

Canadian Association of Physicists

Association canadienne des physiciens et physiciens

Contribution ID: **3193** Type: **Oral Competition (Graduate Student)** / **Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

(G*) Study of the combined performance of the Digital Hadronic Calorimeter and Si-W Electromagnetic Calorimeter for the CALICE R&D Collaboration

Monday, 6 June 2022 11:45 (15 minutes)

The Digital Hadronic Calorimeter (DHCAL) and the Silicon-Tungsten Electromagnetic Calorimeter (Si-W ECAL) are both CALICE prototypes originally meant for the International Linear Collider (ILC) experiments. The analysis of the combined response to different particles will be presented. The data was obtained from test runs at Fermilab in 2011. The linearity, energy and spatial resolutions results will be shown, as well as the calibration and alignment of the detectors. Both DHCAL and Si-W ECAL are fine-layered high-granularity detectors with 1cm x 1cm pixel sizes, which allows for much-improved tracking and particle identification, thus for the application of modern particle flow algorithms.

Primary author: Ms ALMANZA SOTO, Melissa (McGill University)

Presenter: Ms ALMANZA SOTO, Melissa (McGill University)

Session Classification: M1-9 Exploring the Energy and Precision Frontier I (PPD) | Exploration de la frontière d'énergie et de précision I (PPD)

Track Classification: Technical Sessions / Sessions techniques: Particle Physics / Physique des particules (PPD)