Contribution ID: **41** Type: **Talk**

【358】Towards an AI-based trigger system for the next-generation of imaging atmospheric Cherenkov telescope cameras

Thursday 12 September 2024 15:45 (15 minutes)

Imaging atmospheric Cherenkov telescopes (IACTs) observe extended air showers (EASs) initiated by the interaction of very-high-energy gamma rays and cosmic rays with the atmosphere. Besides the Cherenkov light emitted by the EAS, the IACT cameras continuously record light from the night sky background (NSB). The trigger and data acquisition system of IACT cameras is designed to reduce the NSB and electronic noise by carrying out an on-the-fly event selection process. We present some prospective studies for an application of an Artificial-Intelligence-based trigger system for the next-generation of IACT cameras. As a high-level step of the novel trigger system, we show that gamma/hadron separation could be performed at trigger-level.

Author: MIENER, Tjark (Universite de Geneve (CH))

Presenter: MIENER, Tjark (Universite de Geneve (CH))

Session Classification: Nuclear, Particle- & Astrophysics (TASK)

Track Classification: Nuclear, Particle- and Astrophysics (TASK)