STCF ECAL & PID

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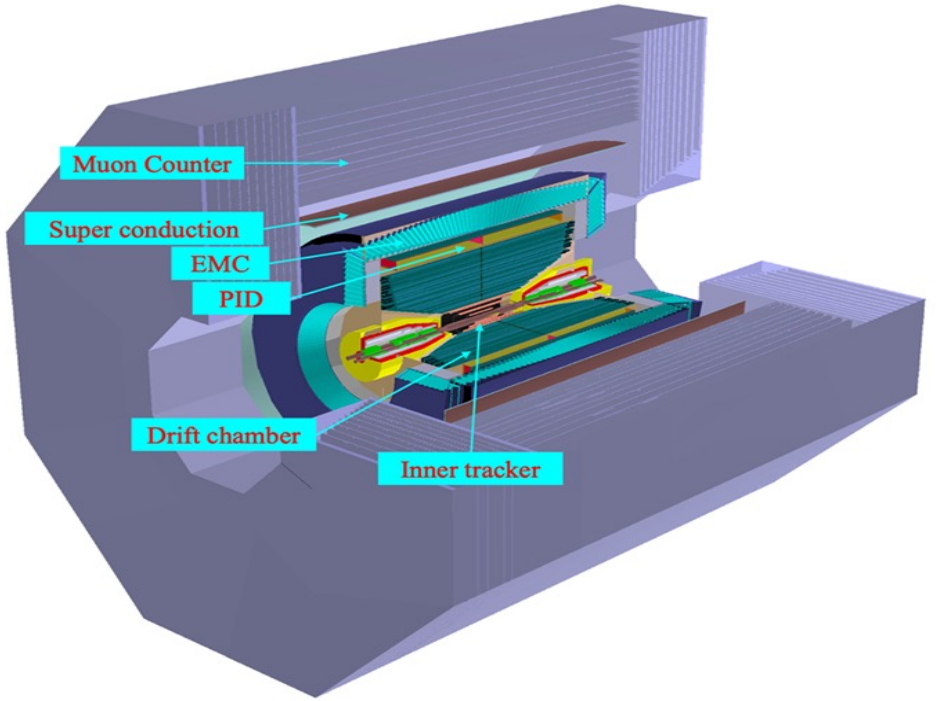
Super Tau-Charm Facility

- **Super Tau-Charm Facility (STCF)**
  - Next generation high luminosity e+/e- collider
  - E_{cm}≈2 – 7 GeV, luminosity ~0.5×10^{35} $cm^{-2}s^{-1}$ at 4 GeV



