1. Project name and short description

Project Name: CEPC vertex detector prototype

Description:

The Circular Electron Positron Collider (CEPC) is a large international collider planned to be constructed in China to study the Higgs boson, W, Z physics and potentially top physics. A vertex detector will be a core component of any detector built at any of the future e+e- colliders put forward: CEPC, ILC or FCC-ee. It requires low material budget, low power and high spatial resolution pixel sensors. A new CMOS pixel sensor TaichuPix, with 25 um pixel pitch, has been developed and implemented in TowerJazz technology to realize simultaneous fast readout and high spatial resolution. A full size prototype has been built and six double-sided ladders, providing a total of 12 measuring points, will be activated for readout at the test beam. The detector will be air cooled.

1. Responsible person：

Name: Joao Guimaraes da Costa

Email：guimaraes@ihep.ac.cn

Phone：（+86）010-88233225

 Cell: (+86) 136963347476

Name: Zhijun Liang

Email：liangzj@ihep.ac.cn

Cell:(+86)18514028539

1. Participating groups:

Institute of High energy Physics(IHEP) at Beijing, China

Nanjing University, Nanjing, China

IFAE, Barcelona, Spain

1. Number of requested weeks: 2 Weeks
2. Preferred month(s)： As late as possible in December, and if not possible, in November.
3. Required infrastructure : We plan to test the spatial resolution at DESY, we need beam telescope and stages.
4. Irradiated samples: we only test chips without irradiation.