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A new approach to EAS investigations in energy region 10^15 - 10^19 eV

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A new method of EAS investigations based on a new phenomenological variable - local muon density at the observation point - is discussed. It is shown that local muon density spectra are sensitive to primary spectrum shape, primary composition and hadronic interaction model.
Ground level measurements of muon density spectra in a wide range of zenith angles provide the possibility to study EAS spectrum in very wide energy interval by means of a single, relatively small-size setup. New data on muon bundles obtained with Russian-Italian detector DECOR are compared with simulation results for different spectrum and interaction models.

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