LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

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"Mass composition results from the Pierre Auger Observatory"

Abstract

The measurement of chemical composition of cosmic rays as a function of their energy provides a significant clue in the understanding of cosmic ray origins, representing one of the most important items of research of the Pierre Auger Observatory. The Pierre Auger Observatory has been designed to measure cosmic rays above 1018 eV with unprecedent statistics and precision. The Observatory has been taking data since 2004, as the detector deployment went on. The detector building finished in early 2008. After outlining the impact of the composition information in our knowledge of cosmic rays and the status of art of composition results in different energy domains provided by previous experiments, recent measurements from the Observatory relating to the mass composition above 1018 eV are described.