

What comes next?

1954: breaking ground at CERN

1960s-70s: Theory of the Standard Model established

1983: Discovery of W and Z bosons

1998: Observation of neutrino oscillations

2012: Announcement of Higgs boson discovery

# ECFA Early Career Researchers Debate: Introduction

Sarah Williams, on behalf of the organising committee

# ECFA

European Committee for Future Accelerators



# Introduction (and welcome)

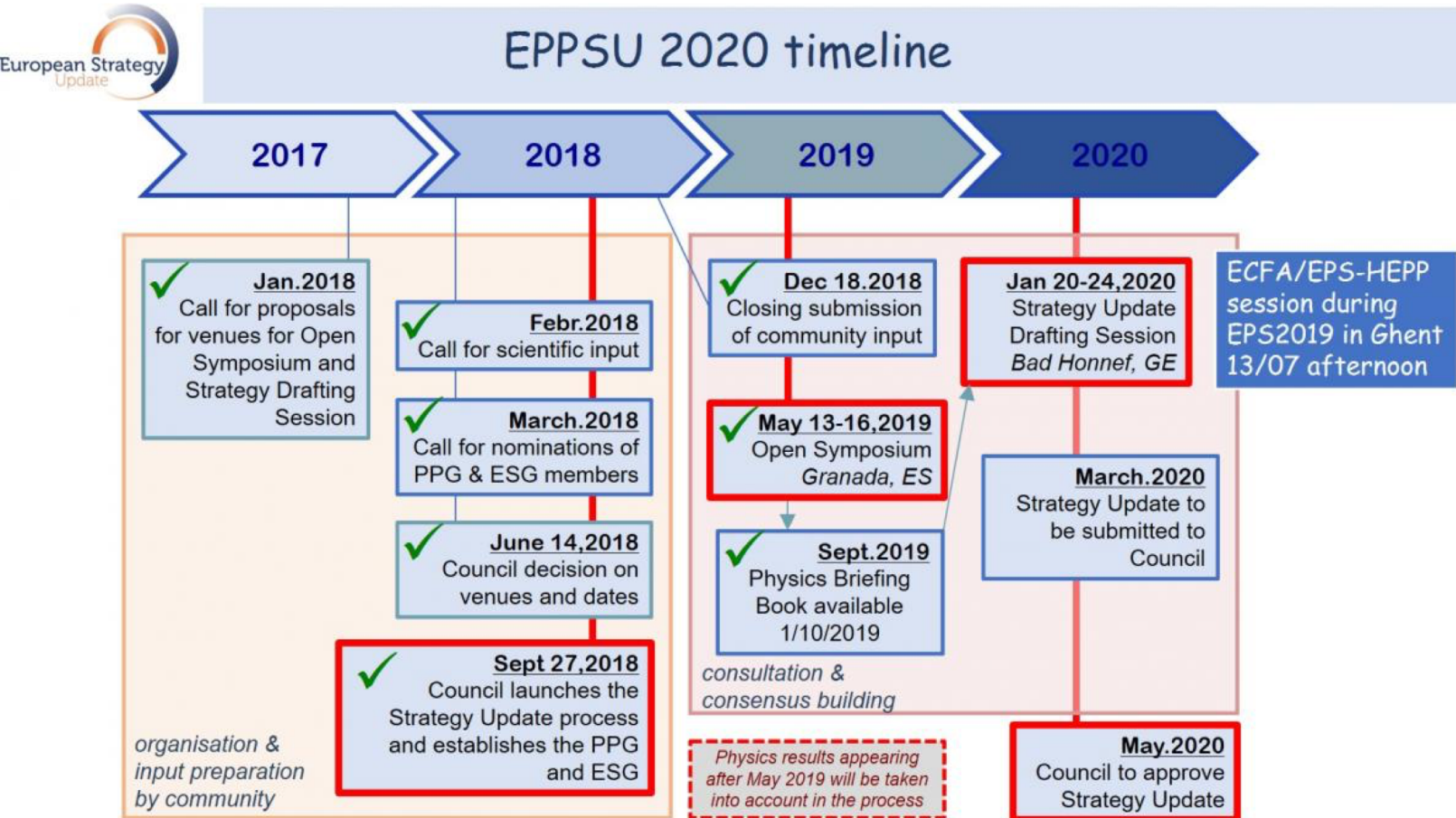
- Today we are ~180 Early Career Researchers (ECRs) brought together from around Europe to debate the update to the European Strategy for Particle Physics.
- Thanks to the organizing committee (RHS) who have worked to prepare today's debate.
- This (short) talk will explain the format of the day and set the scene for the debate.

