

## THE STATUS OF THE STACEE OBSERVATORY

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The Solar Tower Atmospheric Cherenkov Effect Experiment (STACEE) is a ground-based instrument designed to study astrophysical sources of gamma-rays in the energy range 50 to 500 GeV. STACEE uses an array of large heliostat mirrors at the National Solar Thermal Test Facility at Sandia National Laboratories in Albuquerque, New Mexico, USA. These mirrors are used to collect Cherenkov light from gamma-ray air showers. The light is concentrated onto an array of photomultiplier tubes located at the top of a central tower. Construction and observations with STACEE have been underway since 1997. During 1998/1999, the first phase of this experiment, STACEE-32, was used to detect gamma-rays from the Crab Nebula at an energy of  $190 \pm 60$  GeV. In 2001, we completed the final version of STACEE, called STACEE-64. The current version of the experiment represents a considerable upgrade in performance relative to the previous instrument. We have doubled the mirror collection to over 2300 square meters, improved optical throughput, and reduced background albedo. We have also upgraded the electronics and data acquisition systems, by, among other things, the installation of custom-made digital delay/trigger modules and commercial 1 GHz Flash ADCs. These improvements allow us to pursue and energy threshold below 70 GeV which will extend the reach of STACEE for extragalactic sources out to redshift  $z$  of approximately 1.0.