30th International Cosmic Ray Conference

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The performance of a 1 sq-km array of moderate-sized IACTs

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Abstract content

We present the results of simulations of the performance of a 1 sq-km array of imaging atmospheric Cherenkov telescopes (IACTs). To evaluate limitations of the imaging atmospheric Cherenkov technique the array is simulated under the assumption of ideal optics, in a manner which is independent of any particular telescope implementation. The primary characteristics of the array performance, collecting area, angular resolution, background rejection, and sensitivity are calculated as a function of the parameters of the array: telescope spacing, telescope size, camera pixelation, and field of view. We discuss implication of the results for the design and construction of the next generation ground-based gamma-ray observatory.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 3 (OG part 2), pages 1441-1444

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