



EDUCATION AND OUTREACH COMMITTEE

EDUCATION AND OUTREACH MEETING
WEDNESDAY 8TH FEBRUARY 2023





Education

Resources

Communication

Website

Communication and Education online platform for the public

Engage and educate audiences

Social Media

Audience engagement and accessing new audiences

Highlight collaboration, publish resources and developments

Merchandise

Merchandise for education and outreach events, and DUNE activities

Advertise DUNE brand

Local Events

Support and resources for local events

Communications, media and highlights

Resources

- Printables: Brochure, factsheet, posters, workbooks
- Multimedia : Images, photos, videos, animations
- Models: Lego, 3D
- Masterclasses

ORGANISATION

Education & Outreach Committee

- Who to add
 - CERN representative
 - Other continents?
 - Young CERN

How can other contribute

- Do we need a wider outreach Team
 - Student projects
 - How do we reward people?
 - How can they present to us, at our biweeklies?



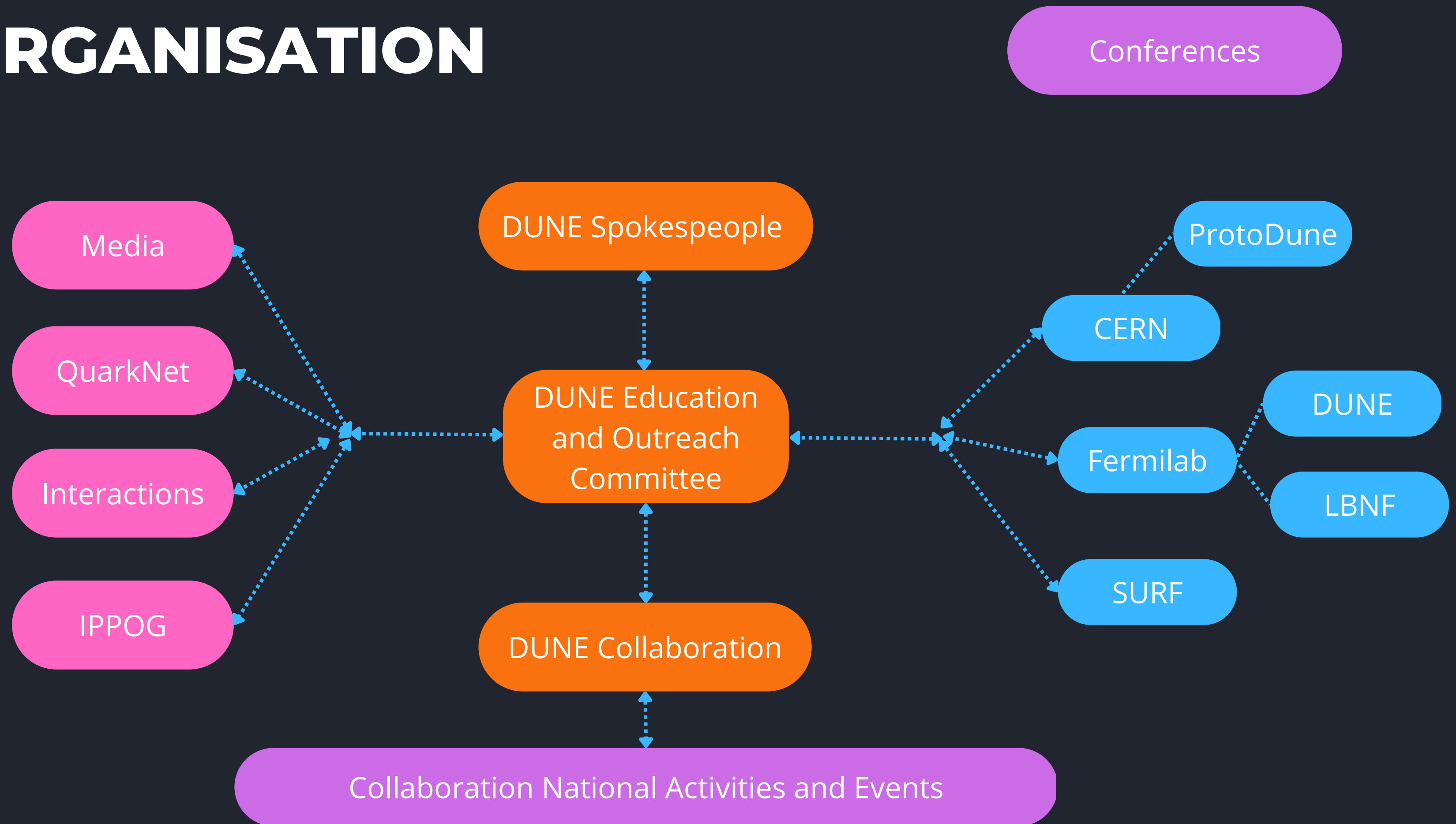
ORGANISATION

DUNE internal Communications

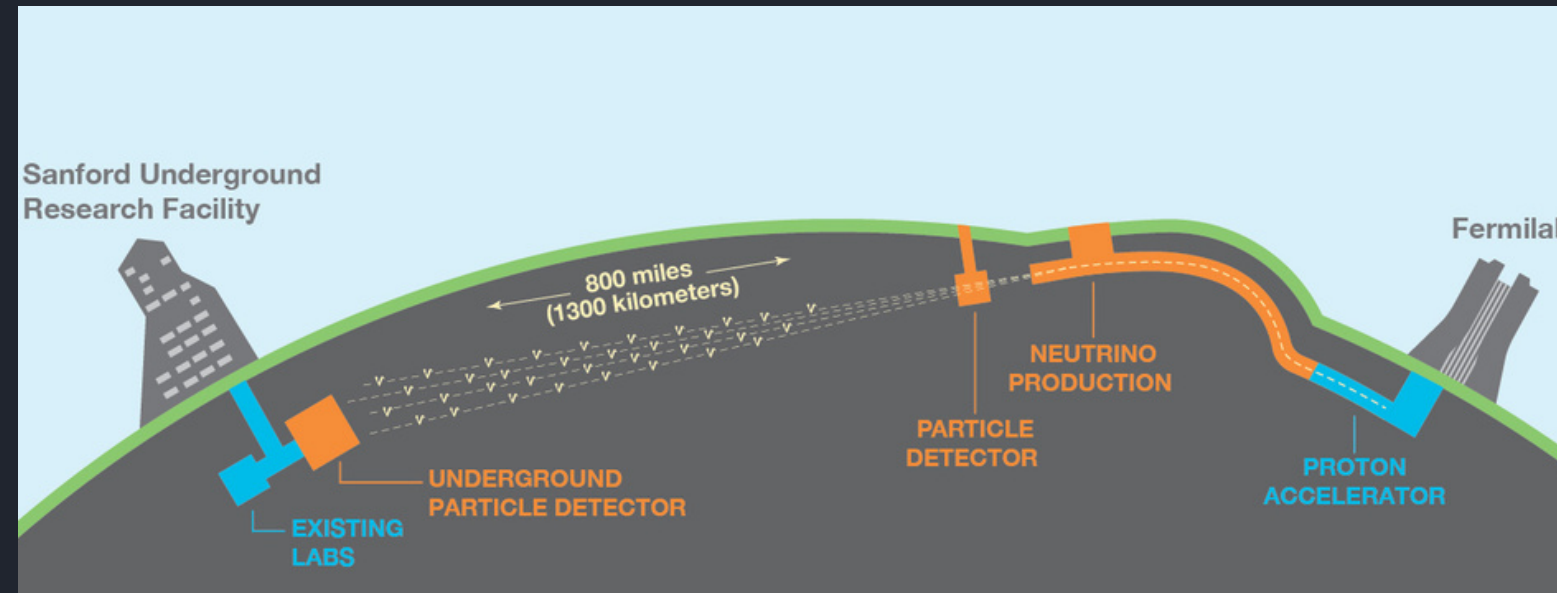
- Regular updates at collaboration calls
 - Should we schedule these in?
- Slack Channel
- E&O mailing list
- Invitation for presenting at our committee meetings
- Dedicated sessions at DUNE weeks?
 - maybe once a year, more?
- Twiki page
- What do we want to communicate
 - Updates and engagement
 - Info on trainings
 - E&O opportunities



