

Abstract Submitted
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Measurement of the longitudinal profile of extensive air showers with the Pierre Auger Observatory FLORIN IONITA, University of Chicago, THE PIERRE AUGER OBSERVATORY COLLABORATION — The Pierre Auger Observatory is a cosmic ray detector designed to measure the flux, the energy spectrum, and the mass composition of ultra-high energy cosmic rays. In this talk, we describe the measurement of X_{\max} , the slant depth at which extensive air showers induced by cosmic rays reach maximum development. The evolution with energy of the average value of X_{\max} and its fluctuations are two observables sensitive to the mass composition of cosmic rays. We present the latest measurements of these quantities and discuss briefly their interpretation in terms of the cosmic ray mass composition.

Paolo Privitera
University of Chicago

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