



DUNE at the Royal Society Summer Exhibition 2024

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KICK OFF MEETING FRIDAY 8TH MARCH 2024

RSSE24

The **Summer Science Exhibition** is a free, week-long festival celebrating cutting edge UK science 2 - 7 July.

Title: Capturing Nature's Ghosts DUNE UK Partnership

10,000 visitors attend

- 7,000 members of the public
- 2,000 school students and teachers
- 1,000 invited guests from media, government and policy influencers.



GOALS

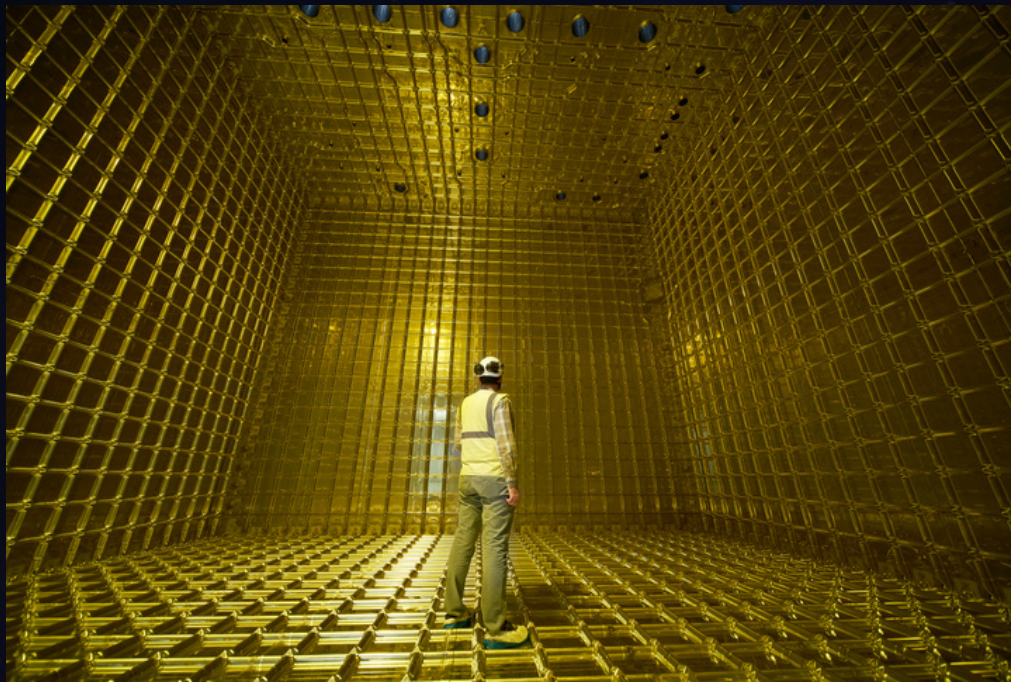
Key Messages:

- **DUNE UK Community** : Who we are, our role in the experiment
- **Neutrino Physics** : What are neutrinos? Why do we study them?
- **Detector Technology** : How to we detect the invisible?