ORGANISATION

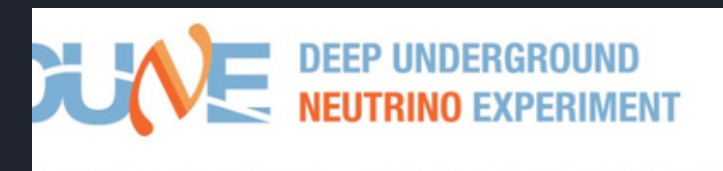


WEBSITE



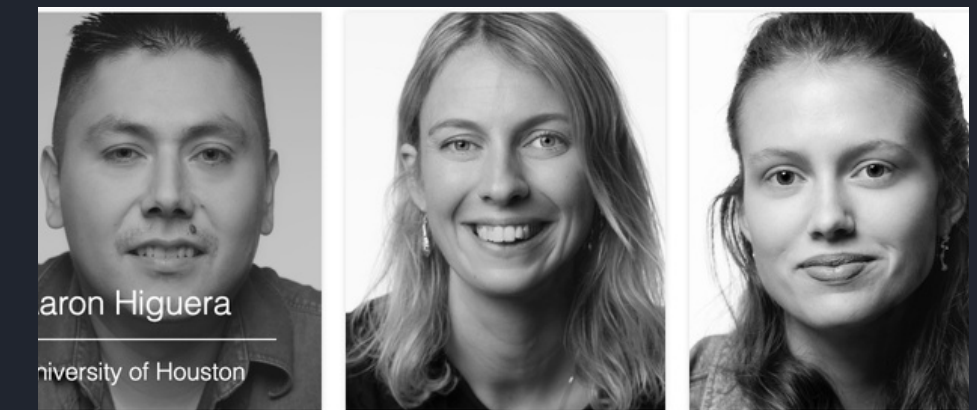
Todo

- Review and update
- Inline with communications plan
- We discussed ideas for
 - blogs
 - paper explainers / 2 months
 - make more dynamic - updates



An International Experiment

The Deep Underground Neutrino Experiment (DUNE) is a... Discoveries over the past half-century have put neutrinos, ... for further research into several fundamental questions ab... questions that DUNE will seek to answer.



Aiming for groundbreaking discoveries

Origin of Matter
Could neutrinos be the reason that the universe is made of matter? By exploring the phenomenon of neutrino oscillations, DUNE seeks to understand neutrinos and their role in the universe.

Unification of Forces
With the world's largest cryogenic particle detector located deep underground, DUNE is designed to search for signs of proton decay. This could reveal a relation between the forces of nature, moving us closer to realizing Einstein's dream of a unified theory.

