

Exploiting the radio signal from air showers: the AERA progress

Thursday, May 14, 2009 5:00 PM (30 minutes)

We will present the last results and status of the Auger Engineering Radio Array (AERA), located inside the Pierre Auger Observatory. AERA, with more than 150 radio stations spread over 17 km², is the largest radio detector of extensive air showers above 10¹⁷ eV. The electric field emitted by secondary electrons and positrons allows to estimate all characteristics of the primary cosmic ray: arrival direction, energy and composition estimation. The performance of AERA together with the analysis methods will be described. The final aim of AERA is mainly to improve the composition estimation of ultra-high energy cosmic rays as a stand-alone detector or in association with other instruments such as a ground particle detector or a fluorescence telescope.

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Session Classification: CR