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Applying EAS universality to ground detector data

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Abstract content

Air shower universality states that the electromagnetic part of hadron-induced EAS can be completely described in terms of the primary energy and shower age. In addition, simulations show that the muon part is well characterized by an overall normalization which depends on the primary particle and hadronic interaction model. We investigate the consequences of EAS universality for ground arrays, which sample EAS at large core distances, and show how universality can be used to experimentally determine the muon content as well as the primary energy of cosmic ray air showers in a model-independent way.

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. 4 (HE part 1), pages 601-604

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