

ECR activities in the UK

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Sarah Williams

Introduction

- This talk will discuss recent efforts in the UK to engage early career researchers (ECRs) in discussions on future colliders. In particular:
 - Initial ECR forum in Birmingham on 25th April: https://indico.cern.ch/event/1145735/
 - Planned follow-up in Cambridge on 4th November: https://indico.cern.ch/event/1196259/
- Reminder: the UK has 3 ECFA ECR representatives (myself, Bryn Roberts, Abbey Waldron) but the organization of these events has been done by a different (but slightly overlapping) group- Andy Chisholm (Birmingham), Matt Kenzie (Warwick), Michaela Queitsch-Maitland (Manchester), Cristiano Sebastiani (Liverpool), Sarah Williams (Cambridge), and has been focussed almost entirely on colliders.



What is an ECR?

Key point: it is VERY difficult to provide a clear definition of an ECR, and we need to be sensitive that the boundaries are often blurred...

- The ECFA ECR panel mandate states "Members are, in general, PhD students and postdocs, either with a non-permanent contract or with up to 8 years after obtaining the PhD"
- For our meeting on 4th November, broadly said PhD or 10 years experience post-PhD but we are eager to be inclusive.
- The nature of fellowship schemes in the UK (and presumably elsewhere) makes it difficult to identify when an individual transitions out of being an ECR.

We have been eager to not see the UK community as containing two distinct groups and instead support ECRs to integrate and thrive!



ECR forum in Birmingham

Thanks to the Institute of Advanced Study (IAS) for hosting the meeting

- In-person meeting organized following the initiative of Prof. Eliezer
 Rabinovici who was visiting the UK and wanted to understand further the
 views of the ECR community on future colliders beyond the LHC.
- A slight focus (on request) on FCC, but many discussions were related to the future roadmap in general. FCC-related matters discussed at the June FCC week in a dedicated ECR-only session.



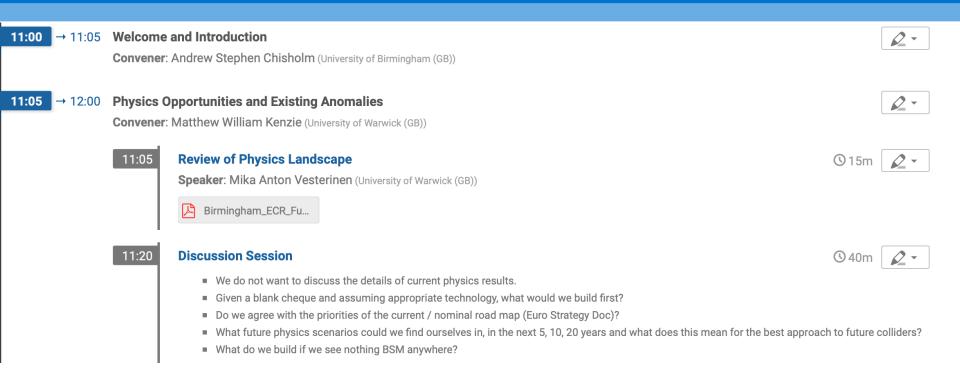


Guiding principles for the meeting

- Organising committee: Andy Chisholm (Birmingham), Matt Kenzie (Warwick), Michaela Queitsch-Maitland (Manchester), Cristiano Sebastiani (Liverpool), Sarah Williams (Cambridge)
- Most ECRs are not currently engaged in work on future colliders- this was an opportunity to further inform the community and promote further discussion.
- Tried to avoid emphasis on technical details and instead focus on 'bigger picture' discussions.
- Where possible, invited speakers were within the ECR community, with the exception of Prof. Andy Parker who was invited to give perspectives on building collaborations and the funding landscape associated with the LHC.



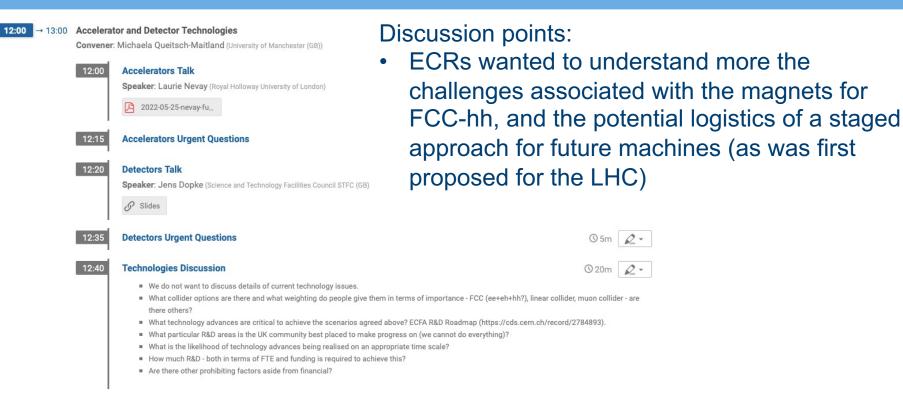
4 sessions of 1 hour each, with all talks ~ 15 minutes and remaining time for discussion



Discussion points raised:

- Avoid physics case for future colliders relying on current anomalies.
- Can we come up with a new "no-lose" theorem for the next future colliders?
- Several comments and questions in favour of staged option for FCC, but the importance of smaller, lower budget experiments was also highlighted.





