



What's new at Fermilab?

Office of Communications

Tracy Marc, media relations manager

November 18, 2021

Fermilab visit – August 10, 2021

Fermilab Director Lockyer awarded the DOE's
Distinguished Career Service Award



Fermilab YouTube video highlighting his
accomplishments

MicroBooNE Announcement– October 27, 2021

Is there a fourth neutrino?



MicroBooNE experiment's first results show no hint of a sterile neutrino

DUNE in the news

Our Northern Hills [Subscribe for \\$5](#)

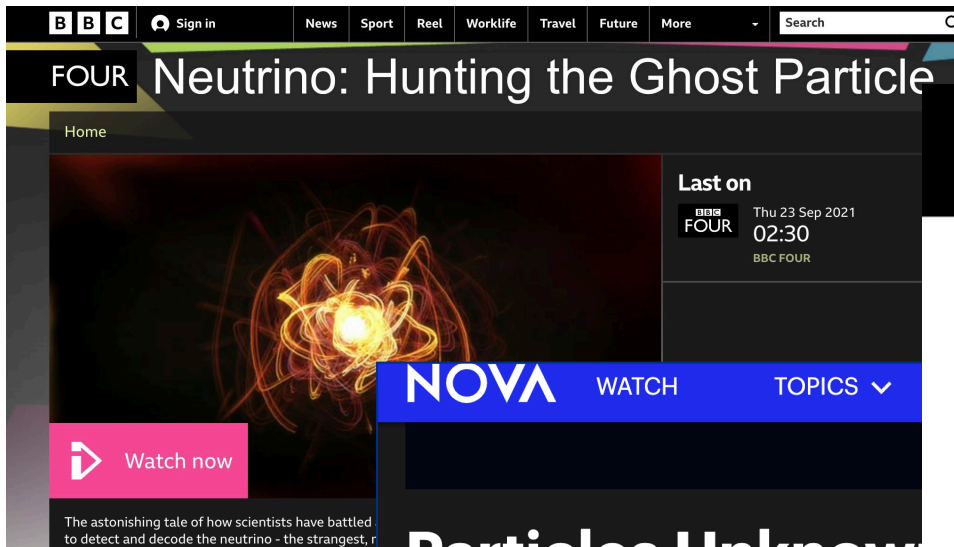
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LBNE/DUNE excavation achieves a gem of a milestone

Sanford Underground Research Facility Nov 4, 2021



MicroBooNE in the news



NOVA WATCH TOPICS ▾

Particles Unknown

Join the hunt for the universe's most common—yet

PREMIERED: 10/6/21 RUNTIME: 53:28 TOPIC: PHYSICS + MATH

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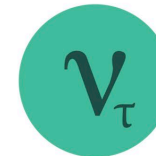
Outnumbering atoms a billion to one, neutrinos are the universe's most common yet most elusive and baffling particle. NOVA joins an international team of neutrino hunters as they try to capture an elusive fourth form of neutrino. Their results may force scientists to redraw their blueprint of the subatomic world, the Standard Model of physics, and change our understanding of how the universe works. (Premiered October 6, 2021)



electron neutrino



muon neutrino



tau neutrino



sterile neutrino

Fermilab Newsroom

Fermilab scientist Marcela Carena appointed as member of the Argentinian Academy of Exact, Physical and Natural Sciences

November 18, 2021



In accepting the invitation, the distinguished scientist and head of the lab's Theory Division will join the ranks of notable inductees, such as Nobel laureates Bernardo Alberto Houssay, Luis Federico Leloir, César Milstein and former Fermilab Director Leon Lederman.

Strategic Laboratory Leadership Program expands to labs across the country

November 16, 2021



The University of Chicago Strategic Laboratory Leadership Program teaches leadership skills to up-and-coming staff and scientists at national labs. Launched as a pilot program in 2007 for scientists at Argonne National Laboratory and Fermi National Accelerator Laboratory, this fall, the training initiative kicks off to U.S. Department of Energy laboratories across the country.

Fermilab Director Lockyer awarded the DOE's Distinguished Career Service Award

November 9, 2021



Nigel Lockyer has received this prestigious award from the DOE's Office of Science in recognition of his outstanding achievement and service to the nation through eight years as the director of Fermi National Accelerator Laboratory.

Over a year later, construction continues to progress on PIP-II Cryoplant Building

November 8, 2021



A little over a year into construction, the structure of the building that will house the cryogenic equipment for the PIP-II particle accelerator is largely complete.

