



Calibration and monitoring of the air fluorescence detector for the Telescope Array experiment

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Abstract: The air fluorescence detectors (FDs) of the Telescope Array (TA) experiment have been constructed in a desert of Utah, USA. We can measure the longitudinal developments of EASs directly with the FDs by detecting air fluorescence lights and determine the primary energies of ultra-high energy cosmic rays. In order for accurate observation and measurements of EASs, elaborate detector calibrations and monitoring systems are required. We will present the result of calibration and monitoring systems for the reflectance and curvature radius of segment mirrors, the characteristics of PMT (absolute gain, linearity, temperature dependence of gain), and the uniformity of the camera surface, etc.