

Results from the Pierre Auger Observatory

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The Pierre Auger Observatory has been designed to investigate the origin and the nature of Ultra High Energy Cosmic Rays.

The combination of information from a surface array, measuring the lateral distributions of secondary particles at the ground, and the fluorescence telescopes, observing the longitudinal profile, provides an enhanced reconstruction capability and opens the way for a multi-messenger approach.

A review of selected results is presented, covering the measurement of energy spectrum, arrival directions, and chemical composition and the search for primary photons and neutrinos. Finally, the motivation and the status for the ongoing major upgrade of the Observatory, AugerPrime, will be discussed with the emphasis given to its expected performance and future perspectives.

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