A minute with Cristián Peña, associate scientist at the Fermilab Quantum Institute

November 4, 2021



Whether he is on the side of a mountain or working at the Fermilab Quantum Institute, Cristián Peña likes to explore the unknown and tackle new challenges. Although he spends most of his time working on quantum communication systems for FQI, Peña dedicates time to work on the CMS experiment. His work between the two experiments, while different in practice, are conceptually similar.

Fermilab sees record performance from next-generation accelerator component

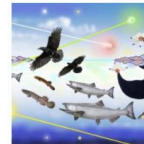
November 3, 2021



Accelerator experts at three national labs have advanced the next generation of cryomodules, the building blocks of particle accelerators. A prototype built for the high-energy upgrade of SLAC's LCLS-II X-ray laser has advanced the state of the art, packing more acceleration into a smaller distance, and could dramatically improve future accelerators.

From physics to fisheries

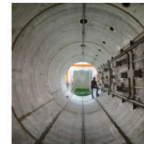
November 2, 2021



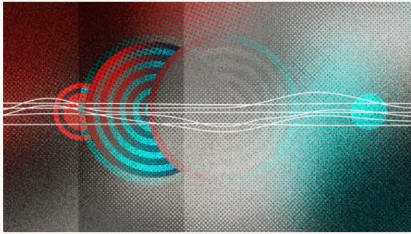
Students in the Alaska Native Science & Engineering Program hope to use skills they developed at Fermilab to benefit Indigenous communities.

MicroBooNE experiment's first results show no hint of a sterile neutrino

October 27, 2021



Four complementary analyses by Fermilab's MicroBooNE show no signs of a theorized fourth kind of neutrino known as the sterile neutrino. Its existence is considered a possible explanation for anomalies seen in previous physics experiments.



11/09/21

The problem-solver: Cosmic inflation

Just over 40 years ago, a new theory about the early universe provided a way to tackle multiple cosmological conundrums at once.



11/02/21

From physics to fisheries

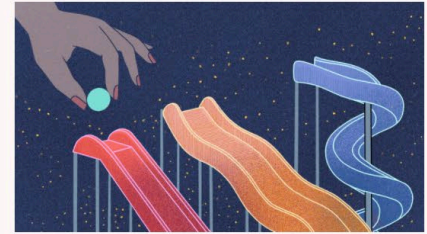
Students in the Alaska Native Science & Engineering Program hope to use skills they developed at Fermilab to benefit Indigenous communities.



10/19/21

Eyes on the sky

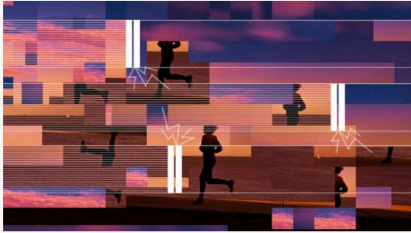
There's no one best way to build a telescope.



10/12/21

Is dark matter cold, warm or hot?

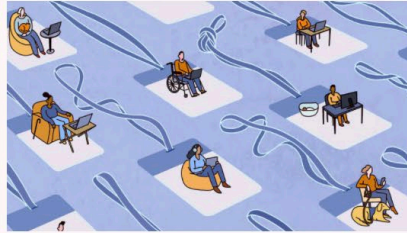
The answer has to do with dark matter's role in shaping the cosmos.



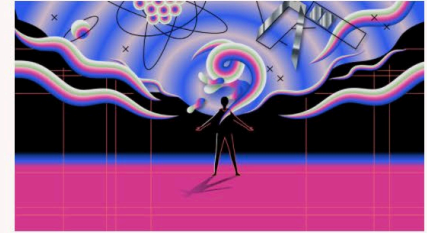
10/05/21



09/28/21



09/21/21

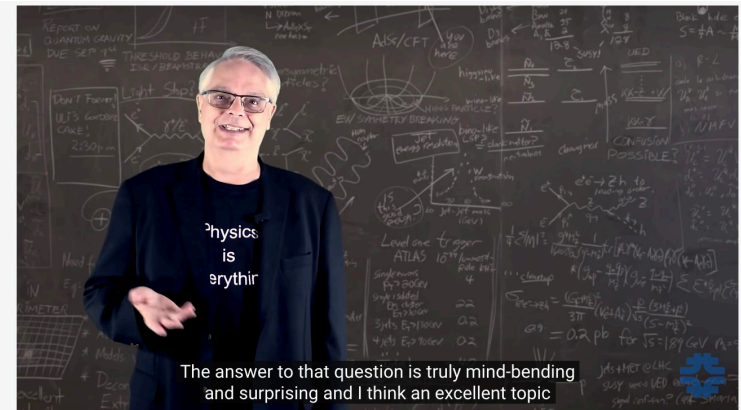


09/14/21

Recent issues:

- Profile on the current Astronomer Royal of Scotland, Professor Catherine Heymans
- Why is our universe flat?
- Two students from Alaska complete their internships remotely, one being a two-time intern.
- Is dark matter cold, warm or hot? The answer has to do with dark matter's role in shaping the cosmos.
- How to train your magnet
- The coevolution of particle physics and computing
- How COVID made physics more accessible

New Fermilab videos on YouTube



Where did the Big Bang happen?



