

*Paris Sphicas
CERN & NKUA
LDG Meeting
Brookhaven, June 6, 2024*

- **Launch of new update of the European Strategy for Particle Physics (ESPP)**
 - **Description of bodies involved**
 - **Timeline**
 - **Some details on the organization from the 2020 ESPP update**
 - **Some comments on US P5 and EUSPP schemes/processes**
 - **National inputs**

**Next update of the ESPP
(European Strategy for Particle Physics)**

ESPP (I): launch of next (current) update

- **In March 2024 CERN Council launched the new ESPP process:**
 - **Announcement of start of process for the update of the ESPP**
 - **Call for contributions to the ESPP: End March 2025**

- **Three bodies (like last ESPP update in 2020):**
 - **"Secretariat":**
 - **Secretary (chair of secretariat), CERN SPC chair, ECFA chair, LDG chair**
 - **"Physics Preparatory Group" (PPG):**
 - **13 people + secretariat; chaired by secretary.**
 - **European Strategy Group (ESG):**
 - **Secretariat (secretary chairs ESG);**
 - **One rep per CERN member state;**
 - **One rep per lab in LDG; CERN DG, CERN DG-elect.**
 - **Invitees: PPG, President of Council, 1 rep from each Associate Member State and Observer State, 1 rep from EC; chairs of ApPEC, NuPECC, ESFRI**

ESPP (II): timeline

□ **Appointments:**

□ **Jun 2024:**

- **Selection of secretary of the ESPP update**

- **Establishment of the ESG**

- **Deadline for submitting country reps: (was) May 20, 2024**

□ **Sep 2024:**

- **Appointment of PPG members;**

- **Deadline for submitting ECFA, SPC and America/Asian reps: Aug 30, 2024.**

□ **Key Dates:**

- **Submission of contributions to the ESPP: end March 2025**

- **Symposium: end June 2025 (call for proposals: out now; decision: Sep 24)**

- **Briefing Book: Sep 2025**

- **Drafting session: Dec 2025**

- **Final approval by CERN Council: June 2026**

ESPP (III): PPG membership

- **PPG composition as approved by Council: total of 17 people.**
 - **Secretary (chair); ECFA, LDG, SPC chairs.**
 - **To be appointed by Council in Sep:**
 - **4 members nominated by SPC (SPC chair)**
 - **4 members nominated by ECFA (ECFA chair)**
 - **To be endorsed by Council in Sep:**
 - **2 members from the Americas (nominated by corresponding ICFA members)**
 - **2 members from Asia (nominated by corresponding ICFA members);**
 - **1 member from CERN.**

- **Deadline for SPC/ECFA/Americas/Asia/CERN to submit nominations to Council: August 30, 2024.**

- **PPG to be formally put in place: Council Week in September (23-27)**

ESPP (IV): from 2020 update, PPG membership

- **Strategy secretariat**
 - Professor Halina Abramowicz (Israel) Scientific Secretary, Chair
 - Professor Keith Ellis (United Kingdom) SPC Chair
 - Professor Jorgen D'Hondt (Belgium) ECFA Chair
 - Professor Lenny Rivkin (Switzerland) Chair EU Lab. Directors' Mtg

- **Scientific Policy Committee (SPC)**

- Professor Caterina Biscari (Spain)
- Professor Belen Gavela (Spain)
- Professor Beate Heinemann (Germany)
- Professor Krzysztof Redlich (Poland)

- **European Committee for Future Accelerators (ECFA)**

- Professor Stan Bentvelsen (Netherlands)
- Professor Paris Sphicas (Greece)
- Dr Marco Zito (France)
- Professor Antonio Zoccoli (Italy)

- **CERN**

- Dr Gian Giudice

- **ASIA/AMERICAS**

- Professor Shoji Asai (Japan)
- Professor Marcela Carena (United States of America)
- Professor Xinchou Lou (China)
- Professor Brigitte Vachon (Canada)

Membership in the PPG was a lot of work. Nominees should (really) be willing to invest heavily in the process.

Note geographic representation and diversity of expertise

ESPP (V): from 2020 update, PPG membership (cont)

- **2020 EUSPP process: eight (8) physics groups:**
 - **Electroweak Physics:** Richard Keith Ellis, Beate Heinemann
 - **Strong Interactions:** Jorgen D'Hondt, Krzysztof Redlich
 - **Flavour Physics:** Belen Gavela, Antonio Zoccoli
 - **Neutrino Physics & Cosmic Messengers:** Stan Bentvelsen, Marco Zito
 - **Dark Matter:** Shoji Asai, Marcela Carena
 - **Beyond the Standard Model:** Gian Giudice, Paris Sphicas
 - **Accelerator Science and Technology:** Caterina Biscari, Leonid Rivkin
 - **Instrumentation and Computing:** Xinchou Lou, Brigitte Vachon

- **Editors of “Briefing Book” :**
 - **Halina Abramowicz, Roger Forty, and the PPG Conveners**

ESPP (VI): selecting ECFA/SPC nominees for PPG (plan)