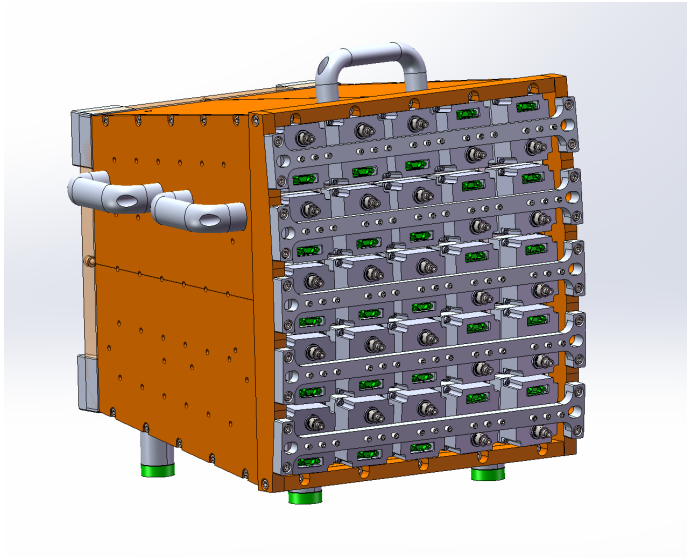
Calorimeter and PID Detector

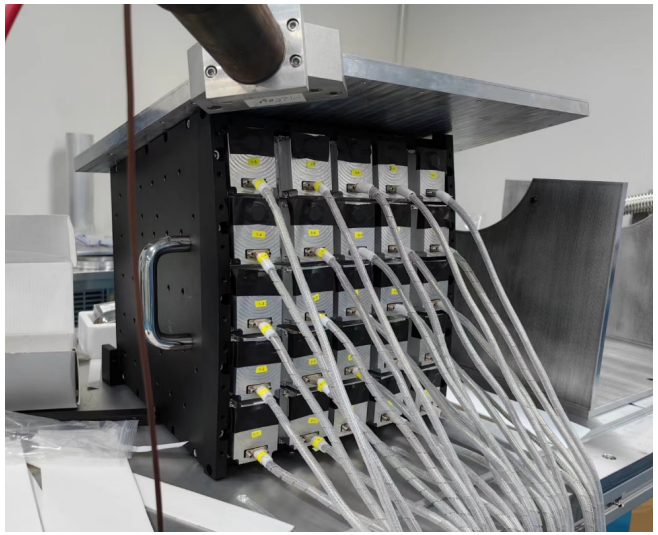
➢PID Detector

- ➢ DIRC-like TOF, and RICH
- ➢ π/K separation power of over 4σ at p≤2 GeV/c.

➢ECAL

- ➢ A homogeneous calorimeter based on pure CsI crystal
- ➢ σ_E is ~2.5% @ 1 GeV
- ➢ σ_t is 300 ps @ 1 GeV





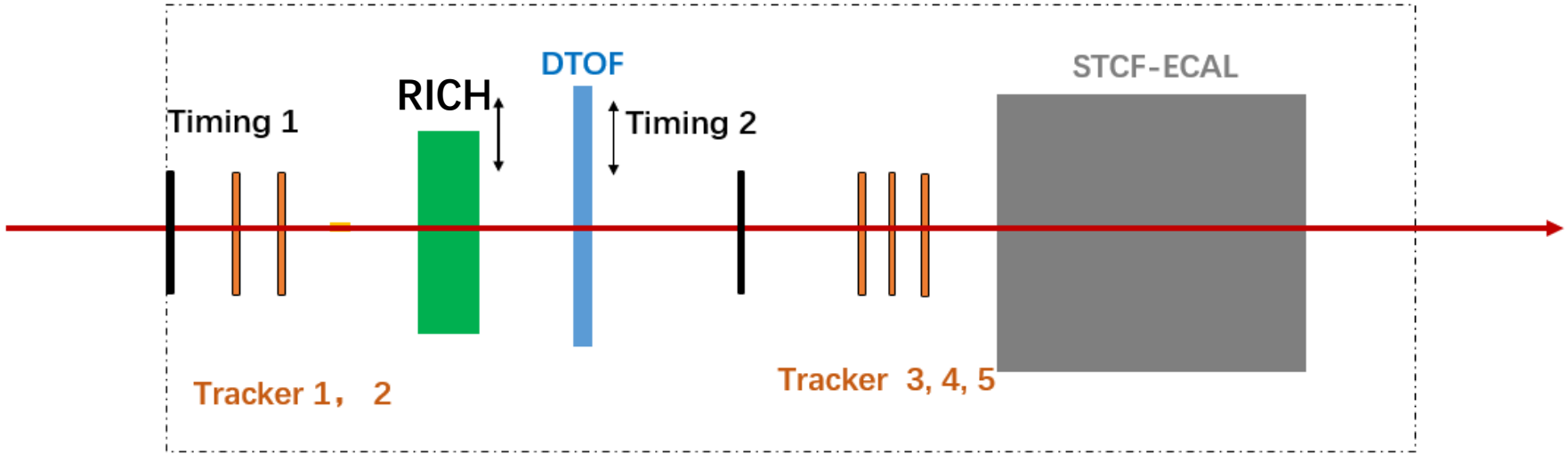
The shipping of Detectors

- The detectors were packed and transported to CERN a week ago
- Now, they are in the airport of Geneva

Beam Requirements

- Particle
  - Muons, around 10 GeV/c
  - Electron，0.5 – 3.5 GeV/c
    - The lower energy, the better :-)
  - Pions and kaons at 1-2 GeV/c
  - kaons and protons at 1.5-3.5 GeV/c
- Intensity
  - 1 -2 kHz
- Beam size
  - Several centimeter

Infrastructure



- Weight
  - PID: 50 kg
  - ECAL: 150 kg
  - Supporting table: 300 kg
  - Others : 50 kg
- gas
  - Ar + CO_2
  - $Ar/Xe(95\%)$ with $iC_4H_{10}/CO_2/CH_4(5\%)$