



Science and
Technology
Facilities Council

The UK's input to ESPPU - *a summary*

Stephanie Hills

The drafting team

- Senior researchers
- Early career researchers
- UK ECFA delegates
- STFC Particle Physics Advisory Panel

- Experimental and theoretical communities

What was discussed

- European Strategy Group questions
- Detector R&D
- Software and computing
- Attracting and maintaining talent and expertise
- Industrial return
- Public engagement and outreach (*I talked to one of the drafting team very early in the process to get this included*)

Summary

- Fully exploit HL-LHC (highest priority)
- Strong support for “a new large circumference tunnel at CERN”
- Strong and sustainable non-collider particle physics programme (potential for groundbreaking discoveries in the next 10-20 yrs)
- Sustained investment in R&D for accelerators, detectors, computing and **environmentally sustainable technologies**
- Sustained and coordinated support for PP theory

ECRs

“The ECR community needs certainty that collider physics has a future beyond the HL-LHC”

- Ensure the future roadmap meets the needs and aspirations of ECRs
- Stress the importance of a definitive decision in this round of ESPPU for the next European flagship collider
- Continued UK commitment to broad programme of non-collider projects – shorter timescale experiments parallel to and in-between major collider projects

Retaining talent is a big concern.

The next project for CERN

- Either FCC-ee followed by FCC-hh, or FCC-hh
- Anxiety about what happens between LHC and FCC (≥ 10 years) – civil engineering for FCC needs to start ASAP
- “It is essential for both ethical reasons and public support that environmental concerns are fully taken into account. This includes ensuring that negative environmental impacts of PP research and infrastructure are identified, minimised and mitigated, including comprehensive life cycle assessments of future experiments”

Public engagement and outreach

- The manifold societal and economic benefits of a future collider programme need to be highlighted to policymakers, funders and the public.

“Europe must invest in all forms of public engagement to improve public opinions of science, illustrate the wider impact of research to justify the funding of large-scale experiments, and inspire the next generation of scientists.”



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