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Contribution ID: 3067 Type: **Poster not-in-competition (Graduate Student) / Affiche non-compétitive (Étudiant(e) du 2e ou 3e cycle)**

(POS-38) Analysis on A Large HPGe PPC Detector with Machine Learning

Tuesday, 7 June 2022 17:52 (2 minutes)

High purity germanium (HPGe) p-type point contact (PPC) detectors are one of the ideal candidates for searching rare and low energy events, such as neutrinoless double beta decay and various dark matter candidates. We will report our studies on pulse shape characteristics and temperature dependency of a large segmented HPGe PPC detector. We will also discuss a machine learning algorithm in development to measure drift time of pulses and identify event positions. The determination of initial event position and optimized drift time measurement could be used for charge trapping correction, hence improving overall energy resolution of the final signals.

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Session Classification: PPD Poster Session & Student Poster Competition (21) | Session d'affiches PPD et concours d'affiches étudiantes (21)

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