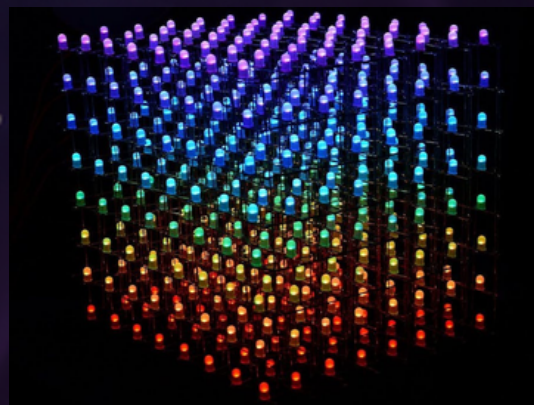
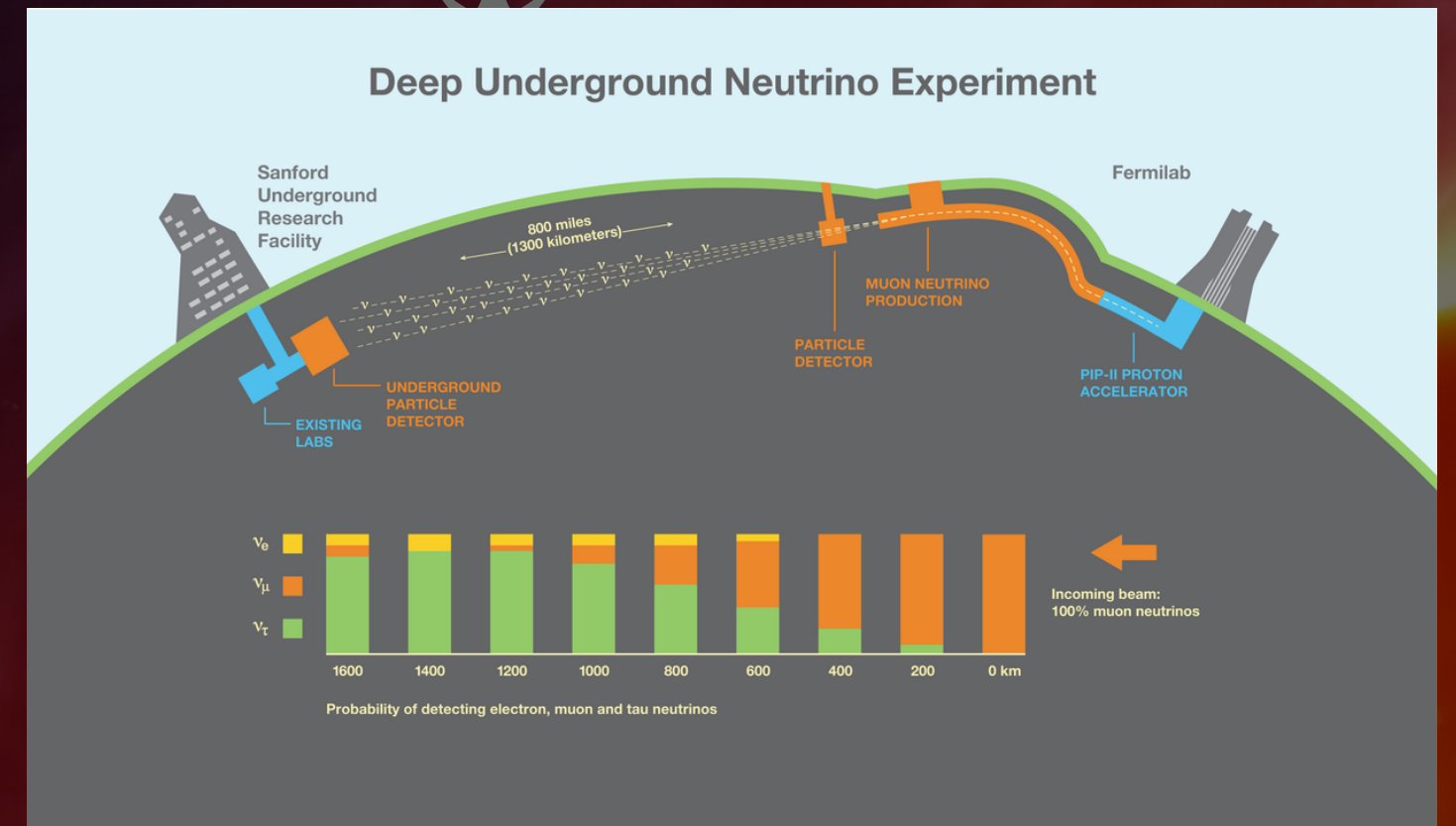
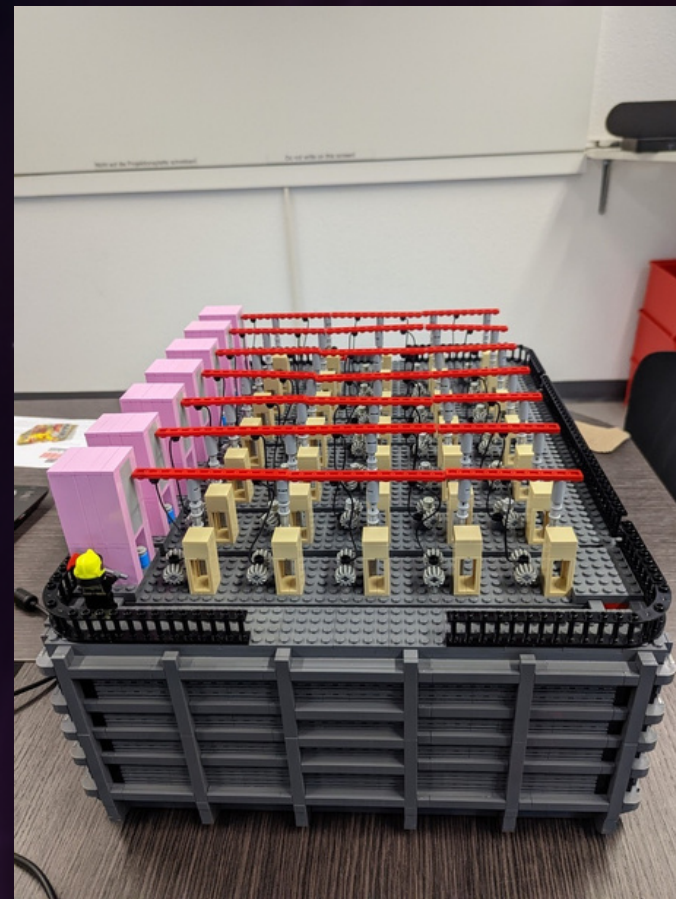
Goals:

