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Measuring Cosmic Ray Composition at the Knee with SPASE-2/AMANDA-II

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Abstract content

Important information pertaining to the origin of high-energy cosmic rays can be gained by studying their mass composition in the region of the knee (~ 3 PeV). Thus, air showers have been observed at the South Pole using the SPASE-2 surface array, which measures the electron-component, and the AMANDA-2 neutrino telescope, which measures the coincident muon-component. These two components, together with a neural network and a well-understood Monte Carlo simulation, yield the cosmic ray energy spectrum as well as the relative cosmic ray composition in the knee region. We report on the results of the analysis.

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

IceCube Collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olive, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 165-168

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