

PPC: Case studies & detector requirements from Physics

- ▶ To prepare for the next step of the project, a TDR in a 3-5 year time, FCC-ee study group has created a new role in the Physics& Experiment organigram: the Physics Performance Coordinators (P. Azzi (INFN), E. Perez(CERN)), who need to lead and bring to completion the « case studies » in collaboration with Physics, Software and Detector R&D groups
- ▶ Each study contains a physics measurement goal and a requirement on detector performance, reconstruction/identification tool or theory work. Targets are:
 - ▶ systematic uncertainties at FCC-ee commensurate with the (very small !) statistical uncertainties
 - ▶ Maximize the potential for discovering very weakly coupled new particles, in decays of Z or Higgs bosons: could motivate dedicated detector designs that would increase the efficiency for reconstructing the unusual signatures of such processes
- ▶ The studies span the physics measurements that can be done at the different center of mass energies
- ▶ The studies also assume that up to 4 detector concepts can be imagined to let new ideas free to be explored

PPC: Current list of Case Studies

- If you want to check what is already there and join one of those proposals the current list of identified « case studies » can be found in this pdf file [DraftListofCaseStudies](#).
 - Clearly you are welcome to contact us with also new ideas!
- LOIs sent by members of the FCC study group (that we know of): collected at <https://indico.cern.ch/event/951830/>
 - 9 to the Accelerator Frontier
 - 16 to the Energy Frontier
 - 5 to the Instrumentation Frontier
 - 1 to the Computing Frontier
 - 2 to the Theory Frontier
- For info :
 - LOIs sent by CEPC : <https://indico.ihep.ac.cn/event/12410/> •
 - LOIs sent by CALICE : <https://agenda.linearcollider.org/ev>

PPC: Meetings & organization

- The first meeting of the PPC on 21/9/2020 here: <https://indico.cern.ch/event/956147/> in Agenda progress on:
 - Progress on c-tagging : Loukas Gouskos & Michele Selvaggi
 - Plans for top studies : Jeremy Andrea
 - Z-pole flavour physics at FCC-ee: Donal Hill
 - meeting today contains another presentation of « case study » on Afb
- Teams are invited to contact us to let us know their favorite study.
 - We'll be your contact point for the “beginner's kit” of information
- Meeting planning proposal:
 - Have monthly meetings devoted to the progress on the case studies on Mondays 3pm-5pm (alternating with the « general physics Meeting »)
 - keep an approximate bi-weekly rhythm
 - Frequence can/will increase with activities
- Next Physics Performance meeting: Oct 19
 - FCC-ee Workshop: Nov 10-13: two slots for PPC related presentations!