TWEPP-09 Topical Workshop on Electronics for Particle Physics

Contribution ID: 156

Type: Oral

ILC-CLIC

Monday, 21 September 2009 17:45 (45 minutes)

The planned linear colliders - international linear collider (ILC) and compact linear collider (CLIC)- will provide electron-positron collisions in the TeV range. Due to the high energy of the passing electrons and positrons at the interaction point a large number of background particles not related to the collision are produced. Thus the detectors must identify and reject these background particles providing small spatial segmentation and precise particle arrival time identification. In order not to influence the particle trajectory and to provide precision measurements the amount of detector material and services need to be reduced to a minimum. Especially for CLIC, the acceleration scheme results in a bunch crossing timing structure posing a challenge to the detector and read-out electronics implementation.

In the presentation the specifications and challenges of the detector and read-out electronics for linear colliders are discussed.

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Track Classification: ASIC's