



Contribution ID: 58

Type: **Poster presentation**

The physical requirements analysis and simulation research of the Time Projection Chamber in the circular collider

The accurate measurement of Higgs is bringing us much more higher physical requirements. We need to deal with many problems of the detectors in different collision models, especially the IBF (ion backflow) in the Time Projection Chamber. The circular collider is different with the linear collider in the collision model and the beam structure. The linear collider can use the controlled gating to reduce the IBF. But the circular collider's beam structure is consecutive, working in a long time operation and nonstop model, with 301ns, a shorter time interval, cannot adopt the controlled gating to reduce the IBF. So we propose an approach that using the hybrid detector to realize the detection and reduce the IBF in the same time. In this paper, it mainly described the problems between the circular collider and the linear collider, and then proposed the analysis method, the research of the prototype-detector and the preliminary simulation work.

Authors: WANG, Haiyun (IHEP, CAS); QI, Huirong (IHEP); ZHANG, Yulian (IHEP, CAS); WEN, Zhiwen (IHEP, CAS)

Presenter: WANG, Haiyun (IHEP, CAS)