

Physics Performance meetings

- See News presented by AB at the General Physics meeting end of July: Physics Performance coordinators (PA & EP) appointed to coordinate the studies that will quantify the detector requirements.

Targets :

- 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.
- Several "case studies" identified : benchmark measurements / processes that set requirements on some aspects of the detector performance
 - initial list contained here: [A selection of benchmark studies at FCC-ee](#)
 - Most of them described in more details in the "Letter of Interests" submitted to Snowmass end of August (see next slide)
 - Clearly this list is just a first step.

Letters of Interest submitted to Snowmass 2021

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/event/8647/>

Case studies “teams” & Organisation (1)

- Teams are invited to pick their favorite “case study” (or to add new suggestions!)
 - For some of them, the work has started already
 - See reports today (and at the general physics meeting next week)
- Please contact us if you are interested: we’ll be your contact point for the “*beginner’s kit*” of information
- Proposal (as a start) :
 - Have monthly meetings devoted to the progress on the case studies
 - monthly, on Mondays 3pm-5pm
 - Alternating with the “general” physics meetings (also monthly, Mondays) to have an approximate bi-weekly rhythm
 - Frequency can/will increase with activities

Case studies “teams” & Organisation (2)

- Coming meetings :
 - Physics Performance: today
 - General physics meeting: Sep 28
 - Next Physics Performance meeting: Oct 12
 - Workshop: Nov 10-13
 - We plan to have another Physics Performance meeting in Nov: Nov 16 or Nov 23
 - and another PP meeting in December, Dec 7 or Dec 14
- Mailing list: for the while, use the general mailing list.
- Documentation: more to come...

Reminder of the November workshop

- 4th FCC Physics & Experiments workshop
 - Nov 10 – 13
 - Remote...
 - <https://indico.cern.ch/event/932973/>
- 2 sessions for the physics requirements on the detectors
 - Tuesday pm and Wednesday morning
 - We are / will be contacting some of you for a report
- Please register !
 - 168 participants already

Reminder for the hands-on software tutorial

- This week and next week, In the context of Snowmass :
 - Tuesday 22 & Wednesday 23: <https://indico.cern.ch/event/945608/>
 - Tuesday 29 : <https://indico.cern.ch/event/949950/>
- Organised by Clement Helsens & Gerardo Ganis
- Encouraged to register and attend !

Agenda for today

- Progress on c-tagging : Loukas Gouskos & Michele Selvaggi
- Plans for top studies : Jeremy Andrea
- Z-pole flavour physics at FCC-ee: Donal Hill

Note: next Monday: Juan Alcaraz on systematics to the Forward-Backward asymmetry of heavy quarks at the Z peak

Discussion about software :

Who is using what ?

((full standalone) – Delphes-standalone - Delphes in FCCSW)

Experience with / feedback on the common SW