

# The Cherenkov Telescope Array Observatory

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The Cherenkov Telescope Array Observatory (CTAO) is the next generation ground-based gamma-ray telescope facility, currently under construction. It is envisioned to ultimately consist of about 100 Cherenkov telescopes on two sites: a northern site on the Canary Island of La Palma, Spain, and a southern site near Mt. Paranal, Chile. The initial array (called “Alpha configuration”) with over 60 telescopes is currently expected to be completed by 2028. The CTA is expected to be about 10 times more sensitive than currently operating Cherenkov telescope facilities (H.E.S.S., MAGIC, VERITAS) and provide significantly improved spatial resolution and extended energy coverage, towards both lower and higher energies. A prototype of the large-sized telescopes (LSTs) is already fully operational on the northern site of La Palma (called LST-1). This review presents the current status of the CTAO construction and science prospects for the full CTAO, as well as first science results from LST-1.

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