



Contribution ID: 201

Type: Oral

Dual-readout calorimetry with homogenous crystals

Tuesday, 7 November 2023 17:30 (15 minutes)

The Calvision project seeks to develop high resolution calorimetry for a future lepton collider with state-of-the-art performance for both electromagnetic (EM) and hadronic signatures using the dual-readout technique. We seek to improve the hadronic energy resolution of homogenous scintillating-crystal calorimeters through the measurement and separation of the scintillation and Cherenkov light in hadronic showers. The research program considers materials, sensors, light-collection techniques, readout, raw-signal analysis, and reconstruction algorithms to improve the data collected at a Higgs factory. This talk will briefly introduce the goals of the research program and review some of the initial measurements from our first test beam efforts aimed at studying the collection of Cherenkov and scintillation signals in homogenous crystals applicable to an EM layer with dual-readout capability.

Early Career

No

Primary authors: HIROSKY, Bob (U. Virginia); CUMMINGS, Grace (Fermi National Accelerator Laboratory)

Presenter: HIROSKY, Bob (U. Virginia)

Session Classification: RDC9

Track Classification: RDC Parallel Sessions: RDC9: Calorimetry