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The Software Quality Assurance programme of the ASTRI Mini-Array project

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The ASTRI Mini-Array is a gamma-ray experiment led by Istituto Nazionale di Astrofisica with the partnership of the Instituto de Astrofisica de Canarias, Fundacion Galileo Galilei, Universidade de Sao Paulo (Brazil) and North-West University (South Africa). The ASTRI Mini-Array will consist of nine innovative Imaging Atmospheric Cherenkov Telescopes that are being installed at the Teide Astronomical Observatory (˜2400 m a.s.l.) in Tenerife (Canary Islands, Spain). The ASTRI Mini-Array software will cover the entire life cycle of the experiment, including scheduling, operations and data dissemination. The on-site control software will allow the operator to communicate remotely to the array (including automated reaction to critical environmental conditions). Due to the high-speed (10 Gbit/s) networking connection available between Canary Islands and Italy, all data will be delivered every night to the ASTRI dedicated Data Center in Rome for their processing and dissemination. The ASTRI team made experience with ASTRI-Horn, the first Italian dual-mirror Cherenkov telescope, prototype of the ASTRI Mini-Array telescopes. Exploiting lessons learned from ASTRI-Horn, we decided to adopt an iterative incremental model for the software in order to provide more software releases according to the project schedule. Due to this software peculiarity, we have implemented a Quality Assurance (QA) programme specific for the software, which defines the strategy and the organization for the management of the quality control. In this contribution we present the layout and the contents of the ASTRI Mini-Array QA software programme, describing the organization adopted for its management and reporting some examples of how it has been applied so far.

Significance

References

Experiment context, if any

Primary author: CONFORTI, Vito

Co-authors: Dr BULGARELLI, Andrea (INAF); Dr LA PALOMBARA, Nicola (INAF); Dr LUCARELLI, Fabrizio (INAF); Dr SIRONI, Giorgia (INAF); Dr ANTONELLI, Lucio Angelo (INAF); Dr BIGONGIARI, Ciro (INAF); Dr CHRISTINE, Grivel (TNG IAC); Dr GALLOZZI, Stefano (INAF); Dr GIANOTTI, Fulvio (INAF); Dr GIORDANO, Valentina (INAF); Dr GIULIANI, Andrea (INAF); Dr LOMBARDI, Saverio (INAF); Dr MILLUL, Rachele (INAF); Dr PARESCHI, Giovanni (INAF); Dr SCUDERI, Salvatore (INAF)

Presenter: CONFORTI, Vito

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