton accelerator...

Physics lab holiday cards

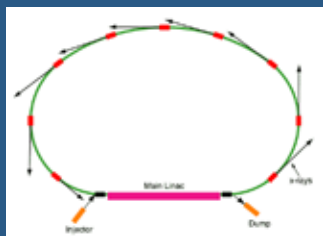
December 18, 2008



A tradition in many organizations is to send out a holiday card. With the near ubiquity of the Web among lab audiences, many of these cards are solely electronic, leaving the wood that would have gone into cards for Christmas trees or other uses! Here is a selection from a few science organizations, showing the usual geeky tendency to incorporate some kind of scientific imagery as a visual metaphor...

Energy recovery linac demonstration successful

December 16, 2008



An ERL is a combination of a linear accelerator and storage ring with a few twists thrown in to make the machine incredibly efficient. They allow particle acceleration at much lower power use for the facility, or much higher-energy acceleration for the same power use. Now one has been shown to work at Accelerators and Lasers In Combined Experiments, or ALICE, at the Daresbury lab in Cheshire, England...

In person at Nobel week in Stockholm

December 12, 2008



A guest essay from David Hitlin, Caltech physics professor and past spokesperson for the BaBar collaboration at SLAC National Accelerator Laboratory, recounts the celebrations and festivities of the Nobel week in Stockholm, where he attended the ceremonies as a guest of Makoto Kobayashi...

Do neutrinos and antineutrinos behave differently?

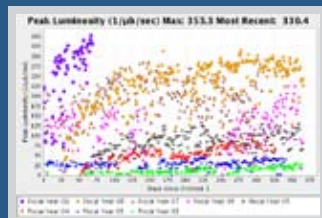
December 12, 2008



Stretch out your hand, and a trillion neutrinos cross it within three seconds. Yet little is known about these invisible particles. Scientists do know that neutrinos have mass and that they can morph from one type into another—a process called neutrino oscillation. The MiniBooNE collaboration at Fermilab has a preliminary result that sheds more light on neutrino oscillation. This is the collaboration's first result with antineutrinos, the antiparticles of neutrinos...

Another record! Tevatron accelerator surpasses expectations repeatedly

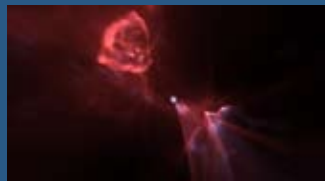
December 11, 2008



In the past five years, Tevatron's, luminosity—the number of collisions per second—has increased six fold. In the last six weeks alone, overall luminosity has improved 10 percent, generating more than a dozen luminosity records, sometimes multiple records in one week. Just since October, the Tevatron has had nine of the top 10 stores in its history...

Lights, camera, render

December 9, 2008



A red plume of hydrogen gas streams in three dimensions across a movie screen that almost spans the width of a dark conference room. Within the plume a brilliant white spot forms. The spot expands and quickly explodes into an orange and red cloud. Soon this cloud dissipates and a new bright dot grows elsewhere on the screen. In less than a minute, the movie has told the story of a young galaxy forming...

Flat Children visit labs by mail

December 8, 2008



Hand-drawn by 8-year-old Johnny, Flat Johnny took a tour of the Large Hadron Collider with researcher Sarah Demers. Flat Maya did the same with SLAC's Travis Brooks...

Free multimedia education material on particle physics, accelerators

December 4, 2008

If you want to explain particle physics, accelerators or colliders to friends, family, students, or others you encounter, you won't want to miss this Web site. The University of California, Santa Barbara has announced the winners of a contest to make particle physics accessible in high school classrooms. You can see them at www.kitp.ucsb.edu/

Should you care about particle physics or the Higgs boson?

December 2, 2008

In an era of tight budgets running up against unemployment, cancer, and crumbling infrastructure, why care about basic research—science done for knowledge's sake? The documentary *The Atom Smashers* put the question on the screen and drew some compelling answers...

The Panofsky turkey constant

November 26, 2008

Just in time for the Thanksgiving holiday, Nicholas Panofsky shares a flavorful tidbit of Panofsky family lore with the precise equation for determining the cooking time for a turkey...

Gorgeous physics photos from the LIFE archives

November 19, 2008



The archive released by Google yesterday contains a number of gems, from Einstein's messy desk to a 1939 cartoon from a Berkeley cyclotron bulletin board, portraits of famous physicists and a chain of nails...

Particle physics gives boost to areas of Latin American

November 18, 2008



In the quest to improve the quality of life in developing countries, people focus on key barometers of affluence, such as literacy rates and affordable food supplies. Few think of high-energy physics as a grassroots growth engine. But it can be. A good example is the Pierre Auger Observatory in Malargüe, Argentina, a rural area of isolated ranches nestled at the base of the Andes...

You can find the full text of these and other items, updated weekdays, at www.symmetrymagazine.org/