

The analysis of hybrid events in Auger

Thursday, 21 June 2007 09:30 (15 minutes)

The Pierre Auger Observatory detects ultra-high energy cosmic rays by implementing two complementary air-shower measurements.

The combination of the single tank information from the surface detector (SD) and the calorimetric measurements of the shower profile using the fluorescence detector (FD), known as the “hybrid” technique, provides a more reliable event reconstruction than using either detector alone. In this paper the approach used to evaluate the cosmic ray flux using this class of events is described. The analysis method is discussed considering its main steps: the event selection, the detector up time evaluation and the exposure calculation.

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Session Classification: Parallel Session: EAS and Gamma Detection