

Performance of LHAASO-KM2A on large zenith angles

The Large High Altitude Air Shower Observatory (LHAASO) has been operating with a zenith cut of 50° , limiting its field of view (FOV) from declination -21° to 79° . However, expanding the FOV to include crucial regions such as the Galactic center for gamma-ray research and providing increased exposure to sources at large zenith angles, such as the Fermi Bubble and gamma-ray binaries like LSI +61303 and LS 5039, requires studying the detector's performance at large zenith angles. This expansion enhances multi-messenger studies and aids in the search for Galactic PeVtrons. In this proposal, we intend to investigate the performance of event core, angular, and energy reconstruction at large zenith angles and compare it with events at small zenith angles. We aim to assess the detector's performance at large zenith angles with the standard candle of Crab Nebula and optimize event selection and reconstruction processes accordingly.

Primary authors: 李, 文莲; 董, 绪强; 李, 骢; 何, 会海

Presenters: 李, 文莲; 董, 绪强