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Machine Learning for Event Position Reconstruction in Germanium Detectors

Tuesday, August 20, 2024 10:05 AM (10 minutes)

In the search for neutrinoless double-beta decay, germanium detectors are a valuable tool. It is of interest to unterstand the position and energy of interactions inside the detectors. An accurate reconstruction of interaction position inside a detector is important for event characterization and background rejection. Novel approaches, such as machine learning, can complement or further improve traditional methods . In my talk, I will discuss the basics of machine learning from germanium detector data, along with my work to reconstruct the position of event interaction. Lastly, I will highlight the machine learning work done within our lab to calculate drift time and pole zero correction.

What area of study best describes your talk?

If you answered 'Other', please provide the study area.

Presenter: CALLJEJA, Mary (Queen's University)

Session Classification: Presentations