

CALPRO, a unconventional calorimetry project

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We propose a unconventional calorimetry approach. The method is based on an idea that has been used for the first time in the energy determination of extensive air showers (EAS) at very high energy (> 100 TeV). It has some peculiar characteristics which that can be summarized in the following two points: a) measurement of the shower energy by means of a single sampling; b) measurement of the lateral density distribution of charged particles around the shower axis. Given the feature b) the method requires measurement of high charged particle densities, which encounters with the RPC capabilities of supporting up to 8×10^8 particle/m². We validated this measurement technique to lower energies (100 GeV - 10 TeV) by MC calculation. Results on the extension to low energies are the subject of the presente contribution.

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