ECR Workshop on EPPSU
summary and next steps

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Working Groups

- WG1: Communicating the importance of particle physics
- WG2: Future colliders
- WG3: Future particle physics experiments beyond colliders
- WG4: Interplay with neighbouring fields
- WG5: Career prospects and ECR leadership

WG1: Communicating the importance of particle physics

- Communication skills are important to be visible in the community, even though we have not been trained in this direction.
- Different levels of communication: general public vs. colleagues
- **General public:** simplifying complex concepts, engaging interest, maintaining attention. Are we acknowledged for that? Should we really do that in our free time?
- **Younger colleagues:** lack of experience in mentorship, balancing mentorship and our own research. Specific training opportunities needed?
- **Other ECRs:** balancing private life and work, isolation. How does it affect the way in which we communicate about our field? How can we help each other?
- **Seniors:** building peer network, independence vs. mentorship.

WG1: Communicating the importance of particle physics

- Ideas:
  - summaries on the importance of our field and our daily activities - showing how important/interesting our field is
  - a mentorship program from senior researchers down-to high school students to encourage knowledge transfer
  - support for ECRs - “ECR Forum”, a dedicated mailing list, an anonymous chat
  - collecting further ideas from different countries regarding training
- What do we want to communicate? What kind of statement can we agree upon?
- How to make sure our work is acknowledged?

WG2: Future colliders

- Input regarding the choice of a future collider
  - criteria to be fulfilled
  - ranking of proposals?
  - our insights
- To be addressed: conditions for a successful and interesting project, transparency, involvement of ECRs in the process
- Plans for the paper: emphasize the importance of a future collider (at CERN?), demand transparency, results of community-wide survey
- Survey (soon-ish until mid-January): ranking of criteria, other questions (also from other WGs!)
- How to make sure the survey is representative?

WG2: Future colliders

- Ideas/issues - survey:
  - adding “risk” to the list of possible criteria?
  - “to ask or not to ask”: what is your “favourite” collider proposal?
  - blank space for expressing opinions(?)
  - “evaluation” of each single proposal
  - what do you work on? who do you work with?

- Create a sub-group working on the survey?

WG3: Future particle physics experiments beyond colliders

- A lot of different experiments: neutrino physics, dark matter direct detection, fixed target experiments, beam dump experiments, precision frontier…
- **Scientific contribution**: probing other scenarios than colliders and/or enhancing sensitivity
- **Community contribution**: “joining” the effort, feeling included in the decision-making process
- Collaboration with other WGs: career implications, extra time outside main topic, interdisciplinary collaboration

WG3: Future particle physics experiments beyond colliders

- Statement: non-collider experiments should maintain a prominent role in the landscape, not only as “pathfinders” but also as groundbreaking activities on their own.
- Idea: enhancing collaboration by establishing a forum for non-collider physics, e.g. a sub-group within ECFA -> exchanging experience, finding your next position
- How to locate smaller experiments in the huge-collider landscape?

WG4: Interplay with neighbouring fields

- Exchange with neighbouring fields is crucial for further development:
  - Exchange of ideas, methods, technologies
  - Expertise exchange, person-power
  - Collaboration over scientific disciplines
- Neighbouring fields understood widely: tools (e.g. statistics), subject (e.g. astrophysics), applications (e.g. medical physics)
- Identifying benefits for particle physics and other fields (exchange)
- Ideas:
  - exchange of experts (moving between disciplines)
  - exchange of tools, ideas, technologies (how?)
  - cross-disciplinary collaboration on overlapping questions

WG5: Career prospects and ECR leadership

- Career prospects among the most important issues
- What to be addressed:
  - sustainable careers for ECRs
  - more leadership roles, more visibility, more recognition
  - dedicated funding
  - interplay with industry, society
  - the choice of the collider defines our future!

WG5: Career prospects and ECR leadership

- Ideas:
  - informing undergrads about career statistics
  - making the field more attractive
  - establishing a clear path towards faculty positions
  - training (both academic and industrial skills)
  - smoothing transition between academia and industry
  - international mobility as an opportunity and challenge
  - support for independent research
  - inclusion in the decision-making process
  - funding

General comments

- We are the experts! Most of the work on future colliders is done by ECRs.
- Reshaping the WGs?
- One survey - input from different WGs needed

Summary

- 122 registered participants (up to 30 in person)
- 6 presentations (recorded) and a lot of discussions
- Still more discussions in the afternoon + a dedicated session for newcomers (please, invite your colleagues!)
- Open ECFA session tomorrow