

Links for CAB – July 22, 2021

DUNE update

SURF activities impact SD economy

https://www.bhpioneer.com/opinion/surf-activities-impact-sd-economy/article_4c162aac-d063-11eb-b3e7-6fb9df6f896e.html?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210622

Crews Start Lowering Equipment for DUNE Excavation

Excavation has begun on Fermilab's DUNE experiment and everything required to build the LBNF caverns must be lowered a mile below the Earth's surface through a 13- by 5-ft. shaft compartment and then assembled underground.

<https://www.constructionequipmentguide.com/crews-start-lowering-equipment-for-dune-excavation/52379>

Argon Cube

The first module of the prototype pixel-based neutrino catcher developed for the Deep Underground Neutrino Experiment is on its way to Fermilab from the University of Bern.

<https://news.fnal.gov/2021/06/dune-prototype-detector-argoncube-crosses-the-globe/>

Dark energy Survey – In the News

From Noir Lab- DECam Takes Millionth Exposure

https://noirlab.edu/public/announcements/ann21023/?fbclid=IwAR1tW_hwgNEI--T979_xYZCgfaNdSTrpxOB9tVFgCCtZo0018n10cJeHRKE&utm_source=newsletter&utm_medium=email&utm_campaign=ft-210610

Artist-in-residence program

Mark Hirsch

<https://news.fnal.gov/2021/06/visual-artist-mark-hirsch-named-2021-fermilab-artist-in-residence/>

David Biedenbender

<https://news.fnal.gov/2021/06/classical-composer-david-biedenbender-named-fermilabs-2021-guest-composer/>

Fermilab virtual signing with the INFN - July 16

https://news.fnal.gov/2021/07/fermilab-and-infn-sign-3-agreements/?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210716

Symmetry stories

[Blink and it's gone](#)

Fast electronics and artificial intelligence are helping physicists capture data and decide what to keep and what to throw away.

<https://www.symmetrismagazine.org/article/blink-and-its-gone>

[The odd\(eron\) couple](#)

Scientists discovered a new particle by comparing data recorded at the LHC and the Tevatron.

<https://www.symmetrymagazine.org/article/the-odderon-couple>

[What is a photon?](#)

The fundamental particle of light is both ordinary and full of surprises.

<https://www.symmetrymagazine.org/article/what-is-a-photon>

[The Golden Particles](#)

Symmetry writer Lauren Biron won Fermilab's 2021 Virtual Physics Slam by hosting an award show with a physics theme.

<https://www.symmetrymagazine.org/article/the-golden-particles>

[The other particle detector](#)

When studying mysterious subatomic particles, researchers use a different kind of particle detector to prevent run-of-the-mill dust particles from getting in the way.

<https://www.symmetrymagazine.org/article/the-other-particle-detector>

[A strong force for inclusion](#)

Elena Long's search for community as a trans scientist put her at the forefront of LGBT+ advocacy in physics.

<https://www.symmetrymagazine.org/article/a-strong-force-for-inclusion>

[Einstein's garden: translating physics into Blackfoot](#)

Sharon Yellowfly has been preserving and expanding the Blackfoot language by translating the announcements of LIGO's universe-bending discoveries.

<https://www.symmetrymagazine.org/article/einsteins-garden-translating-physics-into-blackfoot>

[A champion of physics in South Africa](#)

In recognition of his own past, Azwinndini Muronga has brought STEM enrichment opportunities to youth in remote, underserved towns and villages.

<https://www.symmetrymagazine.org/article/einsteins-garden-translating-physics-into-blackfoot>

Fermilab videos

Emerging technologies: Particle accelerator R&D

How beams of particles benefit our lives

<https://www.youtube.com/watch?v=SfApjcCyBsw>

Emerging technologies: Quantum information science

Quantum information science can help us improve things like traffic patterns, financial modeling, cybersecurity, and even weather forecasting and medical procedures

<https://www.youtube.com/watch?v=4Dw46EjXIY>

Don Lincoln June 30, 2021

Don Lincoln- Amazing ways to look for dark matter

<https://www.youtube.com/watch?v=hUWUXKe-avM>

June 2, 2021

Even Bananas Episode 7: The three neutrino flavors

<https://www.youtube.com/watch?v=ze-a5CDyOFI>

June 22, 2021

Even Bananas 08: The solar neutrino problem

<https://www.youtube.com/watch?v=nN5hnznAVX0>

July 13, 2021

Even Bananas 09: A bunch of neutrino questions

https://www.youtube.com/watch?v=X3_Wy-OYwRY

In the News

William Shatner, I Don't Understand

<https://www.portable.tv/series/new-series-14012021031206?v=a732cbd3-f6b8-4e63-9b92-9dbdb5242585>

Fermilab delivers final superconducting particle accelerator component for world's most powerful laser: <https://news.fnal.gov/2021/03/fermilab-delivers-final-superconducting-particle-accelerator-component-for-worlds-most-powerful-laser/>

Cosmos-Largest ever map of dark matter

https://cosmosmagazine.com/space/astrophysics/largest-ever-map-of-dark-matter/?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210608

Yahoo News- The best dark matter map to date raises questions about the universe

https://www.yahoo.com/now/dark-matter-map-212951919.html?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210609

DECam Takes Millionth Exposure

https://noirlab.edu/public/announcements/ann21023/?fbclid=IwAR1tW_hwgNEI--T979_xYZCgfaNdSTrpxOB9tVFgCCtZo0018n10cJeHRKE&utm_source=newsletter&utm_medium=email&utm_campaign=ft-210610

Don Lincoln: I want to believe in UFOs. Prove me wrong.

<https://www.cnn.com/2021/06/17/opinions/pentagon-ufo-report-opinion-lincoln/index.html>

Gizmodo

Young Physicists Are Shaping the Next Generation of Discoveries

https://gizmodo.com/young-physicists-are-shaping-the-next-generation-of-dis-1847121484?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210624

Argonaut cold robotics story

Argonaut's mission will be to monitor conditions within ultracold particle detectors by voyaging into a sea of liquid argon kept at minus-193 degrees Celsius — as cold as some of the moons of Saturn and Jupiter.

<https://scitechdaily.com/argonaut-ultracold-robotics-project-voyaging-into-a-sea-of-liquid-argon/>

Discover magazine

Could misbehaving muons upend the known laws of physics?

Muons drew the attention of physicists around the world after an experiment at the Fermi National Accelerator Laboratory, or Fermilab, in Illinois demonstrated that they're far more magnetic than expected.

<https://www.discovermagazine.com/the-sciences/could-misbehaving-muons-upend-the-known-laws-of-physics>

People

A minute with Aleksandra Ćiprijanović, astrophysicist

https://news.fnal.gov/2021/06/a-minute-with-aleksandra-ciprijanovic-astrophysicist/?utm_source=newsletter&utm_medium=email&utm_campaign=ft-210621