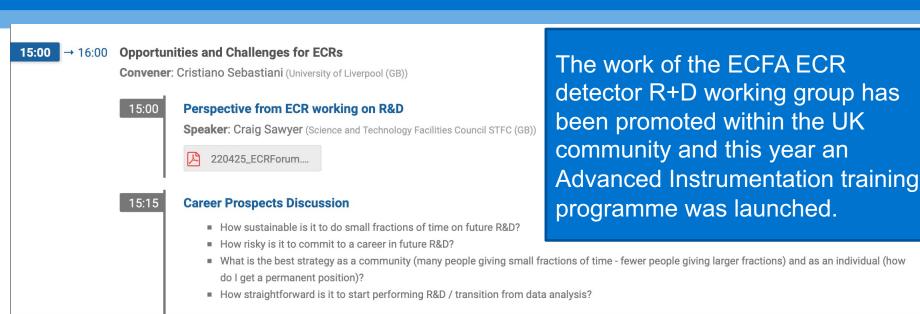
- Muon colliders also discussed extensively though the technology is further away.
- Concerns about energy budget and implications for climate change were raised- important to factor these considerations into decision making and planning.





- Emphasised the significance of re-using the LEP tunnel as a key selling point for the LHC (very relevant for the integrated FCC plan).
- Sticking to a realistic budget envelope is important. Recruiting associate members to CERN was an effective way to manage this for the LHC.
- The importance of convincing the scientific community (outside HEP) of the importance of our programme.





Session focused on challenges/opportunities for ECRs to work in detector R+D for future colliders...

- Concerning lack of ECRs involved in R+D was noted- not entirely surprising based on the lack of funding for R+D. Are there also barriers for career progression?
- Open questions of how to balance current project delivery with future R+D, the sustainability of spending small amounts of time on R+D, and potential risks



Follow-ups

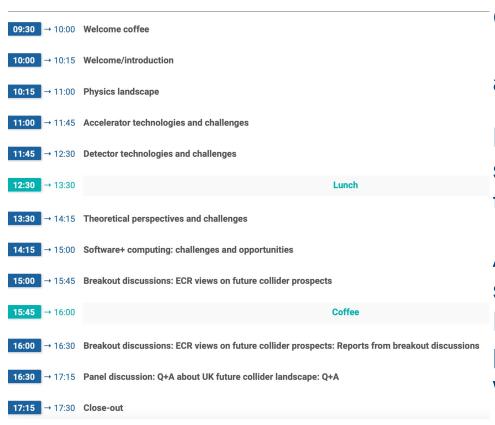
- In the closeout discussion, many appreciated the format of the meeting, which allocated most of the available time to discussions.
- It was suggestion that further representation from the theory and accelerator communities would be beneficial for future meetings.
- Participants unanimously shared the sentiment that they were excited by the physics and technology opportunities offered by future colliders.

Due to constraints on the timing and venue of the meeting, this event was a small invite-only meeting. It was well-received by the participants and the organisers are now planning a follow-on event that would be open to the UK ECR community more broadly.

 This is now scheduled for 4th November in Cambridge- please encourage and support ECRs in your group to attend or participate remotely



Agenda for next ECR forum



Generous support from PPD and IPPP to provide overnight accommodation on 3rd November.

Plenary parts will follow similar structure to before – short talks then time for Q+A discussion.

Afternoon will include time for structured break-out discussion to get ECR input on future colliders and panel discussion to discuss prospects with senior UK academics.

We also hope to use the event as an opportunity to collect qualitative/quantitative feedback....



Conclusion/ points for discussion in the ECR panel

There's been a lot of energy/enthusiasm in the UK to discuss the landscape for future colliders beyond the LHC.

- If other groups wanted to organize similar events we're happy to discuss/provide input on what worked well for us.
- OR- we (or the next panel) might want to organize a more centralized event/set of events to seed further initiatives (at CERN?)
- (Potentially obvious) comment: organizing the meetings (and follow-up reports/discussions) is time consuming, and its important not to overload ECRs and ideally spread the load.

Thanks for listening- I am happy to take questions