- Engage **young** people and **teachers** with fundamental physics, neutrino physics and **research careers**
- Invite the **media** and **policy makers** to appreciate the **UK effort** and **leadership** in neutrino physics and the DUNE experiment
- **Communicate** and **engage** the public about the DUNE experiment, and neutrino physics

ITEMS



STAND is in the style of
DUNE Detector



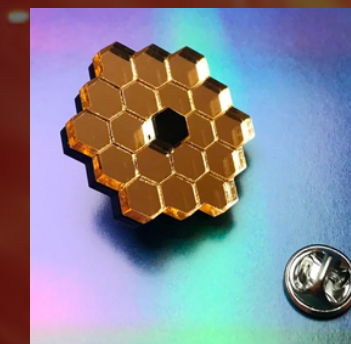
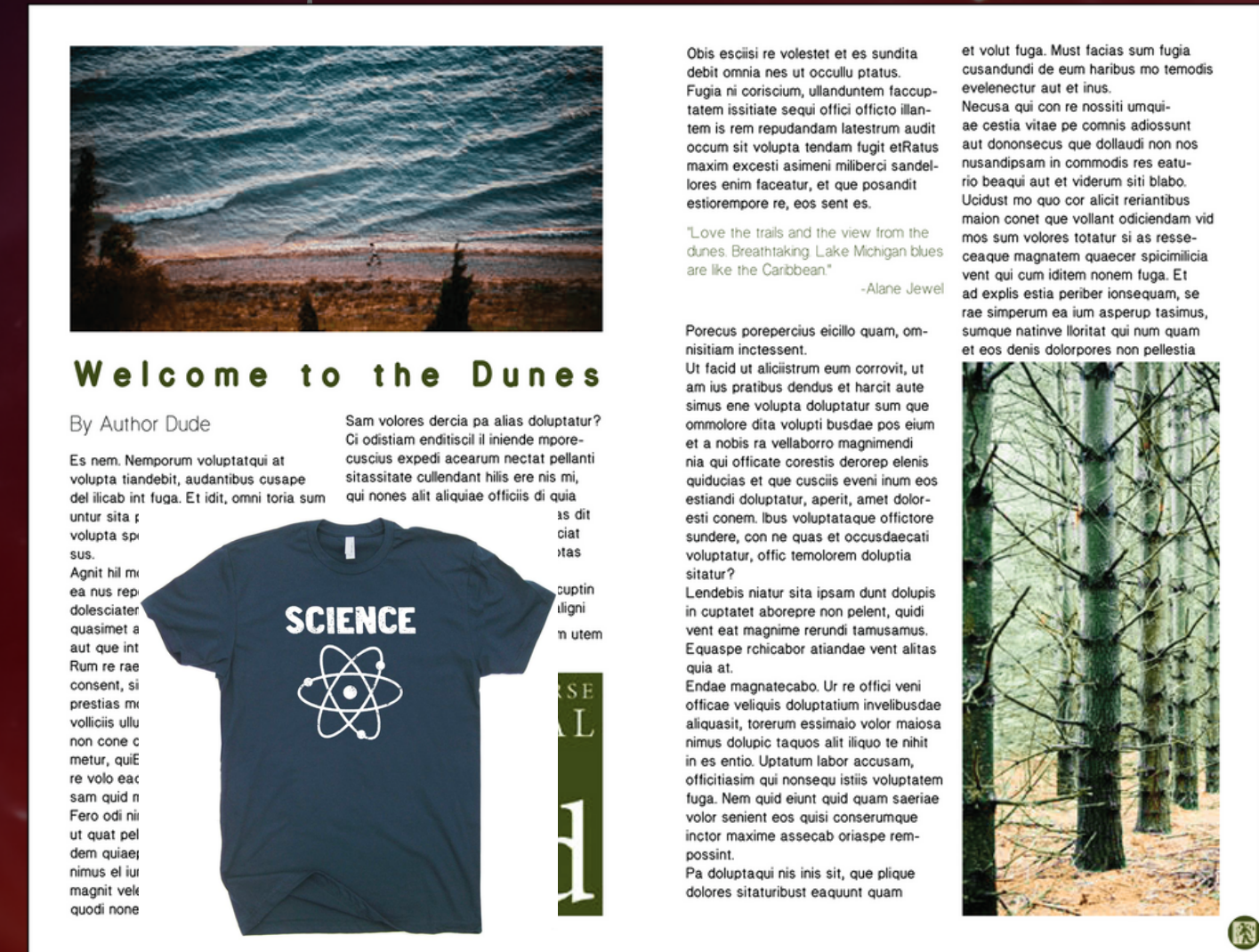
LED Detector Game



