

KET-Collider-WS

Questionnaire:

Personal questions:

1. What's your age:
 - <30
 - 30-39
 - 40-49
 - 50-59
 - ≥60
 - Don't know

2. What is your current main area of research (you can tick multiple options)
 - LHC
 - Belle-II
 - Non-collider experiments
 - Theory
 - Data analysis
 - Detector R&D
 - Computing
 - LC
 - FCC
 - Other
 - don't know

3. For which type of institution are you working?
 - For a university
 - For a research centre or a Max-Planck institute
 - Other
 - don't know

General questions on decision of next flagship project at CERN

4. Do you consider a next flagship project at CERN necessary at all?
 - Yes
 - No
 - don't know

5. Do you consider the following project types suitable as the next flagship project for CERN? (you can tick multiple options)
 - on-site collider project
 - on-site non-collider project
 - off-site collider project
 - off-site non-collider project
 - don't know

6. What are your prime science topics of interests for the next flagship project at CERN (you can tick multiple options)
- Higgs physics
 - Top Physics
 - EWK
 - QCD (incl. QCD phase-diagram, high-density QCD)
 - Flavour
 - Hadron physics
 - BSM
 - Detector development
 - Accelerator development
 - Data science/Computing/AI
 - Developments in theory
 - Other (please name it)
 - don't know
7. What are your prime considerations for the selection of the next flagship project at CERN (you can tick multiple options)
- Science program
 - Incorporation of advanced technologies
 - Securing the long-term future of particle physics
 - Avoiding gap between HL-LHC and the next project
 - Flexibility to react to future scientific and/or technological developments
 - Required financial and human resources
 - Careers and training
 - Sustainability
 - Other (please name it)
 - don't know

Questions on CERN's next flagship collider project itself

8. The 2020 ESPP stated: '*An electron-positron Higgs factory is the highest-priority next collider. For the longer term, the European particle physics community has the ambition to operate a proton-proton collider at the highest achievable energy.*' Do you think now we need both an e^+e^- Higgs factory and a collider in the multi-TeV energy range (e.g. pp-collider or muon-collider) to answer our fundamental questions (independent of the decision where these projects are realized)?
- we need an e^+e^- Higgs factory and a pp-collider at highest achievable energy
 - we need an e^+e^- Higgs factory and a muon-collider
 - we only need an e^+e^- Higgs factory
 - we only need a pp-collider at highest achievable energy
 - we only need a muon-collider
 - we need neither an e^+e^- Higgs Factory nor a multi-TeV collider
 - we can't say yet which scale to explore after an e^+e^- Higgs factory
 - don't know

9. How long is in your opinion a still acceptable gap between the end of data-taking at the HL-LHC and the start of data-taking at the next collider project at CERN?
- < 5 years
 - < 10 years
 - < 15 years
 - > 15 years
 - don't know
10. Is LHeC (in your opinion) a suitable bridge project to avoid an empty gap after the HL-LHC?
- yes
 - no
 - don't know
11. Which of the following projects do you consider suitable as the **next** (!) flagship project for CERN in the ESPP update (i.e. before knowing the fate of the CEPC and before knowing final results of the FCC feasibility study)? (you can tick multiple options)
- LHeC
 - FCC-ee
 - linear e^+e^- collider at 250 GeV
 - linear e^+e^- collider at 550 GeV
 - linear e^+e^- collider at 1 TeV or beyond
 - medium energy pp collider in LHC tunnel
 - medium energy pp collider in FCC tunnel
 - FCC-hh
 - Muon-Collider
 - plasma wakefield collider
 - Other (please name it)
 - don't know
12. Which of the following projects do you consider suitable as the **next** (!) flagship project for CERN if Japan proceeds with the ILC in a timely way? (you can tick multiple options)
- LHeC
 - FCC-ee
 - linear e^+e^- collider at 250 GeV
 - linear e^+e^- collider at 550 GeV
 - linear e^+e^- collider at 1 TeV or beyond
 - medium energy pp collider in LHC tunnel
 - medium energy pp collider in FCC tunnel
 - FCC-hh
 - Muon-Collider
 - plasma wakefield collider
 - Other (please name it)
 - don't know

13. Which of the following projects do you consider suitable as the **next** (!) flagship project for CERN if the CEPC is built on the announced timescale? (you can tick multiple options)

- LHeC
- FCC-ee
- linear e^+e^- collider at 250 GeV
- linear e^+e^- collider at 550 GeV
- linear e^+e^- collider at 1 TeV or beyond
- medium energy pp collider in LHC tunnel
- medium energy pp collider in FCC tunnel
- FCC-hh
- Muon-Collider
- plasma wakefield collider
- Other (please name it)
- don't know

14. Which of the following projects do you consider suitable as the **next** (!) flagship project for CERN if the FCC-ee turns out to be not feasible? (you can tick multiple options)

- LHeC
- linear e^+e^- collider at 250 GeV
- linear e^+e^- collider at 550 GeV
- linear e^+e^- collider at 1 TeV or beyond
- medium energy pp collider in FCC tunnel
- medium energy pp collider in LHC tunnel
- FCC-hh
- Muon-Collider
- plasma wakefield collider
- Other (please name it)
- don't know

15. Which of the following projects do you consider suitable as the **next** (!) flagship project for CERN if the US proceeds with a muon collider? (you can tick multiple options)

- LHeC
- FCC-ee
- linear e^+e^- collider at 250 GeV
- linear e^+e^- collider at 550 GeV
- linear e^+e^- collider at 1 TeV or beyond
- medium energy pp collider in LHC tunnel
- medium energy pp collider in FCC tunnel
- FCC-hh
- plasma wakefield collider
- Other (please name it)
- don't know

Other questions

16. Independent of the choice of the next collider flagship, what other accelerator R&D should be pursued in parallel? (you can tick multiple options)
- High-field magnets
 - RF technology
 - Plasma acceleration
 - Muon cooling
 - Energy recovery accelerators
 - Other (please name it)
 - Don't know
17. To what extent should CERN participate in nuclear physics, astroparticle physics or other areas of science, while keeping in mind and adhering to the CERN Convention (namely accelerator-based research)? Compared to the current level and form of activity the participation should be
- increased
 - maintained
 - reduced
 - don't know
18. Do you consider your own participation in the CEPC, if it is built on the announced timescale?
- Yes, I consider participating
 - No, I consider not participating
 - Abstain, as I will be retired by then.
 - Don't know