Fermilab in the media

Newsweek

TECH & SCIENCE

Ghost Particle Explained As Sterile Neutrino Eludes Physicists in Groundbreaking Study

We the  Italians
two flags one heart

HOME > INTERVIEWS

Anna Grassellino (Italian scientist at Fermilab in Chicago)



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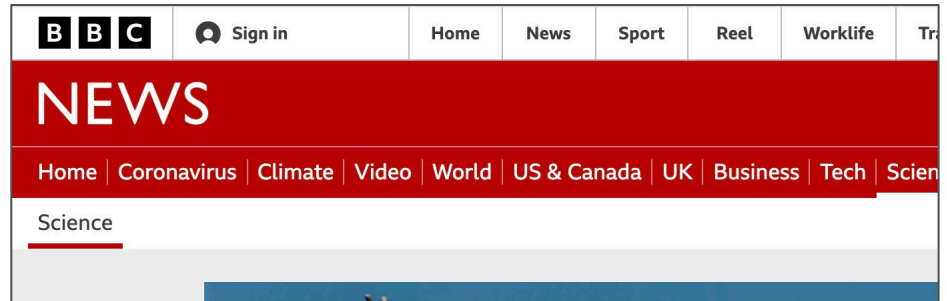
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PARTICLE PHYSICS

Can Sterile Neutrinos Exist?

Physicists have wondered if neutrino particles come in a mysterious fourth variety. Now new experimental findings complicate the question

Fermilab in the media



Navigation bar for BBC News. It includes the BBC logo, a 'Sign in' button, and a menu with links for Home, News, Sport, Reel, Worklife, and Tr. Below this is a red banner with the word 'NEWS' in white. A secondary navigation bar contains links for Home, Coronavirus, Climate, Video, World, US & Canada, UK, Business, Tech, and Science. The 'Science' link is underlined.



WIREDGOV logo and navigation bar. The navigation bar includes links for sign in, Home, Register, About Us, Latest News, My WiredGov, WiredGov Plus, Contracts Locator, and Supplier Locator. Below the navigation bar is a search bar and a date stamp: Friday 29 Oct 2021 @ 13:05. The main article title is 'Science and Technology Facilities Council' with a 'Printable version' link. The article title is 'No hint of theoretical particle sterile neutrino in new results' with the Science and Technology Facilities Council logo. The article text reads: 'Results from a global science experiment have cast doubt on the existence of a theoretical particle beyond the Standard Model.' Below the text is a photograph of a large, cylindrical, metallic particle detector component in a laboratory setting.

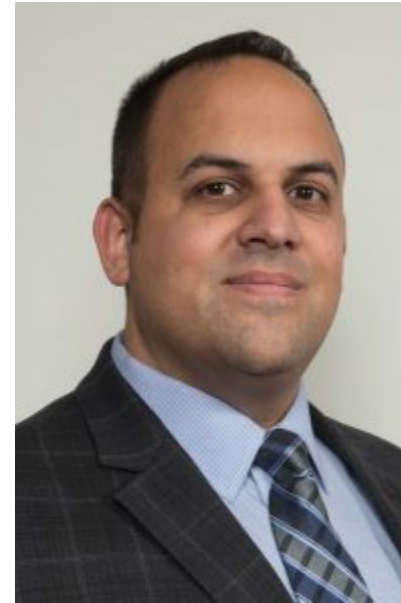


REI coop advertisement. It features the REI logo and the text 'Imagine if everyone felt welcome' with the hashtag #OptOutside. Below the advertisement is a large headline: 'Neutrino result heralds new chapter in physics'. The author's name 'Josh' and the word 'respondent' are partially visible below the headline.

Fermilab people



Pushpa Bhat receives distinguished scientist distinction



Mark Jeffers appointed head of the Facilities Engineering Service Section



Fermilab scientists receive American Physical Society honors

Fermilab people

Two Fermilab scientists named American Physical Society fellows



Questions