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

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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 ~10 m2·sr at GeV energies and ~ 1 m2·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)

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