

Fermilab Offers Tours of Antimatter Production Site, April 23 and May 21

April 12 2006

Scientists at the Department of Energy's Fermi National Accelerator Laboratory are offering special "Antimatter Tours" on Sunday, April 23 and May 21, starting at 12:45 p.m. The two-hour program includes a 45-minute presentation by Fermilab scientists followed by a tour, led by Antiproton Source head Keith Gollwitzer, through a section of the accelerator tunnel that is used to produce antiprotons.

Since its start-up in 1985, Fermilab's Antiproton Source has produced just over 3.91 nanograms (billionth of a gram) of antiprotons, the largest amount ever produced by any accelerator. Visitors will learn about the nature of antimatter and how scientists produce tiny amounts of antiprotons at Fermilab. Throughout the program scientists will be on hand to answer questions.

Often referred to as the "mirror world," antimatter has the opposite electrical charge of matter. Upon contact, matter and antimatter particles annihilate and release energy as tiny flashes of light. This effect is used in a medical application called Positron Emission Tomography. Known as a PET scan, the technique relies on the detection of light rays produced by the annihilation of positrons, the antimatter-partners of the well-known electrons.

Participation in the program is limited. Visitors need to register online at http://eddata.fnal.gov/lasso/program_search/show_eventID.lasso?name=Ask (preferred method), or they can send an email to edreg@fnal.gov or call 630-840-5588. The minimum age for participation is 10 years. The

tour requires walking and involves stairs. Visitors should wear comfortable shoes. Advance registration for the program, which is free of charge, is required.

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