

# A Silicon Photomultiplier Camera for Use in the Cherenkov Telescope Array

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The Cherenkov Telescope Array (CTA) is the next-generation ground-based gamma-ray observatory sensitive in the energy regime of 30 GeV to 100 TeV. Telescopes with a novel Schwarzschild-Couder design are currently being developed as a contribution to CTA. Utilization of silicon photomultipliers (SiPMs) is being planned for use in the cameras of these novel telescopes. Silicon photomultipliers have advanced to a point where they not only compete with photomultiplier tubes, but can also outperform them. To understand the performance of a SiPM camera in CTA, we are working to understand the individual chips, the triggering of the camera, and the effect of the Schwarzschild-Couder design used in conjunction with SiPMs. We discuss the properties of the SiPM most important to the telescope performance and present the conceptual design of a camera for use in a prototype telescope under construction for first light in 2015.

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