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The SST-1M gamma-ray mini-array - early operations and prospects

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We present first results of the commissioning data from two Single-Mirror Small-Sized Telescopes (SST-1M) for gamma-ray detection with imaging air Cherenkov technique. SST-1M adopts a Davies-Cotton optics and a fully digitising silicon photomultipliers (SiPM) based camera. SST-1M telescopes have a lightweight and compact structure with 4 m-diameter mirror dish composed of 18 hexagonal glass mirrors and the focal ratio of 1.4. It has a wide field-of-view of 9.1◦. The innovative cameras employ digital electronics, with fully digital trigger and readout architecture, and highly performing large-area SiPM with dedicated slow control. The SST-1M telescopes are optimized to provide gamma-ray sensitivity above 500 GeV in stereo mode. They already allow fully robotic operation and they are designed for operation in harsh environment with minimal maintenance. The SST-1M mini-array is installed at the Ondřejov Observatory in the Czech Republic and undergoes commissioning and validation during which first remote observations of astronomical sources are performed. In our presentation we will report on the status of the project and present first results of early science operations.

Primary author: NIEMIEC, Jacek (Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland)

Presenter: NIEMIEC, Jacek (Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland)

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