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Evaluating the Energy Reach of Calorimeter-Based Cosmic-Ray Experiment

Abstract content

In recent years, several different experiments have been flown to directly measure high energy cosmic-ray nuclei. To measure the energy of cosmic ray particles including protons and helium nuclei with reasonable accuracy at TeV-scale requires use of a calorimeter. This paper defines energy reach in a configuration-independent way and describes a method to compare a new design to existing experiments using a relatively simple Monte Carlo algorithm. As an example, the method is used to compare the proton energy reach of several recent calorimeter and emulsion experiments and to explore how far the energy reach can be extended with a space-based calorimeter.

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

Summary

Reference

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