

The Very Large Area gamma-ray Space Telescope (VLAST)

Thursday, 9 May 2024 14:40 (20 minutes)

High energy gamma-rays carry the fundamental information of the astrophysical sources in extreme conditions. The space detection of gamma-rays is distinguished by the wide energy range, the observation continuity as well as the high energy resolution. We propose a new space-borne mission-Very Large Area gamma-ray Space Telescope (VLAST), covering a very wide energy range from MeV to TeV. VLAST has an acceptance of $\sim 10 \text{ m}^2 \cdot \text{sr}$ at GeV energies and $\sim 1 \text{ m}^2 \cdot \text{sr}$ at MeV energies. Together with an excellent energy resolution, VLAST is expected to increase the sensitivity of Fermi Large Area Telescope by a factor of 10. In this work, the main scientific objectives, the detection principle, the payload and the expected performance of VLAST will be introduced.

Collaboration (if any)

Primary author: YUE, Chuan (Purple Mountain Observatory, Chinese Academy of Sciences)

Presenter: YUE, Chuan (Purple Mountain Observatory, Chinese Academy of Sciences)

Session Classification: 14 - 空间天文与粒子探测

Track Classification: 14 - 空间天文与粒子探测