Contribution ID: **58** Type: **Talk**

Probing hadronic interactions at the highest energies with the Pierre Auger Observatory

Thursday 29 August 2024 16:00 (20 minutes)

The study of ultra-high-energy cosmic rays allows for the probing of hadronic interactions at energies far exceeding those achievable by human-made accelerators. The Pierre Auger Observatory is the world's largest facility for measuring the extensive air showers that emerge from these cosmic rays. Its hybrid design enables the simultaneous measurement of the longitudinal development of the showers in the atmosphere and their lateral distribution of particles arriving at the ground. In this contribution, we provide an overview of the latest findings and ongoing efforts in studying hadronic interactions using data from the Pierre Auger Observatory, covering an energy range spanning over three decades. A significant tension exists between data and simulations, showing a measured abundance of muons that exceeds the predictions from the most current interaction models.

Internet talk

Maybe

Is this an abstract from experimental collaboration?

Yes

Name of experiment and experimental site

Pierre Auger Observatory (Malargüe, Argentina)

Is the speaker for that presentation defined?

Yes

Details

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