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The small size telescope control system design of the Cherenkov Telescope Array Observatory

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The Cherenkov Telescope Array Observatory (CTAO) will include telescopes of three different sizes, the smallest of which are the Small-Sized Telescopes (SSTs). In particular, the SSTs will be installed at the southern site of CTAO, on the Chilean Andes, and will cover the highest energy range of CTAO (up to ˜300 TeV). The SSTs are developed by an international consortium of institutes that will provide them as an in-kind contribution to CTAO. The optical design of the SSTs is based on a Schwarzschild-Couder-like dual-mirror configuration. They are equipped with a focal plane camera based on SiPM detectors.
The Telescope Control System (TCS) is the system responsible for the control and supervision of each telescope. The TCS includes several supervisor components that interface with the telescope local control systems, the hardware and software that control the telescopes hardware devices such as the telescope mount drive systems and the Cherenkov camera. The TCS is also the interface between the telescope and the CTAO Array Control and Data Acquisition system (ACADA). As far as the mechanical structure is concerned, the TCS is also derived from what has already been developed within the ASTRI project.
The design of the SST telescopes was evaluated and approved during the Critical Design and Manufacturing Readiness review (CDMR) organized with CTAO. In this contribution we will present the design of the Telescope Control System, including the results of the CDMR.

Footnotes

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