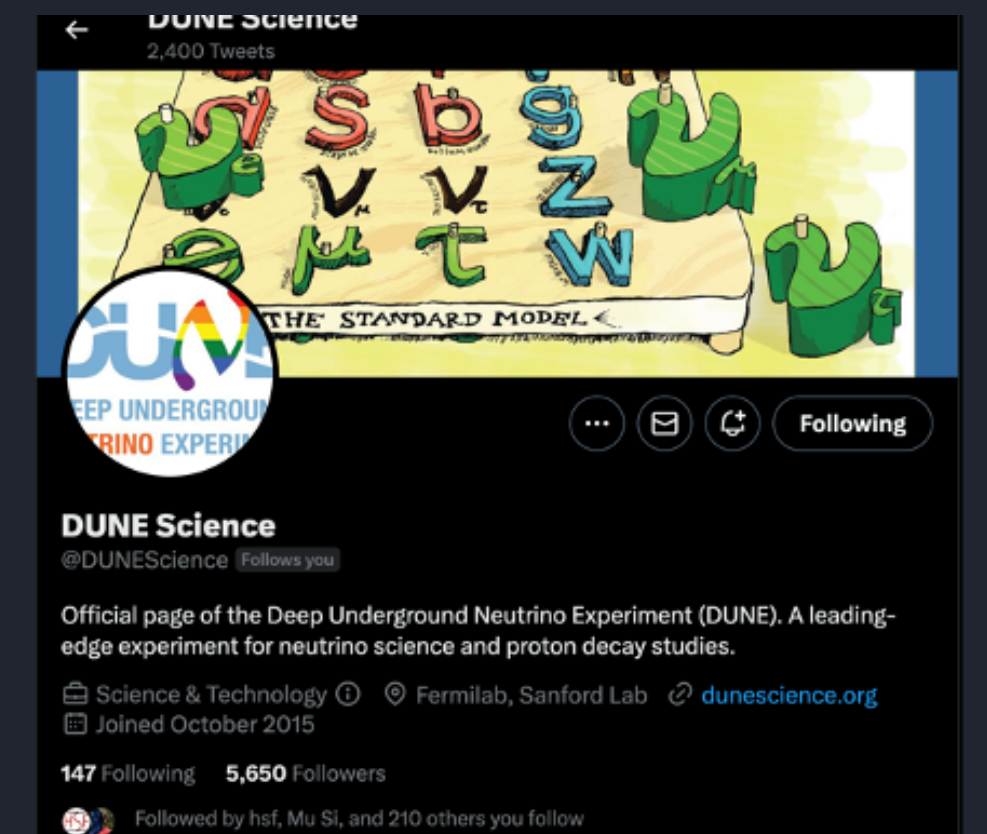
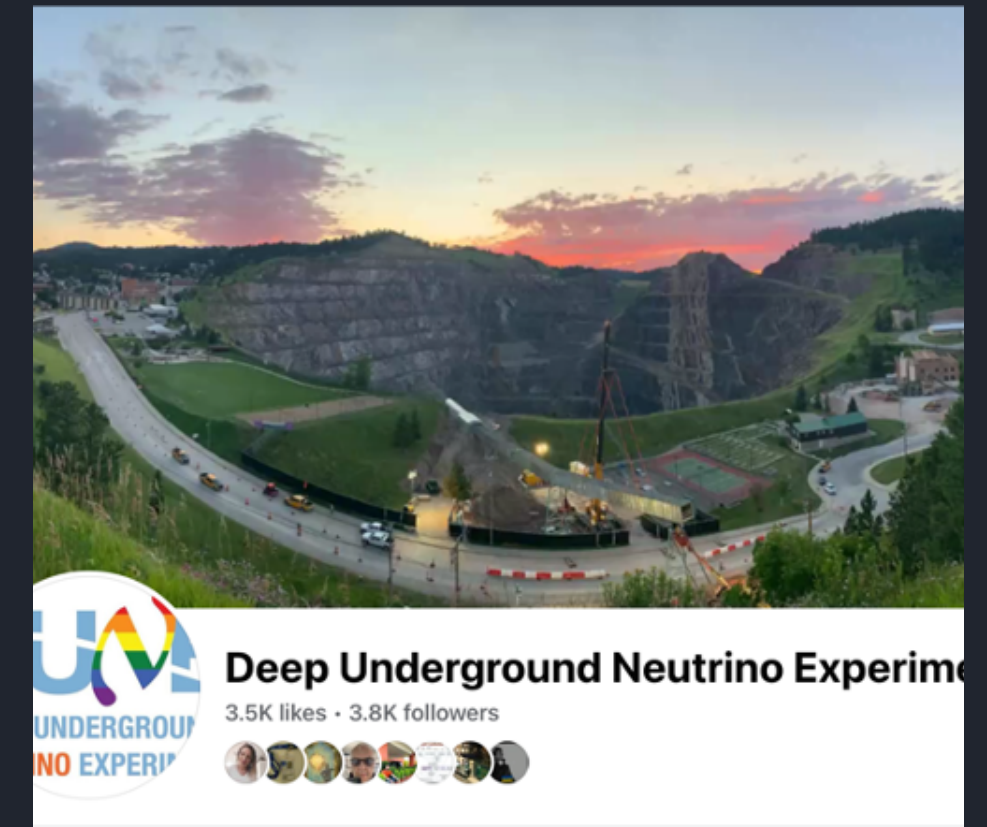
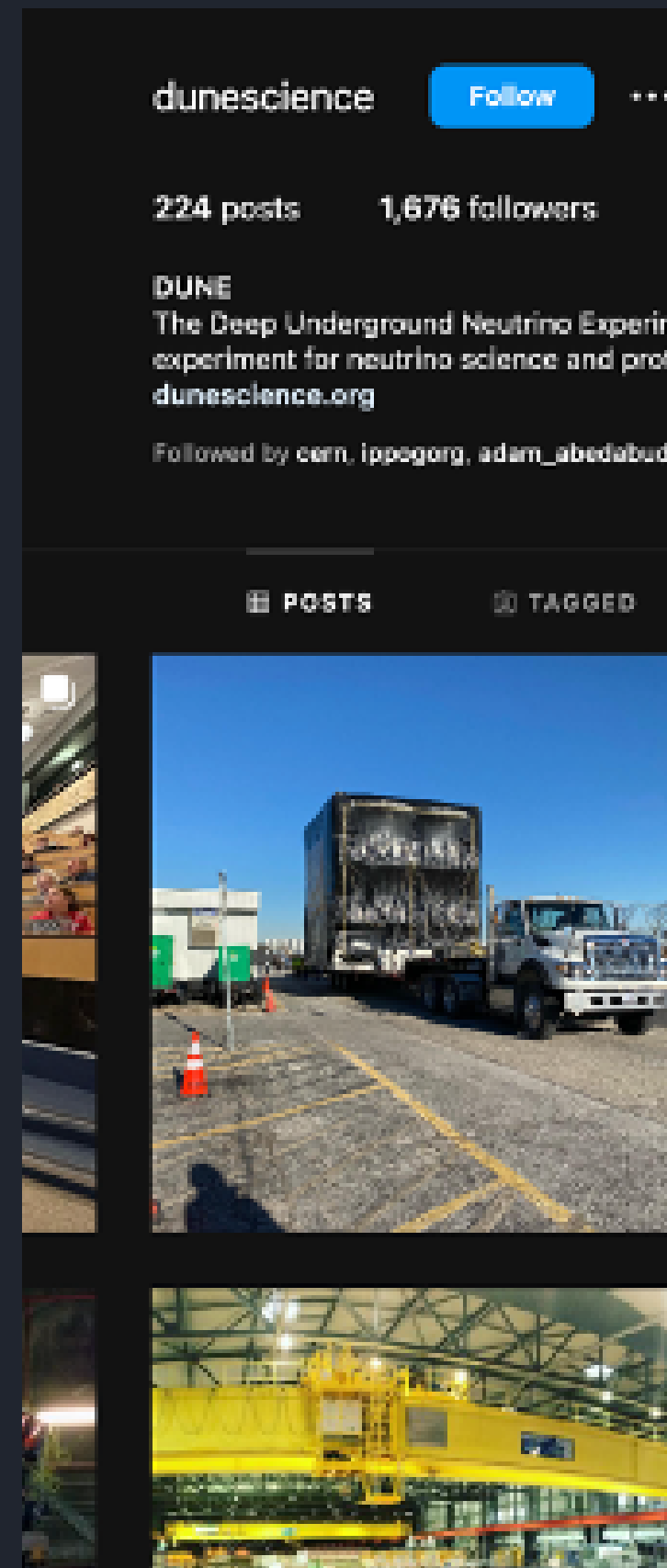
Black Hole Formation
DUNE's observation of thousands of neutrinos from a core-collapse supernova will allow us to peer inside a newly-formed neutron star and potentially observe the formation of a black hole.

• <https://www.dunescience.org/>

SOCIAL MEDIA

Todo

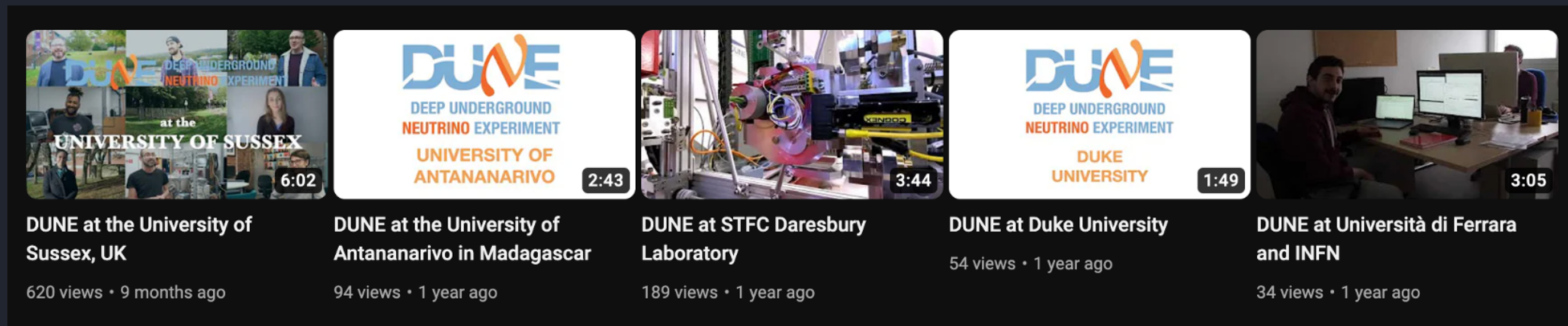
- Review platforms
- Develop social Media plan
- Campaigns - what do we want to focus on
 - Upcoming 11th FEB Women
 - What about LGBT (dune week comment)



SOCIAL MEDIA

YOUTUBE

<https://www.youtube.com/@dunescience6308>



All institutes invited to make a short video about your DUNE group!!

