30th International Cosmic Ray Conference

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Cherenkov Telescope Array: the next generation ground-based gamma-ray observatory

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Abstract content

Gamma-ray astronomy is a new emerging and very successful branch of astronomy and astrophysics. Exciting results have been obtained by the current generation Cherenkov telescope systems such as H.E.S.S., MAGIC, VERITAS and CANGAROO. The H.E.S.S. survey of the galactic plane has exhibited a large number of sources and new astrophysics as for example the question about the origin of the cosmic rays. The detection of very high energy emission from extragalactic sources at large distances have provided insight in the star formation during the history of the universe and the understanding of active galactic nuclei. The development of the very large Cherenkov telescope array system (CTA) is under intense discussion with a sensitivity and angular resolution about an order of magnitude better then current instruments. This observatory will reveal an order of magnitude more sources and due to its higher sensitivity and angular resolution it will be able to detect new classes of objects and phenomena that have not been visible until now. A combination of different telescope types might provide for the sensitivity needed in different energy ranges

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 1313-1316

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