Circular Electron Positron Collider

- **CEPC is intended to be an international project** – growing HEP community & support for basic sciences in China
- CDR completed in 2018, TDR scheduled for 2023, engineering design study soon …
- Extensive R&D underway, construction of light sources providing training and validation
- Very tight schedule matched to China's 5-year plan scheme; proposed to begin construction in 15th 5-YP (~2027)
- CEPC being evaluated in two tracks: (1) **China initialized large science projects**, (2) **CAS particle physics facility**
- If CEPC is approved and realized, **it may be a Higgs factory providing data in the 2030s**
- If FCC-ee is approved earlier than CEPC, the group will join force with FCC and contribute in a very significant way

Opportunities for synergy and cooperation between various Higgs factories:

- designs push technologies to their limit, all **critical components** meeting the requirement
- challenging domains that may limit the luminosity performance, taking into account the **experience** at previous and present colliders, e.g., at SuperKEKB
- prototyping & mass production that lead to **cost reduction** and **energy saving**, (highly-efficient klystrons, low-field dipole magnets for the full-energy booster, HTS superconductor, ….)
- **green** and **environment**
- **innovation** (C3, PWFA, …) to bring the Higgs factory to the next level
- **instrumentation and infrastructure** enabling the particle physicists to collect, store and analyze collision data to get the maximum science (update detector design, wireless control and DAQ, …)
- independent **cross checks** of designs and simulation results; strong & productive **eco system**