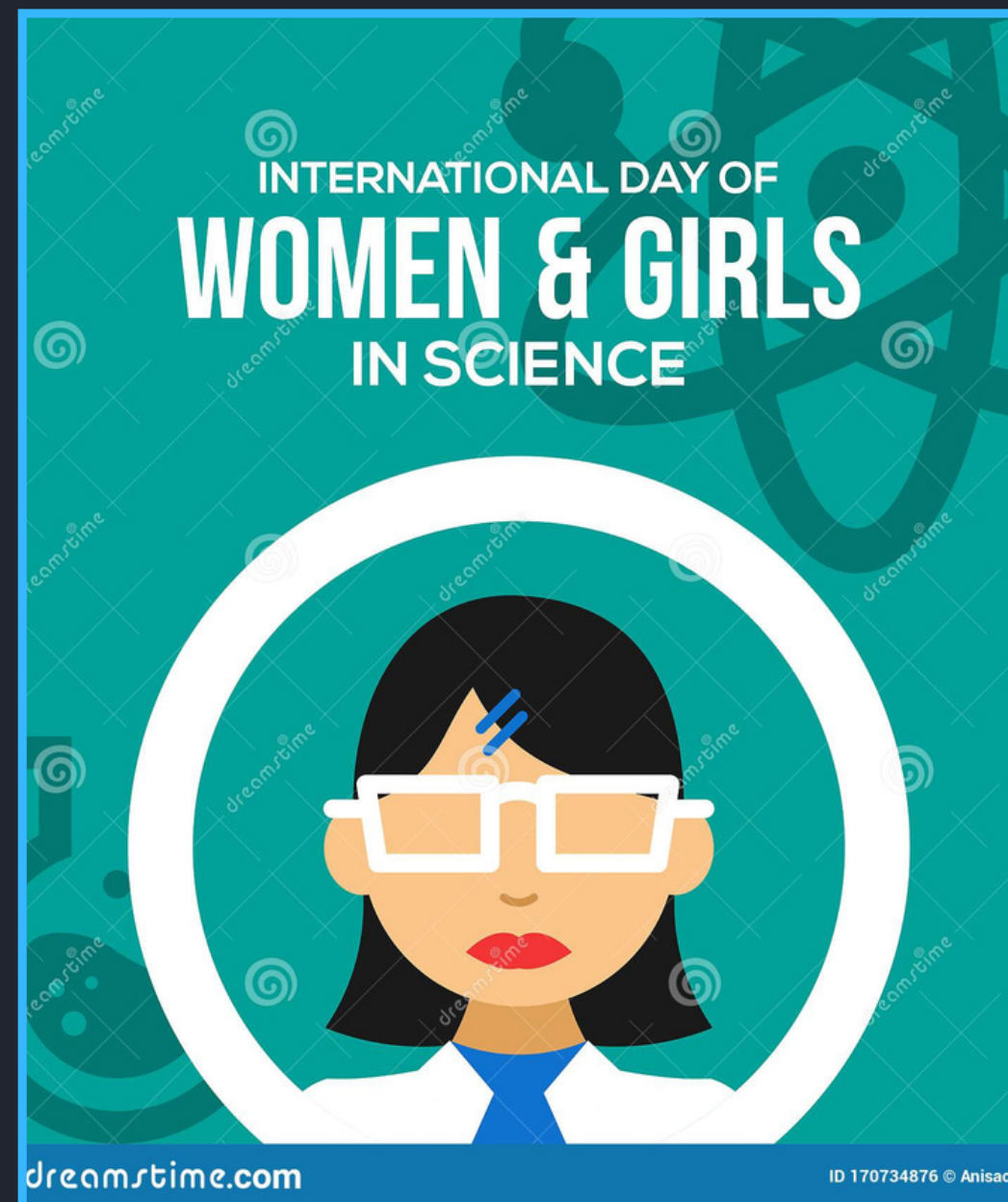
We will include more videos and animations on our YouTube channel, please subscribe, and tell us any suggestions

SOCIAL MEDIA CAMPAIGNS



#February11

The International Day of Women & Girls in Science



We want to use this international day to inspire more women and girls in Science

We will make Social Media posts to share through online networks of the fantastic women working at DUNE!

Please send us a photo of you working, maybe visiting protoDUNE, in the lab, or wherever! And we will ask you for a quote about why you love science!

MERCHANDISE



Todo:

- What Merch do we need
- Design / T-shirt competition?



