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Highlights from the Pierre Auger Observatory

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The Pierre Auger Observatory is the world's largest detector of ultra-high-energy cosmic rays (UHECRs). Since the start of its operation in 2004, a data set unrivaled both in quality and statistics was collected with the Observatory using the fluorescence and surface detectors. Currently, an upgrade of the Observatory, AugerPrime, consisting of the addition of surface scintillator, radio and underground muon detectors is ongoing. The aim of the upgrade is to enable the separation of electromagnetic and muonic components of air showers using the ground detector array and to increase its sensitivity to the mass of primary cosmic rays.

In these proceedings, we present the most recent highlights from the Pierre Auger Observatory on a broad range of results concerning energy spectrum, mass composition, arrival directions and nuclear interactions of UHECRs, multimessenger physics, search for neutral particles, and new physics. In addition, we report on the first results obtained with the radio and underground muon engineering arrays of the Pierre Auger Observatory.

Is this abstract from experiment?

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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Internet talk

No

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