

LCFI Vertex Detector Design Studies

Saturday, 11 March 2006 12:10 (20 minutes)

A vertex detector concept of the Linear Collider Flavor Identification (LCFI) collaboration, which studies pixel detectors for heavy quark flavour identification, has been implemented in simulations for c-quark tagging in scalar top studies. The production and decay of scalar top quarks (stops) is particularly interesting for the development of the vertex detector as only two c-quarks and missing energy (from undetected neutralinos) are produced for light stops. Previous studies investigated the vertex detector design in scenarios with large mass differences between stop and neutralino, corresponding to large visible energy in the detector. In this study we investigate the tagging performance dependence on the vertex detector design in a scenario with small visible energy for the International Linear Collider (ILC).

Primary authors: Dr SOPCZAK, Andre (Lancaster University); Dr MILSTENE, Caroline (Fermilab)

Presenter: Dr SOPCZAK, Andre (Lancaster University)

Session Classification: Tracking and Vertexing

Track Classification: Tracking and Vertexing