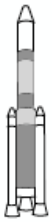

CALOR 2024

第２０回 素粒子・原子核物理学
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Particle Reconstruction in Dual-Readout Calorimeters using Deep Learning (poster-ID98)

Thursday 23 May 2024 14:20 (5 minutes)

Dual-readout calorimeters utilize two distinct readouts from scintillation and Cerenkov fibers to measure energy, yielding high hadronic energy resolution. While these calorimeters can reconstruct the energy, position, and particle type of detected showers, conventional methods are limited to distinguishing between electromagnetic and hadronic particles. To overcome this limitation, we explore deep learning algorithms to optimize particle reconstruction across different regions of the calorimeter and to extend the identification of particle types. This study evaluates of the performance of particle reconstruction using deep learning-based algorithms which is optimized for dual-readout calorimeters.

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Session Classification: Poster Session (with Coffee)