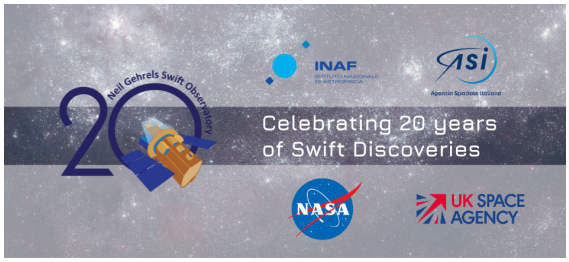

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CTAO a new window for the multi-messenger and multi-wavelength astronomy

Thursday 27 March 2025 09:30 (30 minutes)

The Cherenkov Telescope Array Observatory (CTAO) is the next-genration very-high energy gamma-ray observatory with two observation stations, one in the Canary island of La Palma (Spain) and the other in the Paranal desert in Chile. Designed to operate for 30 years, the CTAO will function as an open, proposal-driven facility, offering access to researchers worldwide.
The CTAO is nearing a pivotal moment, positioning itself as a key player in both multi-messenger and multi-wavelength astronomy. Currently under construction, it is expected to deliver its first data with intermediate array configurations within the next three years. Surpassing existing Cherenkov telescope arrays, already these initial configurations will enable groundbreaking science results. With full capabilities for detecting short-duration phenomena, the early science program of the CTAO will place a strong emphasis on transient events—key drivers in the multi-messenger and multi-wavelength astronomy landscape. This contribution will provide an update on the status of the CTAO construction project, with a focus on the scientific capabilities of the first intermediate array configurations and their significance within the broader multi-messenger and multi-wavelength context.

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