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Deeply Learning the Position Reconstruction of Antihydrogen Annihilations in ALPHA-g

Thursday 17 August 2023 10:00 (15 minutes)

The ALPHA-g experiment at CERN aims to perform the first-ever direct measurement of the effect of gravity on antimatter, determining its weight to within 1% precision. At TRIUMF, we are working on a new deep learning method based on the PointNet architecture to predict the height at which the antihydrogen atoms annihilate in the detector. This approach aims to improve upon the accuracy, efficiency, and speed of the existing annihilation position reconstruction. In this presentation, I will report on the promising preliminary performance of my model and discuss future development.

Topics - Please choose one:

Particle

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