
Charge to the CEPC International Advisory Committee

October, 2021

The Circular Electron Positron Collider (CEPC+SppC) Study Group, currently hosted by the Institute of High Energy Physics of the Chinese Academy of Sciences, has been developing the technical design of the CEPC accelerator and the detector system, continues to refine their designs to enhance the performance, and is carrying out the R&D program, the development of its software, and the site preparation.

The present goals of the CEPC Study Group remain to be the completion of the necessary R&D work and the Technical Design Report, the demonstration of the validity of critical subsystems, the enhancement of the organization and global collaboration.

The CEPC International Advisory Committee shall advise on all related matters for the CEPC project, in particular on the following aspects:

1. Are the accelerator TDR, overall R&D, and the design enhancement on track? For committee's reference, a recent CEPC International Accelerator Review Committee (IARC) report is available to the IAC.
2. The CEPC Study Group has been developing a 4th detector system concept, beyond those three concepts outlined in the CEPC CDR, by utilizing advanced and emerging state-of-art technologies. CEPC is also carrying out an R&D program for the most critical detector components. Is the new detector concept adequate for the Higgs, and Z/W physics program at CEPC? Is the detector R&D program appropriate?
3. In light of the new global reality, how should we carry out international collaboration with the CEPC?

We would very much appreciate additional guidance on the accelerator TDR, R&D, the 4th detector concept, and the international collaboration. The committee is invited to give suggestions on any aspect of CEPC beyond those specifically included in this charge.

It is requested that a committee report responding to this charge be delivered to the IHEP director Yifang Wang by December 1, 2021.

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