

## A long slab prototype for ILD SiW-Ecal

The long slab is a new prototype for the SiW-Ecal, a silicon tungsten electromagnetic calorimeter for the ILD detector of the future International Linear Collider. This new prototype has been designed to demonstrate the ability to build a full length detecting layer (1.60m for the ILD barrel). Indeed, this length induces difficulties for clock and signal propagation and data integrity. The design used for short length slabs had to be adapted on the basis of a simulation study. The long slab performance has been tested with cosmics, radioactive source and with 3 GeV electrons in the beam tests at DESY, Hamburg. The results of the per-channel calibration of the detector will be presented. In DESY beam tests we have accumulated data for both normal and inclined incidence of the beam. With the latter one particle can sometimes traverse two pixels and deposit less energy per pixel. We'll show how this can be used to measure the position of the trigger threshold. This new prototype gives us a lot of hints on how to improve the design of the front-end electronics. It is also a convenient tool to estimate the key characteristics of ILD SiW-Ecal (like power consumption, cooling, readout time etc.) and to optimize the future design of the detector.

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