FLAT-FIELDING OF THE PHOTOMULTIPLIER CAMERA OF THE PHASE I HESS CHERENKOV TELESCOPES

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The imaging atmospheric Cherenkov Telescopes of the HESS project will have a camera built of 960 photomultiplier tubes. To adjust the high voltages (HV) of the tubes for the same gain ("flat-fielding"), a simulated atmospheric Cherenkov light flash will be produced by illuminating a piece of scintillator with a short laser flash. The wavelength-shifted scintillator light then uniformly illuminates the whole camera to make the HV adjustment feasible. This work describes the fibre optic and other technologies used to guide the laser light from one laser to the four cameras of the telescopes of HESS Phase I.