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PMT Array Nonlinearity On-line Calibration using the Photoelectron Meter for Image Air Cherenkov Telescope

Saturday, August 1, 2015 3:30 PM (1 hour)

The PMT array is the most important detection unit for IACT. The high precision Cosmic ray energy spectrum measurement relies on the performance of the PMT array. The PMT gain can be ageing over time, which can impact the performance of the PMT array. A facility of photoelectron meter is developed for high precision online nonlinearity calibration and monitoring the performance of the PMT array of IACT. The photoelectron meter can emit four kinds light with ratio of 1:2:3:4 and the light flux can be adjusted with the fixed ratio. The system uncertainty of the photoelectron meter is less than 0.5% and the precision of nonlinearity calibration is better than 1%.

Collaboration

LHAASO

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