Materials

- Brochure about DUNE for UK audiences
- Stickers
- Colouring in Sheets
- Dune Posters
- Pins / badges
- TShirts for Volunteers
- Water Bottle for Volunteers

Online materials and multimedia content will be made available on DUNE UK website for the public.



Communications

- Issue a 'press release to each university office in line with the Royal Society
- Look for radio / print opportunities both locally, regional, nationally
- Social media campaign in line with Royal Society and institutes
- Promotional Video

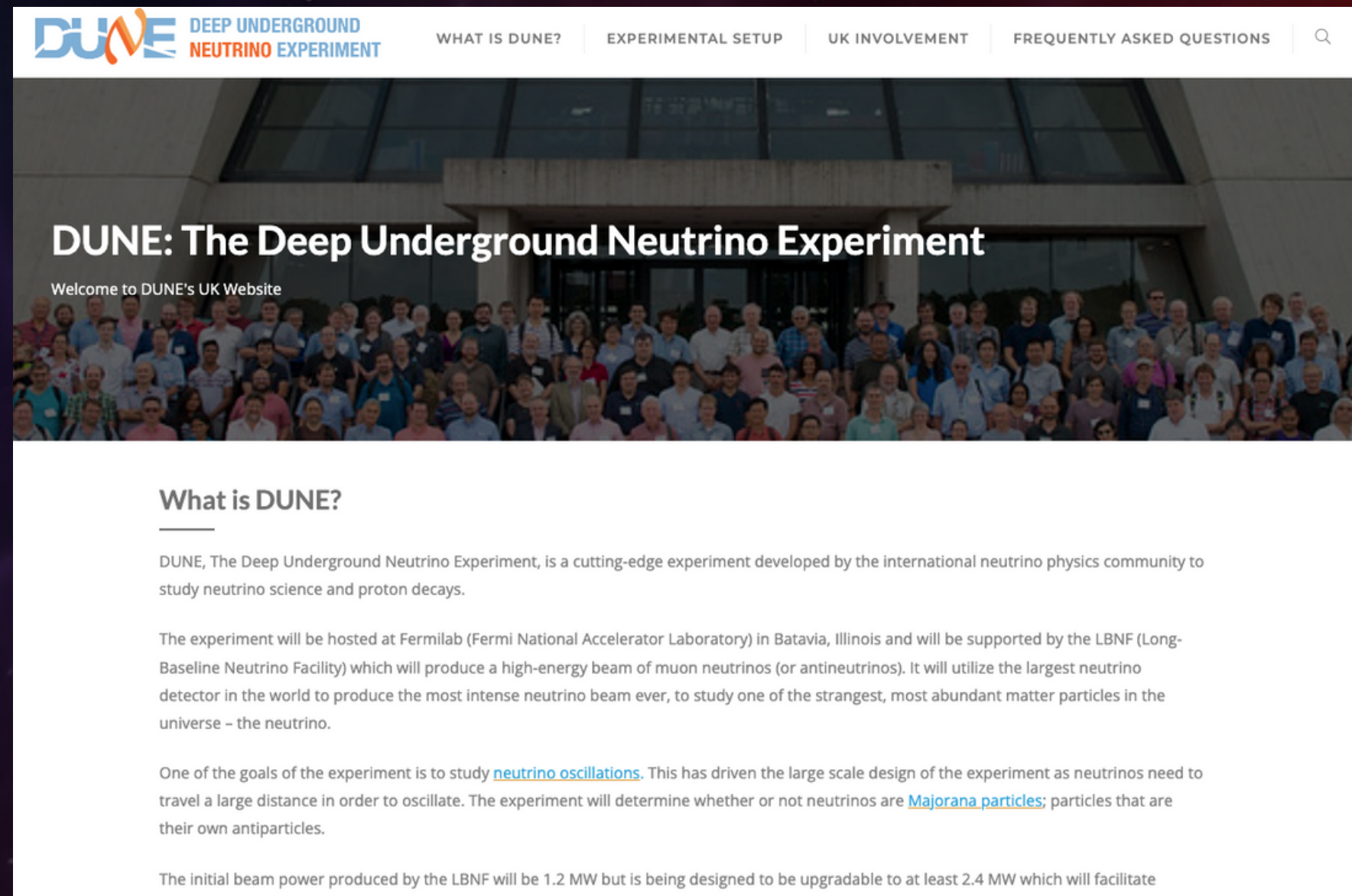
Content

- Videos of work going on in labs (Daresbury, Manchester...)
- Photos of volunteers doing DUNE Science Across the Country
- Written content about neutrinos

DUNE UK Website

We will work with the website group and Lancaster to update the DUNE UK webpages which is very nice shape!

Multimedia and online resources will go here, and the website will be advertised.



The screenshot shows the DUNE UK Website. At the top left is the logo for DUNE (Deep Underground Neutrino Experiment). To the right of the logo is a navigation menu with links for 'WHAT IS DUNE?', 'EXPERIMENTAL SETUP', 'UK INVOLVEMENT', and 'FREQUENTLY ASKED QUESTIONS'. A search icon is also present. Below the navigation is a large banner image of a group of people standing in front of a building. The text 'DUNE: The Deep Underground Neutrino Experiment' is overlaid on the banner, with 'Welcome to DUNE's UK Website' underneath. Below the banner is a section titled 'What is DUNE?' with a horizontal line underneath. The text in this section describes the experiment, its location at Fermilab, and its goals, including studying neutrino oscillations and Majorana particles.

DUNE DEEP UNDERGROUND
NEUTRINO EXPERIMENT

WHAT IS DUNE? EXPERIMENTAL SETUP UK INVOLVEMENT FREQUENTLY ASKED QUESTIONS

DUNE: The Deep Underground Neutrino Experiment

Welcome to DUNE's UK Website

What is DUNE?