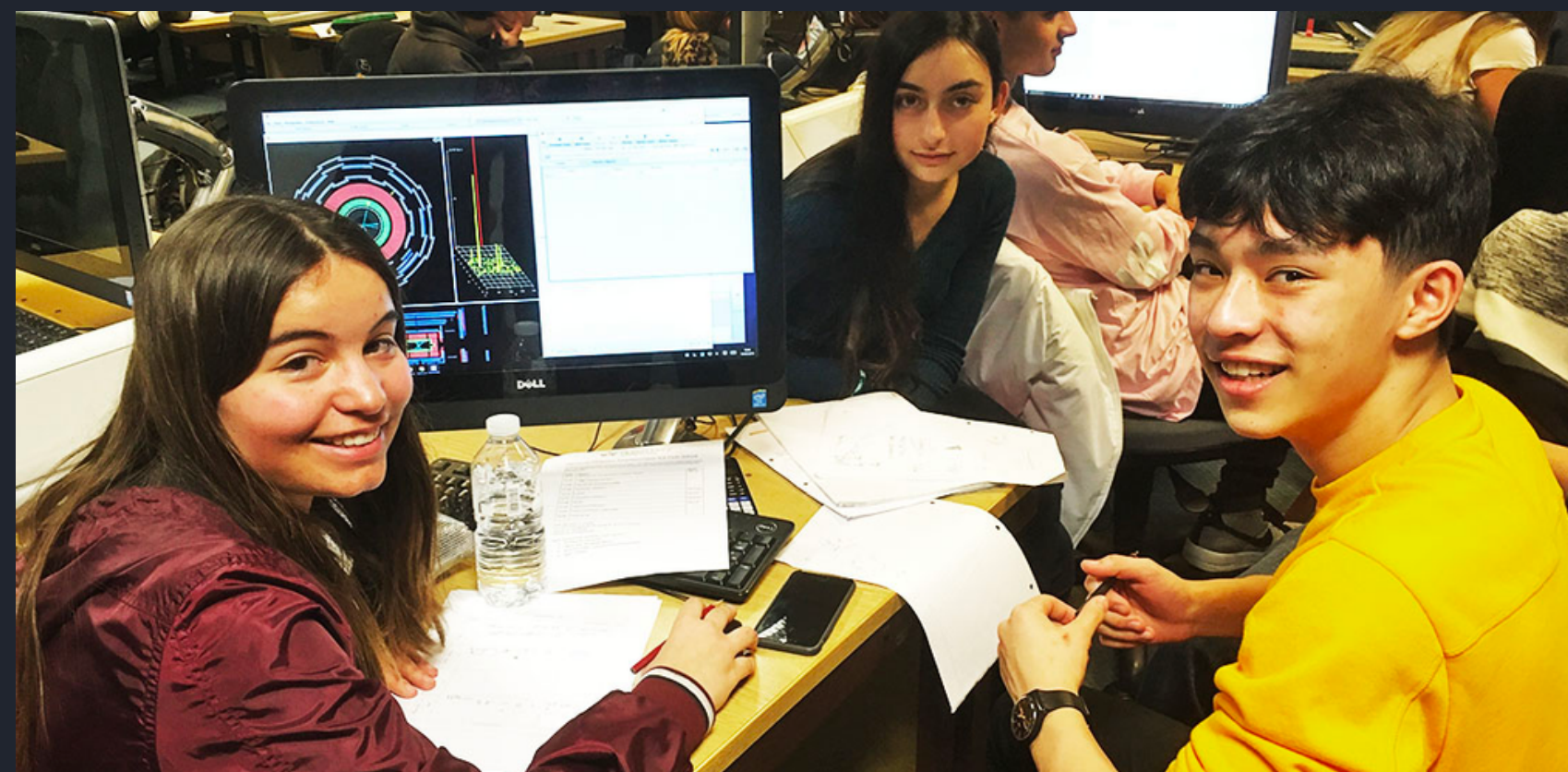
LOCAL EVENTS



Procedure to increase the impact of
Collaboration local/ national events and
activities

Support your communications, and
provide help with educational and visual
resources

DUNE WEEK COLOMBIA? (exhibition /
public event)



RESOURCES PRINTABLES

Developing:

- a new DUNE brochure
- set of DUNE posters and factsheets
- workbooks or educational resources for young people
- Translations needed

Building an International Flagship Neutrino Experiment

Contact:
Fermilab Office of
Communication
+1 630 840-3351
fermilab@fnal.gov
fbnl-dune.fnal.gov

An international team of over 1,000 scientists and engineers from more than 30 countries is building the most advanced neutrino experiment in the world, which could change our understanding of the universe. Groundbreaking for this revolutionary endeavor—hosted by the U.S. Department of Energy's Fermilab with contributions from across the U.S. and around the globe—took place in July of 2017. A large prototype detector successfully recorded data at the European research center CERN from 2018 to 2020.

Sanford Underground Research Facility, South Dakota Fermi National Accelerator Laboratory, Illinois

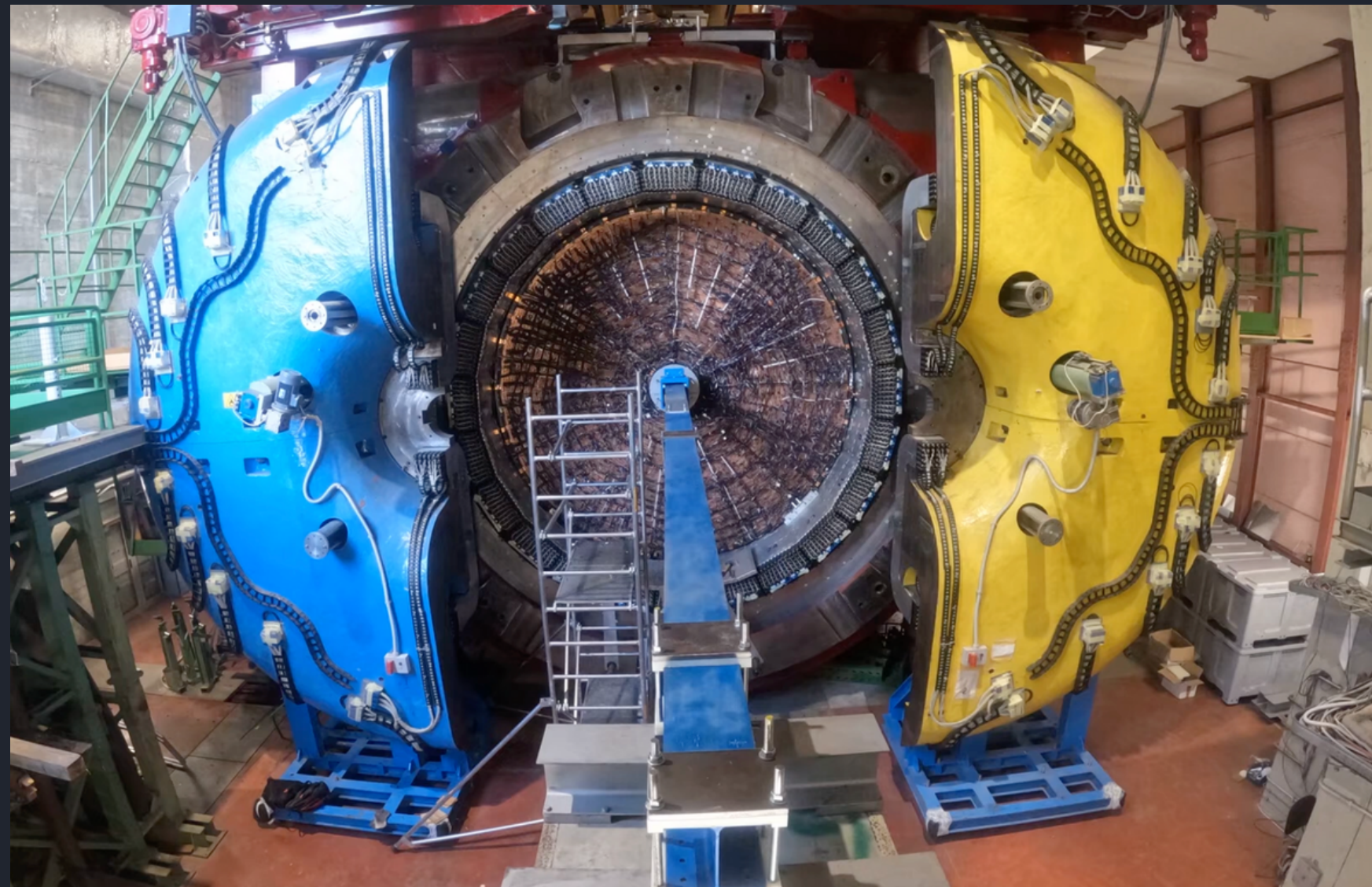
800 miles/1300 km

Deep Underground Neutrino Experiment Long-Baseline Neutrino Facility Proton Improvement Plan II



