

Abstract Submitted
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Operations and Performance of the Prototype Schwarzschild-Couder Telescope CORBIN COVAULT, Case Western Reserve University, THE CTA CONSORTIUM COLLABORATION — The prototype Schwarzschild-Couder Telescope (SCT) is a new imaging Cherenkov telescope for gamma-ray astronomy located at the Fred Lawrence Whipple Observatory in Amado, Arizona. The SCT is a candidate design concept for the planned Cherenkov Telescope Array (CTA). CTA will consist of two arrays (north and south) consisting of dozens of different imaging gamma-ray telescopes of various sizes. CTA will provide a significant increase in sensitivity to astrophysical sources in the 20 GeV to 300 TeV energy range relative to prior experiments. SCT has a unique dual-mirror design that provides unprecedented angular resolution for air shower images. The focal plane of the SCT is instrumented with a large area modular solid-state silicon photomultiplier camera. We describe the operations and performance of the prototype SCT telescope and camera system which has been deployed since early 2019. Results include progress toward full optical alignment of the precision mirror systems and initial operations of the prototype camera for nighttime observations. We also summarize progress toward completing the planned upgrade to the full-sized camera system which will increase the size of the camera from 1,600 to 11,136 pixels.

Corbin Covault
Case Western Reserve University

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