**This debate represents a valuable opportunity to provide input to a process that will influence the HEP landscape for the duration of our careers and beyond!**

## Organising Committee:

Agni Bethani (Belgium)  
Erica Brondolin (CERN)  
Alison Elliot (UK)  
Julián García Pardiñas (Switzerland)  
Geoffrey Gilles (Germany)  
Loukas Gouskos (CERN)  
Emanuel Gouveia (Portugal)  
Elena Graverini (Switzerland)  
Nils Hermansson Truedsson (Sweden)  
Adrian Irles (France)  
Hendrik Jansen (Germany)  
Katja Mankinen (Sweden)  
Elisa Manoni (Italy)  
Abhijit Mathad (Switzerland)  
Josh McFayden (CERN)  
Predrag Milenovic (Serbia)  
Michaela Queitsch-Maitland (CERN)  
Jonas Rembser (France)  
Elliot Reynolds (UK)  
Robert Schoefbeck (Austria)  
Patrick Schwendimann (Switzerland)  
Sezen Sekmen (Turkey)  
Pawel Sznajder (Poland)  
Daniele Zanzi (CERN)  
Sarah Williams (UK)

# Update to the European Strategy for P.P



- As part of the consultation ECFA has organized this event to discuss ECR input to the update.

- Using points raised today (and in the recent WG meetings), a document will be produced (co-ordinated by the organizing committee) and submitted to ECFA to provide ECR input to the process.

**In the next talk Prof Jorgen D'Hondt will provide a brief overview of the process with time for Q+A.**

More info on ECFA and the update: <https://ecfa.web.cern.ch>

Briefing document: [http://cds.cern.ch/record/2691414/files/Briefing\\_Book\\_Final.pdf](http://cds.cern.ch/record/2691414/files/Briefing_Book_Final.pdf)

# Pre-debate working group (WG) discussions

- **6 working groups** established to gather ideas/opinions to feed into the debate:
  1. [Flavour/neutrino physics + cosmic messengers](#)
  2. [EWK/strong physics](#)
  3. [BSM physics, dark matter + dark sector](#)
  4. [Computing + software](#)
  5. [Accelerators + detectors](#)
  6. [Environment + sustainability](#)
- At least one meeting was organized by each group with all delegates encouraged to attend.
- **Human and social factors** (e.g. recognition/funding/job security) were discussed across all of these groups, and have been assigned a separate slot in the agenda
  - => **Thanks to everyone who has made time to participate in these meetings in recent weeks!**

**\*Hyperlinks are to the google docs where minutes for each WG discussion will be added\***

# Agenda for debate

9:00-9:10am	Introduction from the organizing committee
9:10-10:00am	Introduction from the ECFA chair and Q+A
10:00-10:30am	Coffee break
10:30-11:00am	WG 1: BSM, dark matter and dark sector
11:00-11:30am	WG 2: Accelerators and Detectors
11:30-12:00pm	WG 3: Computing and software
12:00-1:30pm	Lunch break (lunch included)
1:30-2:00pm	WG 4: EWK and strong physics
2:00-2:30pm	WG 5: Flavour, neutrinos and cosmic messengers
2:30-3:00pm	WG 6: Environment and sustainability
3:00-3:30pm	Discussion on social and human factors across all groups
3:30-4:15pm	Open discussion
4:15-4:30pm	Conclusions and next steps

Each 30' slot will include:

- Short summary of discussions coming out of WGs.
- Time for Q+A, further discussion

Detailed minutes will be taken by the organisers, but if you have any other points to add after the 30' is finished please add them to the following google doc:

- <https://docs.google.com/document/d/1O2q0cfOanpYnSoQ1eF6511v0wUgKIJ5qXB3tkpQDgcc/edit>

# HEP for the coming decades: the big picture

- What are the major open questions in particle physics?
- Are we excited by these challenges? Are we focusing in the right areas?
- Would the proposed future collider scenarios answer the questions we think are of primary importance?

*... plus discussions about...*

*Improving links between  
theory and experiment*

*Diversification and the roles of  
smaller experiments*

*Recognition for technical work*

*Complementarity between HEP and  
cosmology/astrophysics*

*Sustainability and our impact on the  
environment*

# Practical information/requests for the day

- Please say your name/backgrounds when making comments (at least for the first time).
- There's a lot to discuss: we expect to have to move on from some discussions (additional ideas/opinions can be put in the google doc:  
<https://docs.google.com/document/d/1O2q0cfOanpYnSoQ1eF6511v0wUgKIJ5qXB3tkpQDgcc/edit> )
- Please be respectful of each-others views: we expect that on many issues we will not reach a consensus, but understanding the range of views on topics is still useful ECR input to the process.
- We hope to circulate a survey after the event to gather quantitative information on our views in light of today's discussions=> please take the time to respond!

**We anticipate lots of fruitful discussion throughout the day: we hope you both enjoy and learn from the debate!**

... and now onto the first talk...

