

# ECFA-UK European Strategy Initiative: Physics kick-off

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On behalf of the ECFA-UK plenary ECFA and ECFA-ECR delegates

Plenary ECFA: Daniela Bortoletto, Sinead Farrington, Joel Goldstein, Haroon Rafique, Aidan Robson, Matthew Wing

UK ECFA-ECR: Julia Allen, Holly Pacey, Patrick Dougan, Atanu Modak

#### Introduction

- Welcome and thank you to all of you for making time (either 'live' or through the recording) to follow this meeting.
- This is the first of several meetings/workshops aiming to encourage UK engagement in the scientific input to the next European Strategy Update.
  - Deadline for written input 31 March 2025.
  - Aim to conclude process by June 2026.
- In the UK the preparation of scientific input and the drafting of the national consensus will proceed in parallel to the PPAN (Science Board) road-mapping process. Some topics will be discussed in both however the outcomes will be different- we all need to work together!

### Aims of today

- Bring together the theory/experimental community for the first time prior to the next EPPSU.
- Set the scene on the ESPPU and review the international context and studies.
- 3. (Where available) set out the task lists, and discuss the challenges, from the areas listed above
- 4. Encourage people to sign up, discuss preliminary steps, and be ready to show results in the next workshop.

## Physics topics covered

- e<sup>+</sup>e<sup>-</sup> colliders
- ep colliders
- 10 TeV pCM colliders (muon, pp)
- Neutrinos
- Direct dark matter detection
- Other non-collider experiments/facilities
- Quantum technologies

Many thanks to the speakers for their time preparing for todays event!

## Diversity in our field

- Obvious comments: these physics cover a diverse range of fundamental questions/ technological challenges and there are lots of overlaps/synergies between them!
- Timescales/ priorities are also different for different areas => some experiments/groups may not be planning specific briefing book submissions. For those areas the speakers will highlight key milestones/activities expected ahead of the next ESU.
- We hope this initiative will also build understanding within the community of the landscape/challenges across the whole field.

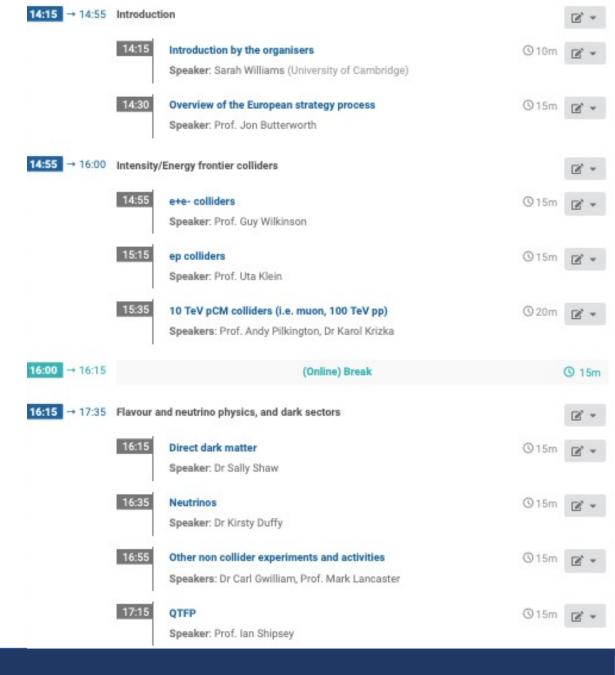
#### The road ahead

High-level goals: discuss the physics/technologies first, before discussing the national consensus!

- Today: kick-off for physics discussions/studies.
- May/June [tbd]: equivalent kick-off for accelerator/detector technologies.
- June-September 2024: physics studies ongoing, in discussion with physics chairs and ECFA-UK workshop organisers.
- 23-26 September 2024: ECFA-UK workshop: theoretical overviews of physics drivers (dark matter/ QCD/ EWK / flavour), discuss status of physics studies and next steps.
- September/October 2024 [tbd] 1-day ECFA-UK workshop on detector/accelerator technologies.
- October 2024 [tbd]: community drafting day to be organized by PPAP/ECFA.
- November 2024-March 2025: Additional community drafting days to finalise the national input to the ESU.

### Todays meeting

- After an overview of the ESU process (thanks Jon) we will have short (10-15) minute talks in each area by speakers who will also help chair the September workshop.
- We will be strict with time, but feel free to follow-up with additional questions offline.
- We hope today will provide a respectful and inclusive environment to discuss the future. Please respect the <u>CERN code of conduct</u>



#### Call to action

- The next European Strategy Update is a pivotal point for High Energy Physics for the coming decades => we should be aiming make our mark on it.
- This is a great opportunity to bring the community togetherwe want to promote more interaction between the theory/experimental communities and between the physics/technology sectors.
- We particularly encourage ECR participation => you will need to lead and deliver the future roadmap.