



Contribution ID: 1226

Type: Poster

## Using muon rings for the optical calibration of ASTRI-1 telescope: preliminary results.

The ASTRI Mini-Array, an array of nine innovative Imaging Atmospheric Cherenkov Telescopes, is an INAF project devoted to the study of gamma-ray sources emitting at very high-energy in the TeV spectral range. It is situated at the Teide Astronomical Observatory, Instituto de Astrofísica de Canarias, on Mount Teide in Tenerife (Canary Islands, Spain), where the first telescope, named ASTRI-1, is already operational since mid-2024 and the second telescope, named ASTRI-3, is under deployment.

The analysis of muon ring images, which are observed by almost any Imaging Atmospheric Cherenkov Telescope during standard data-taking, is a standard method used to calibrate optical throughput and monitor the optical point spread function. This method has also been adopted in the ASTRI Mini-Array calibration plan as one of the techniques for calibrating these parameters.

In this contribution, we present preliminary results from the analysis performed to identify muon candidates and the reconstruction procedures applied using the AmuSoft code, one of the calibration software tools developed for the ASTRI Mini-Array telescopes, on data collected by ASTRI-1 during its commissioning while observing the Crab Nebula.

### Collaboration(s)

ASTRI

**Authors:** MINEO, Teresa; MOLLICA, Davide (INAF); COMPAGNINO, Antonio Alessio (INAF -IASF Palermo); CICIARI, Gloria Maria; BIGONGIARI, Ciro; SATURNI, Francesco Gabriele

**Presenter:** MINEO, Teresa

**Session Classification:** PO-2

**Track Classification:** Gamma-Ray Astrophysics