

## THE HYPERGEOMETRIC FORMALISM FOR THE LATERAL DISTRIBUTIONS OF CHARGED PARTICLES IN EAS.

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We propose a new form of function describing lateral distribution of charged particles in extensive air showers (EAS). We had performed simulations of shower development using CORSIKA v.5.62 code for primary proton and iron nuclei with energies  $10^{11}$  GeV/nucleon with thinning factor  $10^{-6}$ . We obtained mean distributions of several EAS components for distances from the core up to  $10^4$  m. We fitted the lateral distribution with the function which has one more free parameter allowing to achieve consistency with simulations. The function is exactly normalized in terms of the Hypergeometric formalism.