RESOURCES

MULTIMEDIA

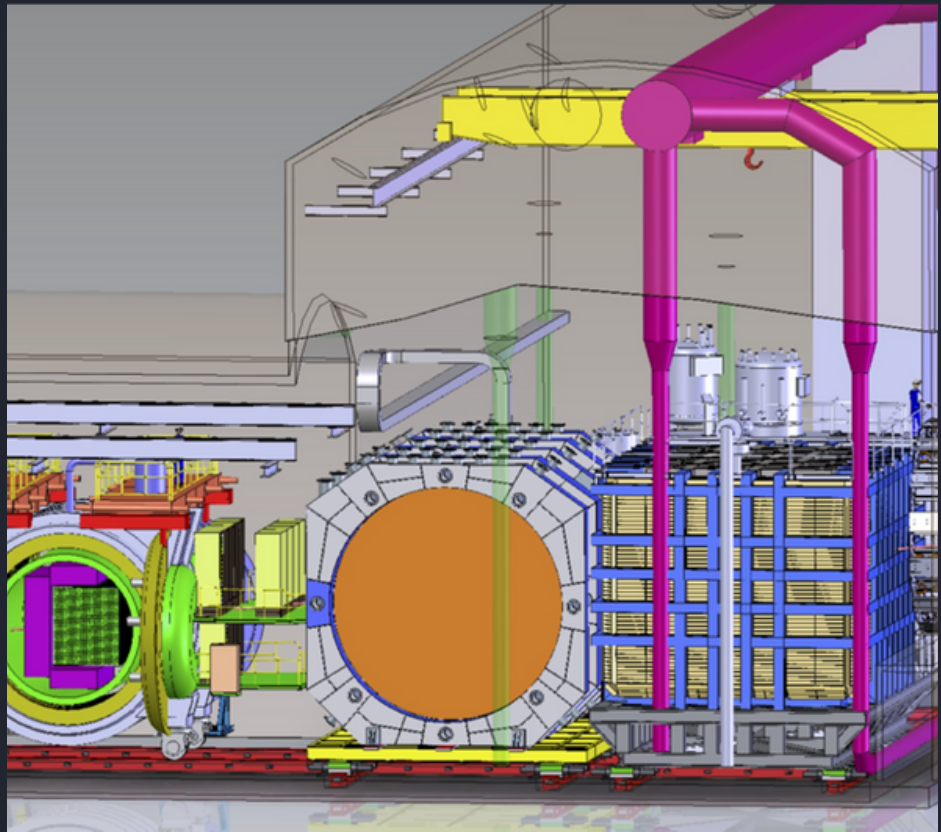
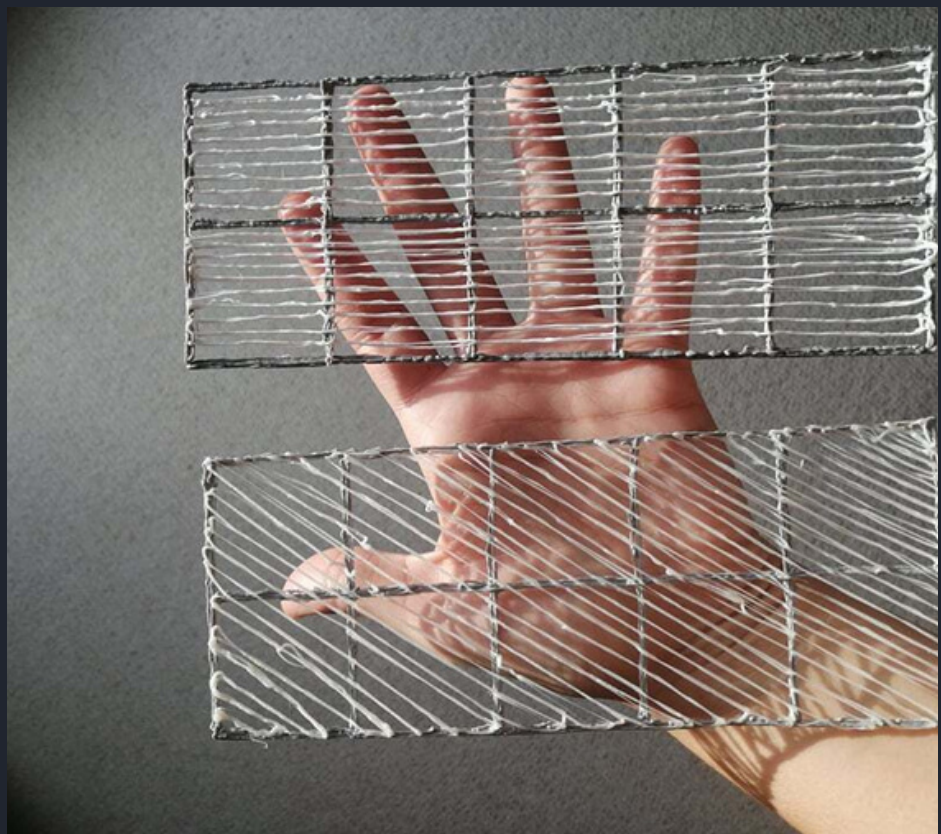


Multimedia!

