A FIBER-OPTIC BASED CALIBRATION SYSTEM FOR THE HIRES EXPERIMENT

HiRes Collaboration

This article describes a fiber-optic based calibration system installed at the High Resolution Fly's Eye (HiRes) astro-particle physics observatory. The HiRes detectors measure ultra-violet scintillation light from distant extensive air showers. This automated calibration system delivers light from a frequency-tripled (355nm) YAG laser to the 10,762 photo-multiplier tubes of the 42 HiRes-II detectors. The design, implimentation, operation, and use of the system will be reviewed.