Abstract Submitted
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Development of a Matched Runs Method for VERITAS[1] ANDREW FLINDERS, University of Utah, VERITAS COLLABORATION — VERITAS is an array of four Imaging Air Cherenkov Telescopes located in southern Arizona. It has been successful in detecting Very High Energy (VHE) radiation from a variety of sources including pulsars, Pulsar Wind Nebulae, Blazars, and High Mass X-Ray Binary systems. Each of these detections been accomplished using either the standard Ring Background Method or the Reflected Region Method in order to determine the appropriate background for the source region. For highly extended sources (>1 degree) these background estimation methods become unsuitable due to the possibility of source contamination in the background regions. A new method, called the matched background method, has been implemented for potentially highly extended sources observed by VERITAS. It provides and algorithm for identifying a suitable gamma-ray background estimation from a different field of view than the source region. By carefully matching cosmic-ray event rates between the source and the background sky observations, a suitable gamma-ray background matched data set can be identified. We will describe the matched background method and give examples of its use for several sources including the Crab Nebula and IC443.

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