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

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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, with up to 70 telescopes covering an area of many square kilometres on the CTA southern site in Paranal, Chile. 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 and will be equipped with a compact, SiPM-based camera with full waveform readout. Here, we describe the requirements for the SST Camera, the technology used and the challenges that will be encountered in producing many maintainable and reliable cameras required for the largest ever gamma-ray observatory.

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