

The ASTRI Mini-Array Supervisory Control and Data Acquisition software system

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The ASTRI Mini-Array is an international collaboration led by INAF and devoted to imaging atmospheric Cherenkov light for very-high γ -ray astronomy. The project is deploying an array of 9 4-m class Imaging Atmospheric Cherenkov Telescopes at the Teide Observatory on Tenerife, in the Canary Islands, most sensitive to γ -ray radiation above 1 TeV. The Supervisory Control and Data Acquisition (SCADA) system controls all the operations carried out on-site, from the execution of an observing plan to the acquisition of scientific data. SCADA provides monitoring and online observations quality information to help assess data quality during the acquisition. Moreover, the system provides automated reactions to critical conditions. SCADA handles the automated data transfer to the Data Center at the Observatory in Rome through a high-speed networking connection, allowing us to operate the array remotely from different locations. In this contribution, we describe the software architecture of the SCADA system, the team organisation, the software engineering development approach and the software quality management.

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