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Mass composition of cosmic rays with energies above 3*10ˆ15 eV according to the data of the small Cherenkov array

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According to the long-term registration data from the small Cherenkov array of integral and Cherenkov differential detectors obtained the characteristics of air showers with energies above 3*10ˆ15 eV, including of the maximum of the development of the Xmax. The dependence of Xmax on the shower energy found and the characteristics of air showers compared with the QGSjetII-04 model. From a comparison of Xmax with calculations based on the QGSetII-04 model for a proton and an iron nucleus, a conclusion obtained on the mass composition of cosmic rays in the energy range 3$10^15 - 2*10^18$ eV.

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