- Videos
- Animations
- Images
- Photos
- GIFs

Where do we store these
What should we make

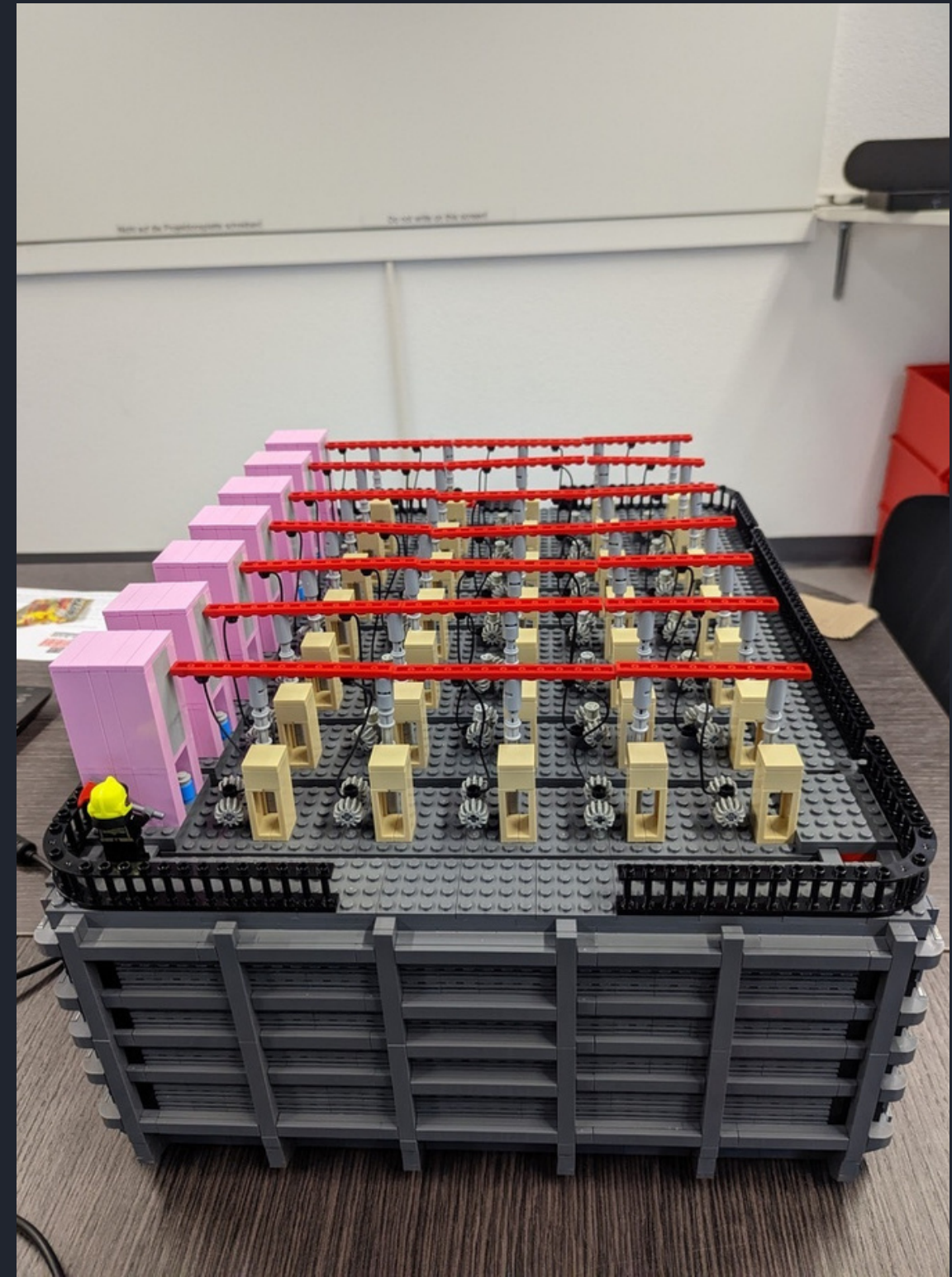
APAs



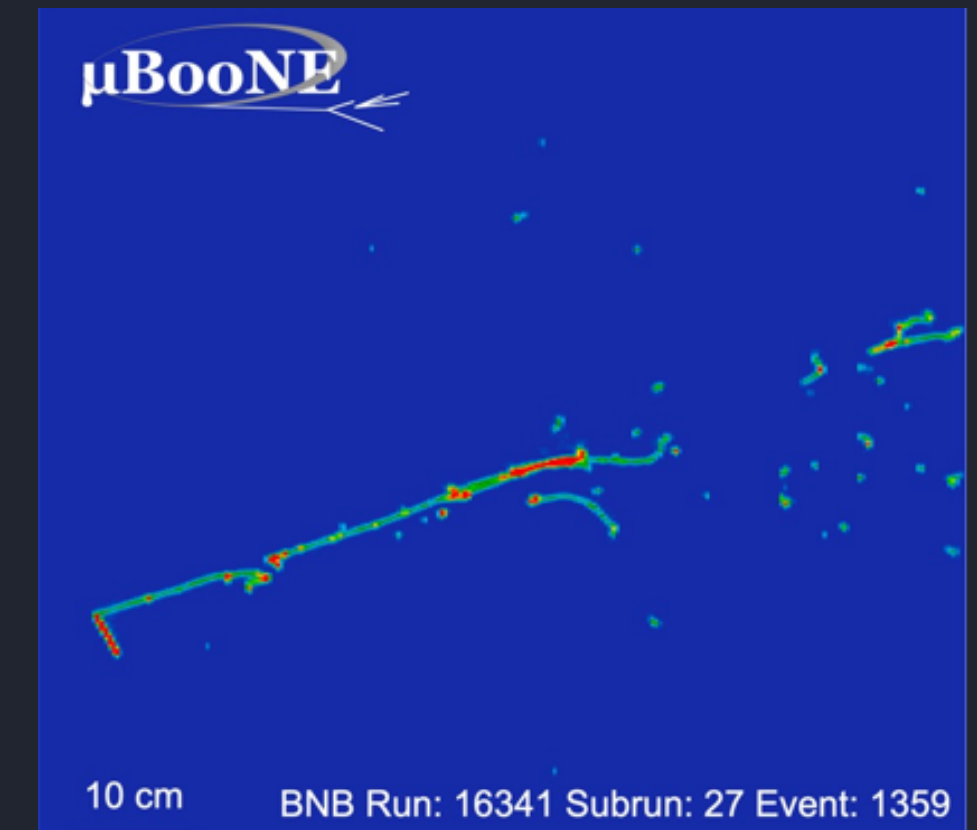
RESOURCES MODELS & VR

Lets do models!
Get in contact with
people working in this!

Thaigo sussex applyng
for VR -others?



RESOURCES MASTERCLASSES



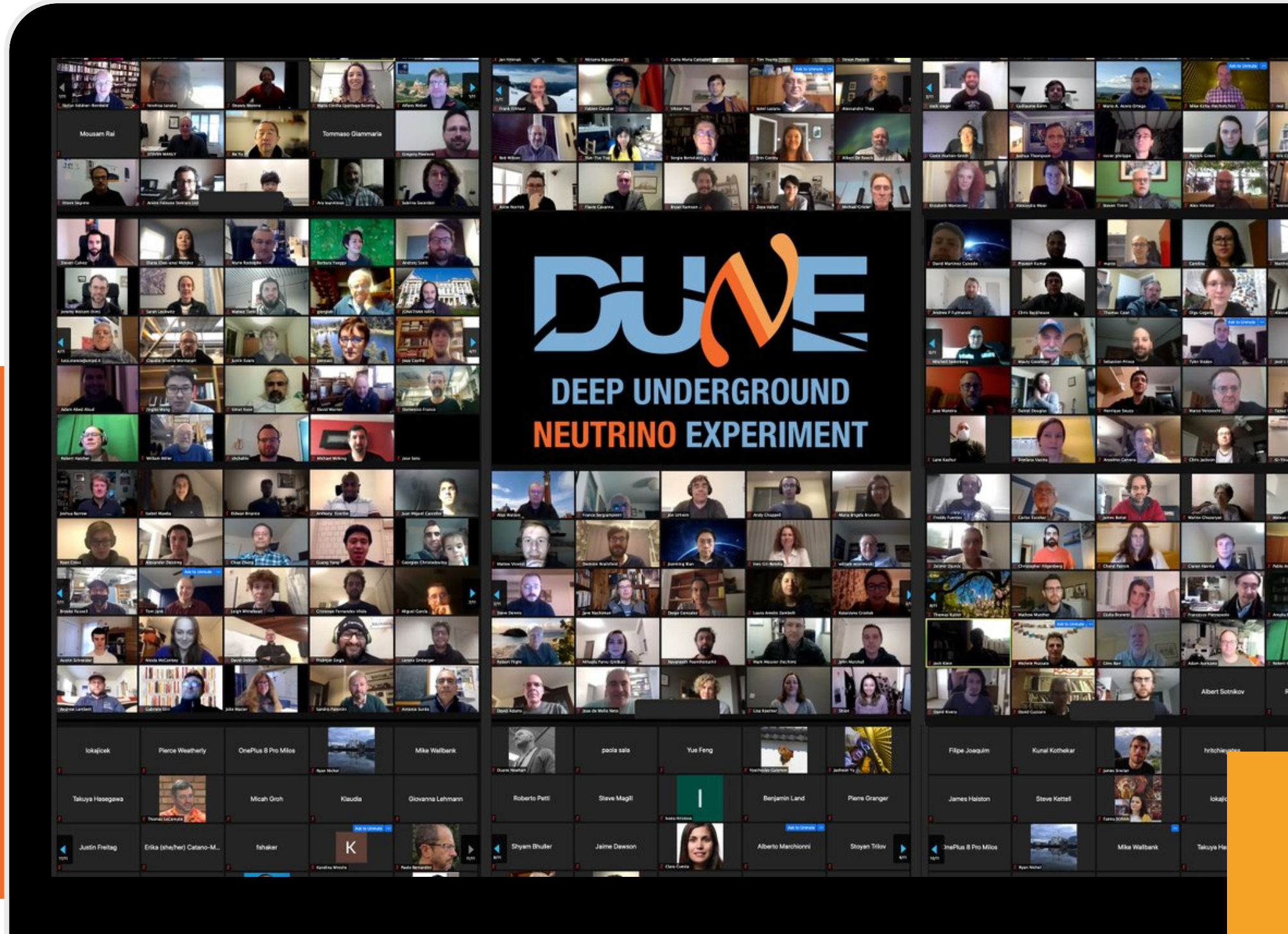
- Working with IPPOG and Quark Net and DUNE collaborators
- MINERVA and Microboone
- Teach young people DUNE analysis
- DUNE person talked to us?





