

A Camera for the Small Sized Telescopes of the Cherenkov Telescope Array

The Cherenkov Telescope Array (CTA) will use three telescope sizes to effectively detect cosmic gamma rays in the energy range from several tens of GeV to hundreds of TeV. The Small Sized Telescopes (SSTs) will form the largest section of the array covering an area of many square kilometres on the CTA southern site in Paranal, Chile. Up to 70 SSTs will be implemented by an international consortium of institutes as an in-kind contribution to the observatory (with 37 planned in the first stage of construction). The SSTs will provide unprecedented sensitivity to gamma rays above 1 TeV and the highest angular resolution of any instrument above the hard X-ray band. CTA has recently finalised the technology that will be used for the SSTs: the telescopes will be a dual-mirror design with ~4 m primary reflector and equipped with an SiPM-based camera with full waveform readout from 2048 channels covering a approximately 9 degree field of view. Due to the aplanatic and small plate-scale Schwarzschild-Couder configuration of the optics, the camera can be compact (diameter ~55 cm, mass <100 kg) and low cost. In this contribution we present the SST camera design and the implementation plan for series production.

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Session Classification: Contributed posters