

# Development of an Imaging Atmospheric Cherenkov Telescope Array for Ultra-High Energy Gamma-ray Astronomy

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Dozens of gamma-ray sources are now observed to extend their emission up to Ultra-High Energies (UHE,  $E > 100$  TeV). Most of these sources are located along the Galactic Plane and appear largely extended to ground detectors. Imaging Atmospheric Cherenkov Telescopes (IACTs) provide excellent angular resolution and a large effective area, but to build an array which is sensitive to UHE emission would typically be a complex and costly endeavor. However, if the goal is strictly to study the very highest energies ( $E > 100$  TeV), then an array can be constructed with smaller and more affordable telescopes. *The Panoramic Search for Extraterrestrial Intelligence* (PANOSSETI) team have designed telescopes that meet these requirements and have already been used to image gamma-ray initiated air showers in coincidence with VERITAS. In March 2024, three PANOSSETI telescopes were deployed at Lick Observatory, California to collect data and to test analysis tools developed in conjunction with Monte Carlo simulations. Described here is the telescope technology, status of the array, and plans for future deployment.

**Primary author:** KORZOUN, Nikolas (University of Delaware)

**Co-authors:** BROWN, Aaron (University of California San Diego); HOLDER, Jamie (University of Delaware); HOROWITZ, Paul (Harvard); LIU, Wei (University of California Berkeley); MAIRE, Jérôme (University of California San Diego); PUESCHEL, Elisa (Ruhr-Universität Bochum); RAULT-WANG, Nicolas (University of California Berkeley); WERTHIMER, Dan (University of California Berkeley); WILEY, James (University of California San Diego); WRIGHT, Shelley (University of California San Diego)

**Presenter:** KORZOUN, Nikolas (University of Delaware)

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