Nouvelles du site web FCC-PED France

Réunion FCC-Contacts, 13 mars 2026

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FCC PED – pages CERN et France

13 février 2026

Stay aware

- **FCC PED** meetings
- **Physics performance** meetings
- **FCC-ee monthly physics meetings** past and upcoming meetings
- **FCC conferences and workshops:** Past and upcoming Events

The FCC-ee in a few words

The idea of a large circular e+e- collider as Higgs Factory came from a conjunction of circumstances: i) the need of a large tunnel for the continuation of the high energy exploration after the LHC; ii) the new 'nano-beam' designs proposed for the 'super' B factories; iii) and of course the discovery of the Higgs boson with a mass that could have been reached (with efforts) at LEPII. The idea of such a machine as a first step toward a 100TeV pp collider was submitted to the ESPP2013/13 and led to the FCC study, launched in 2014. The study concluded in its FCC-int submission to the ESPP2020 that the *"The most effective and comprehensive approach to thoroughly explore the open questions in modern particle physics is a staged research programme, integrating in sequence lepton (FCC-ee) and hadron (FCC-hh) collisions".*

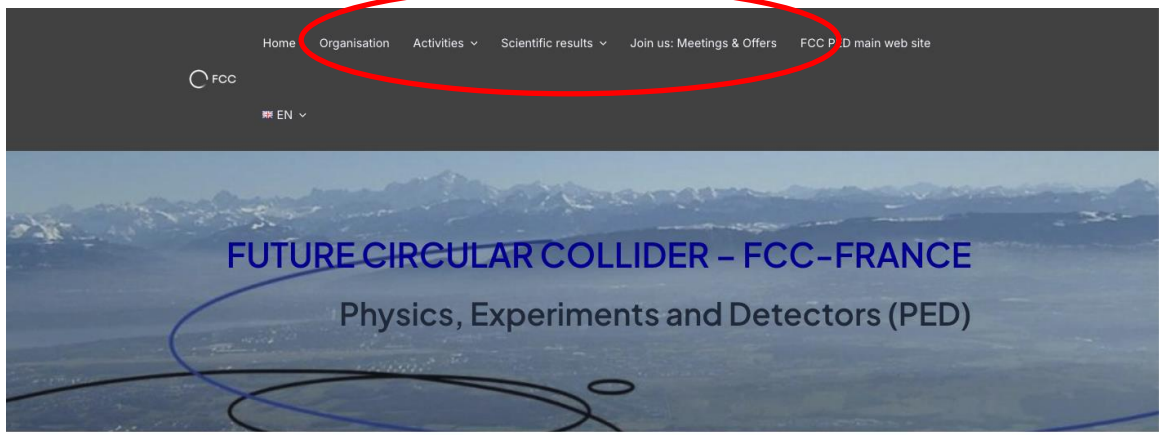
The ESPP concluded: ***"Europe, together with its international partners, should***

Next events

Physics Performance
FCC-hh Physics & Performance meeting
Fri, 13/02/2026 - 16:00

Physics Performance
FCC-hh Physics & Performance meeting
Fri, 13/03/2026 - 16:00

https://fcc-ped.web.cern.ch/



The FCC-ee in a few words

The FCC-ee project is a high-luminosity, high-precision e+e- circular collider. Two separate e+ and e- storage rings with very strong focusing, fed by a full size continuous injector, provide e+e- collision luminosities ranging from (per interaction point) 230 10^{34} /cm2 /s at the Z pole, 8 10^{34} /cm^2 /s at the ZH production maximum (240 GeV) and 1.7 10^{34} /cm^2 /s at the tt threshold and up to 365 GeV. Four interaction points are considered. The run plan of 15-20 years yields 5 10^{12} Z bosons, 10^8 W pairs, 1.3 10^6 Higgs bosons and 106 top quark pairs. Thanks to the availability of transverse polarization, the energy calibration at 100 keV precision offers unprecedented precision for measurements of Z and W properties. The possibility of s-channel Higgs production at E_{CM}=125 GeV is under study, giving unique access to the electron Yukawa coupling. These opportunities make the FCC-ee stand out among the other Higgs factory proposals. Especially at the Z run, considerable challenges await experimenters and theorists, for systematic uncertainties to match the extraordinary available statistical precision.

Following the ESPP 2020 recommendations, the goal until 2025 of the Physics Experiments and Detector studies will be, with widest participation from the international community, the delivery of an advanced Feasibility Study demonstrating the breath and feasibility of the experimental program, including detector designs. The present focus on the experimental side is the analysis of physics benchmark measurements with the aim of producing a consistent set of detector requirements, under the aegis of the Physics Performance Coordination. The design of the detectors, the use of the latest technologies, and the R&D program, offer great opportunities for creativity. On the phenomenological side, focus will be the full understanding of the possibilities for discovery of the machine, as well as the planning of the precision calculations required to fully exploit the program of precision measurements.

The French HEP community is involved in most of the Physics, Experiments and Detectors (PED) aspects of the FCC Feasibility Study. See the Organisation folder to see how it is organized and how you can join the effort.

The main page of the FCC Physics PED Feasability Study (2021-2025) is to be found here: https://fcc-ped.web.cern.ch/.

https://fcc-ped-france.in2p3.fr/

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Feed-back et la suite

- Chaque FCC-contact a les droits en lecture, (Gaëlle en écriture)
  - https://fcc-ped-france.in2p3.fr/wp-admin/
- Suite à notre appel à Feedback
  - LLR intégré
  - Autres ?

Prochaines étapes :

- Au niveau FCC-PED
  - Suivre et interagir les développements (Claire, Panos)
  - Eventuellement uniformisation
- Plus pratiquement
  - Credit and legal notices, e.g. https://www.l2it.in2p3.fr/en/credits-legal-notices-2/
  - Créer un mail de contact générique (foot page) ?
  - Faire la version FR une fois la version EN « figée »