Contribution ID: **89** Contribution code: **INSTR/SW** Type: **Oral**

Detection prospects of extended sources with ASTRI, CTA, and LHAASO

Wednesday 4 September 2024 14:45 (15 minutes)

The recent discovery of several ultra high-energy gamma-ray emitters in our Galaxy represents a significant advancement towards the characterization of its most powerful accelerators. Nonetheless, in order to unambiguously locate the regions where the highest energy particles are produced and understand the responsible physical mechanisms, detailed spectral and morphological studies are required, especially given that most of the observed sources were found to be significantly extended. In these regards, pointing observations with the next-generation Imaging Atmospheric Cherenkov Telescopes, like the Cherenkov Telescope Array (CTA) Observatory and the ASTRI Mini-Array (ASTRI), are expected to provide significant improvements. In view of identifying the most promising sources to target in future observations, I will present a comparative analysis of the expected performance of ASTRI and CTA, computing their differential sensitivities towards extended sources, and further exploring their capabilities with respect to specific case studies, including follow-ups of existing gamma-ray source catalogs.

Primary authors: PERON, Giada (Istituto Nazionale di Astrofisica (INAF)); CELLI, Silvia (Sapienza Università di Roma)

Presenters: PERON, Giada (Istituto Nazionale di Astrofisica (INAF)); CELLI, Silvia (Sapienza Università di Roma)

Session Classification: Parallel 2