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CTA: The next-generation giant for ground-based Gamma-ray Astronomy

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Abstract content
 (Max 300 words)

The envisaged Cherenkov Telescope Array (CTA) project is a global initiative to build the next-generation ground-based very high-energy (VHE) gamma-ray telescope facility. It will serve as an open observatory to a wide astrophysics community, providing a deeper insight into the non-thermal high-energy universe. CTA is designed to achieve full-sky coverage, with one array in the northern and another one in the southern hemisphere. Through deployment of about 50 to 100 telescopes (in at least three sizes at the southern and at least two sizes at the northern site), CTA will have improved sensitivity by about an order of magnitude relative to present instruments, spanning about four decades of energy, from a few tens of GeV to above 100 TeV. The observatory will also feature enhanced angular and energy resolutions over current imaging air Cherenkov telescopes (IACTs). An international CTA collaboration of more than 1000 members from across the world has already completed a design study and started an EU-funded preparatory phase which is intended to lead to production readiness of CTA in 2014 with a 5-year construction period starting in 2015. In this presentation we introduce the CTA and provide an overview of the project and its scientific goals.

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