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## The string percolation model and the interpretation of cosmic ray data above $10^{17}$ eV

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### Abstract content

The study of the energy dependence of the depth of shower maximum and of the muon content in high energy cosmic ray showers are two widely used methods for the derivation of cosmic ray composition. An alternative interpretation of the energy dependence of these two observables is a change in the features of hadronic interactions at high energy. In this contribution we show that the string percolation hadronic model provides a consistent interpretation of cosmic ray data above  $10^{17}$  eV. In particular we discuss the importance of the inelasticity and of the particle multiplicity in the most energetic shower interactions, as well as the crucial role played by the nature of the leading primary.

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 659-662

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