

VHE gamma-ray surveys with CTA

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The Cherenkov Telescope Array (CTA) will be the first astronomical observatory fully covering the gamma-ray sky in an energy range from 20 GeV up to 300 TeV. The observatory will be composed of two arrays of tens of telescopes located in La Palma, Spain, and Paranal, Chile.

Among the Key Science Projects proposed by the CTA Consortium, Galactic and extragalactic surveys will be conducted during the first years of operation. With an unprecedented sensitivity and improved angular resolution, CTA surveys promise the discovery of several hundred of new gamma-ray sources, but the challenges coming along with the analyses of these data will also scale up. We will focus on the challenges of source variability, extended sources modeling, source confusion, source association with multi-wavelength catalogues, classification in source populations, and sources contamination due to the systematic errors in the modeling of instrumental and astrophysical backgrounds.

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Session Classification: Survey Session