- ❑ **ECFA and SPC have made calls for nominations for their four slots (each) on the PPG:**
 - ❑ Nominees do not need to be members of ECFA and/or SPC
 - ❑ Deadline for receiving nominations: Monday, July 1st, 2024.
- ❑ **Current (*informal*) plan is to discuss nominations received (profiles of nominees: expertise, other workload, etc) within ECFA and SPC – and also consult widely.**
 - ❑ Form short list (~10 people) from ECFA (and a number of people from SPC)
 - ❑ Discuss short lists with SPC chair, ESG secretary and CERN.
 - ❑ **Possibly, also with the ICFA chair and representatives of the Americas and Asia.**
 - ❑ To ensure broad coverage of thematic areas, geographic representation, etc
 - ❑ Converge on final list of PPG nominees
 - ❑ **Present group to ECFA and SPC for endorsement**

ESPP (VII): some differences wrt US P5 process

- **The US P5 process is driven by a funding agency (DOE; indirectly also NSF)**
 - The EUSPP is driven by CERN council – which has to approve the new ESPP
- **The big “symposium” to summarize and review the submissions from the community was/is driven by**
 - The DPF in the US
 - The ESG/PPG; dates set by CERN council
- **A key aspect of any plan for the future: financial constraints**
 - US P5 process had specific funding scenario(s)
 - EUSPP has no specific funding scenario as “boundary condition”:
 - It is left to CERN council, after the ESPP process has converged, to determine whether to proceed with the highest recommendation – or not.
- **While Astroparticle physics is part of Particle Physics, Astrophysics is not**
 - So, in ESPP, the process is expected to converge on particle physics projects
 - In the US P5, the top priority for a future project is (was) the CMB-S4...

ESPP (VIII): Some lessons learned from 2020 update

- ❑ **Last time: there was a round of receiving “national inputs”**
 - ❑ Responses varied widely:
 - ❑ For small(er) countries, feedback was ~uniform and easy to interpret.
 - ❑ For large(r) countries, feedback was non-uniform, often favoring multiple priorities (e.g. type of next collider)
 - ❑ Wide range of responses made it difficult to summarize the “opinion” or “position” of several countries
 - ❑ And clearly, this is not a popular vote
 - ❑ Lesson learned: while it will always be difficult to summarize the “position” of an entire country, at least we can aim at uniform responses
- ❑ **Plan for ECFA: facilitate wide discussion(s);**
 - ❑ Aiming to also formulate a set of questions and issues for countries (“national communities”) to discuss.
 - ❑ Clearly, not an exclusive list, countries/groups could/should add their own issues/concerns/wishes etc

ECFA Early Career Researchers' (ECR) panel

- ❑ **Career Prospects and Diversity in Physics**
 - ❑ Launched survey to collect information on
 - ❑ Impact of collaboration size on ECRs?
 - ❑ Assess the career prospects of ECRs, how ECR panel help, what are the main problems?
 - ❑ Circulated to ECR community (760 responses!)
 - ❑ Analysis of answers: written [report here](#).
- ❑ **ESPP update and ECR involvement; From ECFA to national communities**
 - ❑ Organize event with national, in-person events on future colliders, directing discussions into the ECFA countries as some issues are country-dependent
 - Blueprint ready on zenodo ([link](#))
 - ❑ First events have already taken place

Example 1: Nordic event (May 14); Talks:
Physics Landscape and Motivation
Experimental overview of future colliders
Status and Physics of EIC
Report from ECFA ECR panel
Summary of activities in the Nordics
Panel Discussion

Example 2: Austria event (May 23)

EARLY CAREER RESEARCHERS IN PARTICLE PHYSICS IN AUSTRIA

THE LONG-TERM FUTURE OF PARTICLE PHYSICS IN EUROPE

The European strategy for Particle Physics will be updated early 2025, shaping the upcoming years for high energy physics. Since projects like the FCC will last for many years, inclusion and participation of PhDs and early postdocs is crucial. This meeting will contain talks from senior experts about current and future experiments, as well as discussion rounds to evaluate the view of the next generation of scientists. Additionally, alumnis will give insight on career opportunities in industry and academia.

23 May 2024, 10:00 to 17:00

Agenda and Registration: <https://indico.cern.ch/event/1409061>

Registration requested but not mandatory

Austrian Representatives:

Maximilian Babeluk
Yannick Dengler
Andreas Gsponer



Outlook

Unpaid Ad; ECFA Panels: HET Factory Study

- **This will be the last meeting of the HET Factory study prior to the submission of its input to the EUSPP (end March, 2025)**
 - **Wed-Fri, 9-11 October, 2024. Finishing at 16:00 on Friday to facilitate travel**
- **Web page: <https://ecfa.web.cern.ch/ecfa-study-higgs-ew-top-factories>**
 - **Envisaging: finalizing the work until end 2024; writing from Oct 2024 to Jan 2025;**
- **Three working groups:**
 - **WG 1, Physics Potential: Jorge de Blas (Univ. Granada), Patrick Koppenburg (Nikhef), Jenny List (DESY) and Fabio Maltoni (UC Louvain / Bologna)**
 - **WG 2, Physics Analysis Methods: Patrizia Azzi (INFN-Padova / CERN), Fulvio Piccinini (INFN Pavia) and Dirk Zerwas (IJCLab/DMLab)**
 - **WG 3: Detector R&D (WG3 web page): Mary Cruz Fouz (CIEMAT Madrid), Giovanni Marchiori (APC Paris) and Felix Sefkow (DESY)**
- **Please consider registering/participating in this Workshop**