Abstract number: S7-540
7. High energy gamma-rays (GR)

Active Galactic Nuclei and IACTs

Becherini, Yvonne[1]
[1]Department of Physics and Electrical Engineering, Linnaeus University, 351 95 Vaxjoe, Sweden

Active Galactic Nuclei (AGN) are the most numerous sources populating the extragalactic sky. They have been extensively studied at all wavelengths and are thought to be among the most powerful objects in the Cosmos, with their supermassive black holes at their centers and bipolar jets, accelerating particles up to the highest energies. With the advent of very-high-energy astronomy, AGN have been the first sources to be detected by pioneering experiments, helping to validate the Atmospheric Imaging Cherenkov Telescope technique. Since then, about 60 AGN have been discovered at VHE, giving the possibility to finally complete the Spectral Energy Distributions at the highest detectable photon energies, to measure extremely fast variability, and to correlate these measurements with those in other wavelength ranges; all thus giving a detailed view of the acceleration mechanism at work. They have also served as Cosmic lighthouses, allowing the study of the intervening photon and magnetic fields and even the fabric of space-time itself. Still, there is a lot to be learned on these extraordinary objects, and the CTA observatory will provide the opportunity to achieve higher photon statistics over a wider energy range, with more accurate energy and angular resolution, so giving much enriched information about the AGN population, their variability and intrinsic spectral features.