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Cosmic rays from 100 TeV up to the EeV regime: a review

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Content

Cosmic rays are one of the most enigmatic and energetic form of radiation that the Earth receives from outer space. It is mainly composed of atomic nuclei with energies that extends from a few MeV up to 1 ZeV, this way, surpassing the reach of modern particle accelerators. Depending of the energy range considered, there are different aspects of these particles that are still unknown, which are related with their energy spectrum, composition, origin and acceleration mechanism. To shed light on these questions, data on the energy, chemical composition and arrival direction of cosmic rays are needed, as well as multi-messenger observations of the sky. In this talk, It will be presented a small review on the physics of cosmic rays at energies above 100 TeV, which has been difficult to study due to the low statistics in this energy regime. In addition, it will be reviewed some of the most important and recent observations of cosmic rays in this energy region and it will be discussed what we have learned from them.

Summary

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