Contribution ID: **23** Type: **not specified**

# Progress of CEPC scintillator-tungsten structure ECAL

*Tuesday 3 October 2017 12:10 (20 minutes)*

The circular electron and positron collider (CEPC) was proposed as a future Higgs factory. To meet the physics requirements, a particle flow algorithm-oriented calorimeter system with high energy resolution and precise reconstruction is considered. A sampling calorimeter with scintillator-tungsten structure is selected as one of the electromagnetic calorimeter (ECAL) options due to its good performance and relatively low cost. We present the design, the test and the optimization of the scintillator module read out by silicon photomultiplier (SiPM), including the design and the development of the electronics. To estimate the performance of the scintillator and SiPM module for particles with different momentum, the beam test of a mini detector prototype without tungsten shower material was carried out at the E3 beams in Institute of High Energy Physics (IHEP). The results are consistent with the ones from the simulation. These studies provide a reference and promote the development of particle flow electromagnetic calorimeter for the CEPC.

**Presenter:** DONG, Mingyi (Institute of High Energy Physics, Chinese Academy of Sciences)

**Session Classification:** Prototypes, upgrades and concepts