

Background rejection using image residuals from large telescopes in imaging atmospheric Cherenkov telescope arrays

Identification of light coming from muons has been suggested as a promising way to dramatically improve the background rejection power of IACT arrays at high energies. However, muon identification remains a challenging task, for which efficient algorithms are still being developed. We present an approach in which, rather than identifying Cherenkov light from muons, we simply consider the presence of Cherenkov light other than the main shower image. We show that this approach results in background rejection improvements at all energies above 1 TeV, while maintaining a large gamma-ray efficiency.

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