CONTACT US

dune-outreach@fnal.gov
Join our Slack Channel:
[#outreach-general](#)



The DUNE Education and Outreach Committee (EOC) is responsible for education and outreach activities in collaboration with DUNE management.

- Initiate, plan, and organise education and outreach activities related to DUNE science goals and technologies.
- Work with the Fermilab Communications team to develop material communicating DUNE science to the public, including DUNE's public web presence.
- Maintain the social media presence of the DUNE Collaboration.
- Coordinate education and outreach activities with other collaborations.
- Centrally support local DUNE education and outreach activities organised by DUNE collaborators at an appropriate level.
- Approve centrally used DUNE education and outreach material.



WHO ARE WE

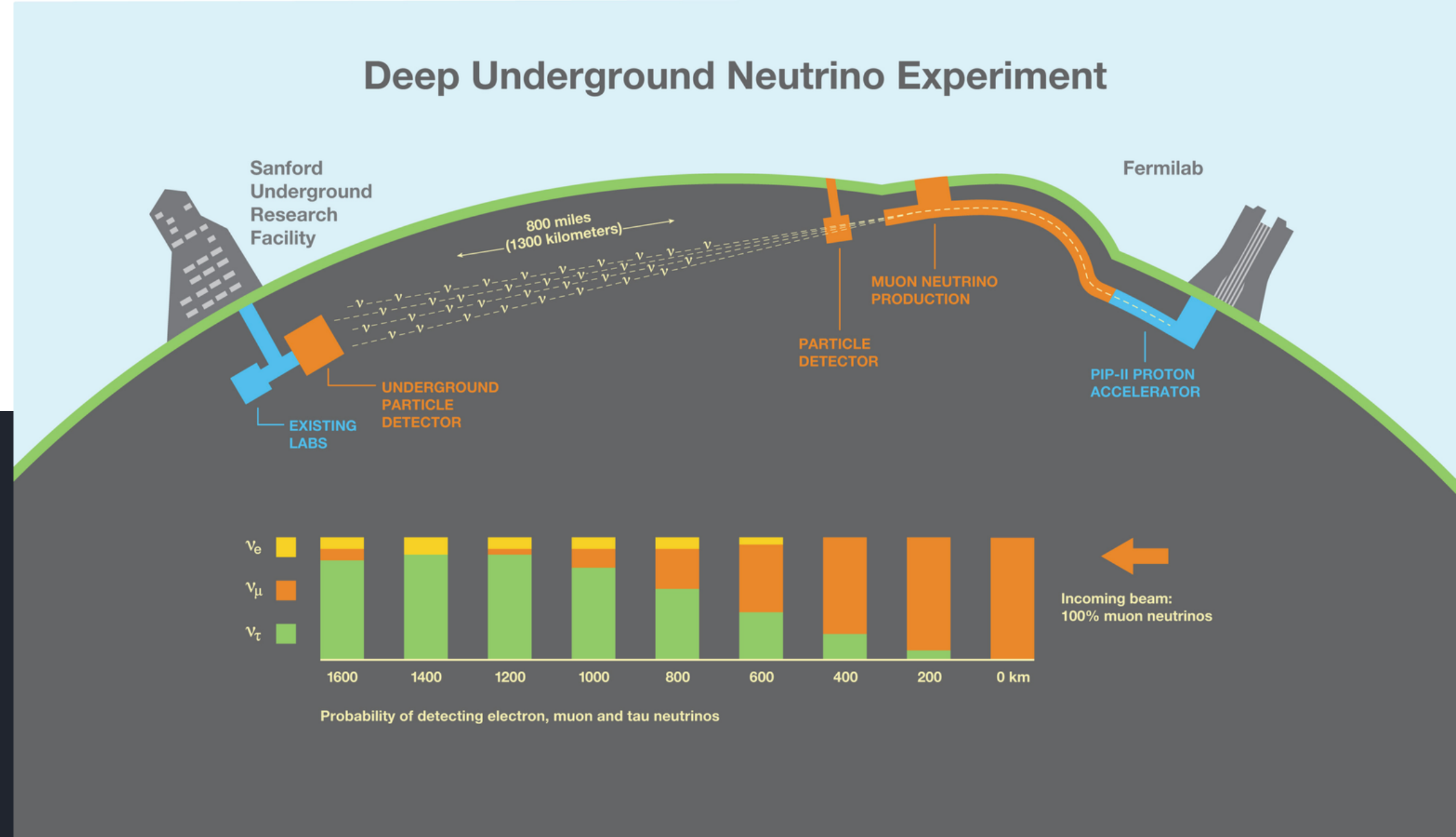
- Mateus Carneiro (BNL)
- Linda Cremonesi (QMUL)
- Kirsty Duffy (Oxford)
- Maxine Hronek (Fermilab)
- Helio da Motta (CBPF)
- Kate Shaw (Sussex) chair



WHY

Publically funded science should communicate their science to the public, improve understanding of scientific method and of DUNE and DUNE Science

Improved communications and public engagement can build public appreciation of DUNE and influence government and policy makers opinion



As scientists we must work to inspire and educate young people with focus on diversity, about STEM



DEVELOPING A DUNE E&O STRATEGIC PLAN

WHAT ARE OUR THEMES AND MESSAGES

WHO ARE OUR TARGET AUDIENCES?

We need everyones input!!

General Public:

- We are high risk blue skies physics
- We have impressive impact on technology, economy, education, training and STEM
- We are Big Scale Science!

Students and teachers

- Amazing world of neutrino physics
- Our collaboration and its diverse make up
- Educational goals in detector physics

Everyone

- DUNE is a leading-edge international experiment for neutrino science.
- The diversity in our collaboration