

Early Career Researcher Input to the European Strategy for Particle Physics Update: White Paper

Fifty-five recommendations for the future of our field

Editors

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Krzysztof Mękała (UW/DESY)

36th Future Colliders @ DESY meeting, 04.04.2025

Organisation

- process initiated by the the ECFA ECR panel in September '24 to collect the perspectives of young researchers (non-permanent or <10 years after PhD, studying or employed in Europe or at CERN)
- fully community-driven and open to everyone fulfilling the criteria, focused on commonalities, trying to converge on a common vision
- communication via Mattermost and regular online/hybrid meetings (2 dedicated in-person meetings at CERN)
- a broad survey circulated to get wider input from the community
- **general spirit:** today's ECRs are tomorrow's leaders

Structure of the document

- Introduction
- Survey
- Recommendations
 - Careers and wellbeing of early career researchers
 - Early career community building, leadership and recognition
 - Communicating the importance of particle physics
 - Future particle physics projects
- Conclusions

(Very) personal highlights

ECRs are concerned by the instability caused by frequent relocations and short-term contracts [10]. **Post-doctoral positions should not be shorter than two years. The emphasis on long-term mobility for career advancement must be reconsidered to foster a more inclusive field (R. 1.2, 1.3).**

ECRs should be more included in topical working groups and the organisation of events. Dedicated ECR sessions should be an integral part of conferences and similar events (R. 2.3).

(Very) personal highlights II

In this view, the storytelling of particle physics research should emphasize the role of future experiments as particle observatories, rather than focusing solely on their potential for discovering new particles. Highlighting their ability to provide precise measurements, test fundamental theories, and explore unknown phenomena can reinforce enthusiasm within the field and enhance public support for fundamental research (R. 3.9).

Thus, we conclude that the selection of the next collider facility should be guided by its technological innovation as the driving factor. The project should provide a comprehensive and exhaustive baseline programme; while a long-term vision for particle physics is important, the upgrade path should not be the primary motivation for building a specific collider. Regardless of the location of the next major project, it is crucial to ensure its openness to global collaboration (R. 4.4, 4.5, 4.6 and ECFA question 3.b).

More to be found [here](#)

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