

ANGULAR DISTRIBUTION OF COSMIC RAYS

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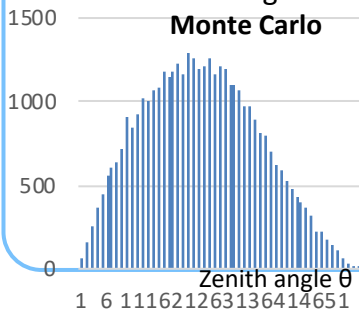
Abstract

Our international school - *Liceo Galvani* in Bologna - is involved in the Extreme Energy Event (EEE) project since 2006 and this year will come into operation in our school the second one detector. Here we present our measurement of angular distribution of cosmic muons at ground level.

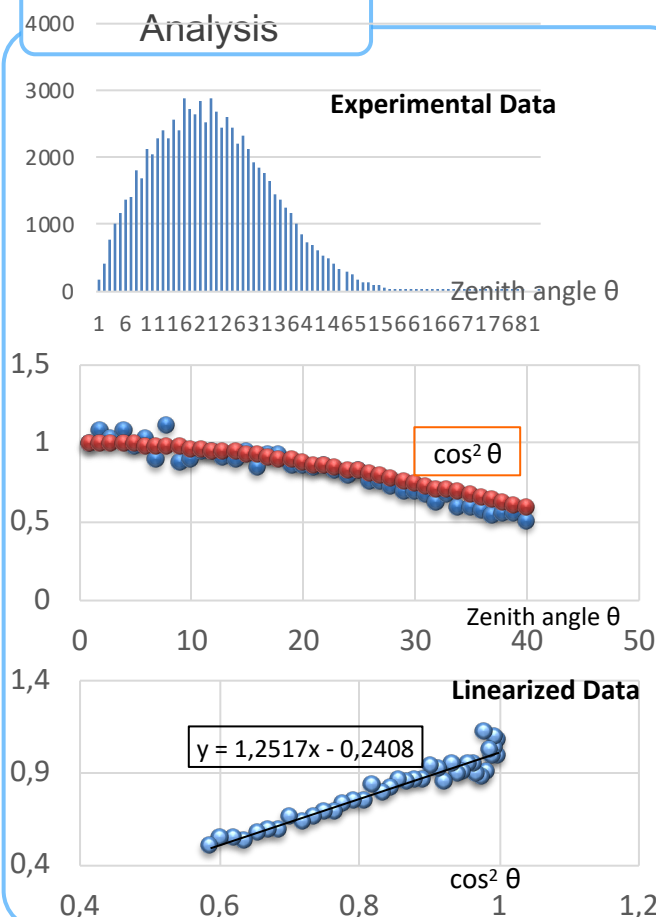
Experimental Setup

In Italy there is a nationwide network of cosmic ray MRPC telescopes within the EEE project, located in 50 different schools around the country. Every detector is checked daily by the students themselves. Here we have analyzed the data collected by our own MRPC telescopes throughout a single day and organized it into graphs, which show the angular distribution of cosmic muons at ground level. Through the analysis of our data we have obtained a result which is consistent with the model simulation

Acceptance of our MRPC telescope is $\sin \theta$, see Monte Carlo histogram



Analysis



Results

The results that we have obtained show that the angular distribution of cosmic muons at ground level follows the graph of $\cos^2 \theta$, in agreement with literature for muons with energy $E_\mu \sim 3\text{GeV}$.