Contribution ID: **173** Type: **Oral presentation**

The ASTRI mini-array and its scientific prospects in the framework of the Cherenkov Telescope Array

Monday, 26 October 2015 18:28 (15 minutes)

In the framework of the international Cherenkov Telescope Array (CTA) observatory, the Italian National Institute for Astrophysics (INAF) has developed a large field-of-view (9.6 degrees), dual-mirror, small-sized, end-to-end telescope (ASTRI SST-2M). This prototype has been installed at Mt. Etna (Italy) on September 2014, and it is currently undergoing engineering tests. Soon after the scientific validation of the ASTRI SST-2M prototype, INAF will be ready to lead, in synergy with the Universidade de Sao Paulo (Brazil) and the North-West University (South Africa), the deployment at the final CTA southern site of the ASTRI mini-array composed of nine ASTRI SST-2M telescopes that are proposed to be a precursor to CTA. The ASTRI mini-array will overtake the sensitivity of current IACTs above few TeVs up to about 100 TeV, and will be well suited to perform unprecedented scientific observations of known and predicted bright TeV emitters, both Galactic and extra-Galactic. In addition, it will also allow us to address problems in fundamental physics such as the particle nature of Dark Matter. In this contribution, we review the main ASTRI mini-array scientific prospects.

Primary author: Dr LOMBARDI, Saverio (OAR-INAF, ASDC)

Presenter: Dr LOMBARDI, Saverio (OAR-INAF, ASDC)

Session Classification: Gamma-Ray Astrophysics

Track Classification: Gamma-ray Astrophysics