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The Small-Sized Telescope Camera of CTAO

The Small-Sized Telescopes (SSTs) will be a key component of the Cherenkov Telescope Array Observatory (CTAO), the next-generation ground-based gamma-ray observatory in the energy range from tens of GeV to hundreds of TeV. They will focus on the highest energies, from about 1 TeV to at least 300 TeV, with a planned deployment of at least 37 and potentially up to 70 units at the southern site in Paranal, Chile. They use a dual-mirror Schwarzschild-Couder design, allowing for a compact SiPM camera measuring about 50 cm and weighing less than 100 kg. The fast Cherenkov pulses are detected by 2048 SiPMs placed on its curved focal plane, organised in modules of 64 pixels each, all read by state-of-the-art full waveform readout electronics. Development is essentially complete and the collaboration is organising the testing of the first quarter camera (QCAM) on a prototype telescope in Tenerife. The first complete camera (Engineering Camera, ECAM) will then be built and series production will begin.

In this contribution we present the design choices that led to the development, the current measurement results and the status of the project.

Collaboration(s)

CTAO - SST

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