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Hybrid performance of the Pierre Auger Observatory

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Abstract content

A key feature of the Pierre Auger Observatory is its hybrid design, in which ultra high energy cosmic rays are detected simultaneously by fluorescence telescopes and a ground array. The two techniques see air showers in complementary ways, providing important crosschecks and measurement redundancy. Much of the hybrid capability stems from the accurate geometrical reconstruction it achieves, with accuracy better than the ground array counters or a single telescope could achieve independently. We have studied the geometrical and longitudinal profile reconstructions of hybrid events. We present the results for the hybrid performance of the Observatory, including trigger efficiency, energy and angular resolution, and the efficiency of the event selection.

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

The Pierre Auger 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. 4 (HE part 1), pages 425-428

Primary author(s) : THE PIERRE AUGER COLLABORATION, - (The Pierre Auger Observatory); Dr. DAWSON, Bruce (University of Adelaide)

Presenter(s) : Dr. DAWSON, Bruce (University of Adelaide)

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