

The Solar Two 20-300 GeV Gamma-ray Observatory

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The Solar Two Gamma-Ray Observatory is designed to close the energy gap between 20-300 GeV that is inaccessible by current instruments, such as the satellite-borne EGRET detector and the ground-based Whipple 10 Meter telescope. Utilizing the facilities of the Solar Two Power Plant in Barstow, CA, the observatory will detect the Cherenkov light generated as high-energy gamma rays and charged cosmic-ray particles interact with the atmosphere. With over 2000 heliostats available, Solar Two has the largest heliostat mirror area in the world and, thus, the potential to be the most sensitive gamma-ray detector at these energies.

A secondary mirror system capable of imaging 32 heliostats has been built and is being calibrated, with the first observations expected when the Crab Nebula becomes observable in October. We report on the design and testing of this secondary mirror system including the PMT camera, electronics, and heliostat field.