

Main results of the Pierre Auger Observatory after 10 years of operation

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The nature and the origin of ultra-high energy cosmic rays (UHECRs), above 10^{17} eV, is still unknown. The Pierre Auger Observatory has been operating for more than 10 years obtaining a number of major breakthroughs. To answer the open questions on UHECRs the Observatory was conceived as a hybrid detector consisting of fluorescence telescopes overlooking an array of water Cherenkov stations covering a surface of 3000 km^2 . This design and the huge exposure provides us with a large set of high quality data. The main results will be highlighted in this talk. Their coherent interpretation is still missing and has motivated several efforts for the design of an upgrade of the Observatory. The open questions and the future plans will be presented.

Summary

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