

Probing the universe at the highest energies with the Pierre Auger Observatory

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The Pierre Auger Observatory is the currently largest cosmic-ray detector covering ultra-high energies from 10^{18} eV to 10^{20} eV. The size of exposure accumulated since 2004 granted measurements of unprecedented precisions on energy spectrum, mass composition and anisotropy searches. These measurements guide us slowly to the sources of ultra-high energy cosmic rays, which is a tantalizing mystery of physics. A brief introduction of the Pierre Auger Observatory will be given. Then, an overview of the most interesting results of the Observatory will follow with aim to the recent findings on anisotropy searches and multi-messenger surveys.

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