DUNE, The Deep Underground Neutrino Experiment, is a cutting-edge experiment developed by the international neutrino physics community to study neutrino science and proton decays.

The experiment will be hosted at Fermilab (Fermi National Accelerator Laboratory) in Batavia, Illinois and will be supported by the LBNF (Long-Baseline Neutrino Facility) which will produce a high-energy beam of muon neutrinos (or antineutrinos). It will utilize the largest neutrino detector in the world to produce the most intense neutrino beam ever, to study one of the strangest, most abundant matter particles in the universe - the neutrino.

One of the goals of the experiment is to study [neutrino oscillations](#). This has driven the large scale design of the experiment as neutrinos need to travel a large distance in order to oscillate. The experiment will determine whether or not neutrinos are [Majorana particles](#); particles that are their own antiparticles.

The initial beam power produced by the LBNF will be 1.2 MW but is being designed to be upgradable to at least 2.4 MW which will facilitate

TEAM: DUNE UK

We invite all Institutions to partner for the exhibition as a DUNE UK effort.

- **Liase** from each university to join organising committee
- Suggested institutional financial **contribution** £1-2k
- **Volunteers** from DUNE UK for 6 days, + 3 soiree evenings. 4 people at stand at any one time (~40++!)
 - To discuss if we pay travel via DUNE travel grant?



STFC, CERN, FERMILAB will also partner

ROLES



1. Exhibition coordination - Sussex
2. Volunteer coordination - Imperial
3. Workshop volunteers to make items - Lancaster, Sussex
4. Festival and exhibition coordination to organise loaning and transportation of the exhibit going forward next two years
5. Monitoring and Evaluation strategy
6. Website group
7. Brochure, Posters and written content group
8. Multimedia manager
9. Communications manager