

Classifying cosmic-ray components for LHAASO-KM2A with ParticleNet

The classification of cosmic-ray components in ground-based air shower experiments such as LHAASO is a challenging task. ParticleNet is a DGCNN-based model designed for particle physics applications. In this presentation, we use ParticleNet to identify the proton and light components from background cosmic-ray events in the simulation data of LHAASO-KM2A. The results show enhanced classification performance compared to the baseline method, demonstrating the promise of advanced deep learning techniques in cosmic-ray data analysis.

Primary authors: ZHANG, Weiyan (Hebei Normal University); ZHANG, Xiaopeng (IHEP)

Presenter: ZHANG, Weiyan (Hebei Normal University)

Session Classification: 人工智能和机器学习的应用

Track Classification: 人工智能和机器学习的应用