UNIVERSITY OF LIVERPOOL

Particle Physics Research Frontier

Leading scientific breakthroughs to uncover the deepest secrets of the universe.

The key strengths that made us a Frontier were

Uniqueness: innovative programme and strong foundation in instrumentation "developing experiments from first concept to exploitation"

Reputation: Leverhulme International Professorship Award and other leadership roles

Size: extended group with broad programme, excellent facilities and substantial research income

The Particle Physics Frontier includes both experimental and theoretical particle physics.

Frontier Team

Leads: Tara Shears, Graziana Venanzoni, Joost Vossebeld

Advisors: Monica D'Onofrio, Tim Veal, Thomas Teubner

A five year plan was developed to

1. **Attract national and international talent**
2. **Consolidate and extend our detector expertise**
3. **Consolidate and extend our world-leading, innovative and discovery-oriented research**
4. **Raise the profile of Liverpool Particle Physics**

.. and also increase and diversify funding..

Particle Physics Research Frontier

Implementation of the 5 year plan

Raising the profile of Liverpool Particle Physics &

- Lead roles in many experiments and projects
- Hosting collaboration meetings workshops, conferences
  Muon Precison workshop, IOP HEPP/APP/NP 2024, ATLAS ITK workshop, NUFACT2025, ….
- Event for British Science Festival
- Increase volume of publicity: list of upcoming news items (news stories, podcasts, ..);
- Improved research web pages

Attracting national and international talent

- UG students: Extended PP in undergraduate curriculum / First A-level masterclass
- PG students: Improved recruitment candidates for studentships (Improved web pages and advertising)
- Fellows: Improved recruitment candidates for fellowships, ….
- Visiting researcher schemes: identify

Particle Physics Research Frontier

Implementation of the 5 year plan (continued)

Consolidate and extend our detector expertise and world-leading, innovative and discovery-oriented research

Many ongoing and planned projects for upgrades and future experiments.

Ongoing investment in new technologies and in our facilities

Strong focus on physics exploitation (Dissappointing CG award in this area!)

Increase and diversify funding

Developing new projects: several projects in development or on the horizon

Large grants: exploring future bids (Leverhulme Trust, Simons Foundation, templeton foundation, ERC synergy grants, ERC fellowships, MSCA networks, ..

Identify strong candidates for fellowships, ERC grants etc

Everyone should be thinking about this!

Develop strategy in each research area/experiment to grow or sustain work and in particular physics exploitation