Contribution ID: **366** Type: **Oral report**

The First LHAASO Catalog of Gamma-ray Sources

The results of the first catalog of very-high energy and ultra-high energy gamma-ray sources detected by LHAASO will be presented in this talk. The catalog was compiled using 508 days of data collected by the Water Cherenkov Detector Array (WCDA) from March 2021 to September 2022 and 933 days of data recorded by the Kilometer Squared Array (KM2A) from January 2020 to September 2022. This catalog represents the main result from the most sensitive large coverage gamma-ray survey of the sky above 1 TeV, covering declination from -20° to 80°. In total, the catalog contains 90 sources with an extended size smaller than 2° and a significance of detection at $> 5\sigma$. Based on our source association criteria, 32 new TeV sources are proposed in this study. Among the 90 sources, 43 sources are detected with ultra-high energy ($E > 100$ TeV) emission at $> 4\sigma$ significance level.

Primary authors: 胡, 世聪 (高能所); SHAOQIANG, Xi (中科院高能物理研究所); ZHA, Min (高能所); CHEN（陈）, songzhan（松战）(中科院高能物理研究所)

Presenter: 胡, 世聪 (高能所)

Track Classification: 中微子物理、粒子天体物理与宇宙学