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Results from the GAMMA experiment on Mt. Aragats

Romen Martirosov, Aleksander Garyaka, Samvel Ter-Antonyan, Anatoly Erlykin, Natalya Nikolskaya, Yves Gallant, Lawrence Jones, Jacques Procureur, Hovhannes Babayan

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The present status of the GAMMA facility consisting of an enlarged surface EAS array (116 of 1 m^2 scintillation detectors) and underground muon carpet (150 m^2 detectors) is described. The recent results on mass composition and energy spectrum at the energy region above the knee obtained on the basis of the GAMMA experimental data are presented. It is shown that the power law after the knee is not invariable like -3.1. The slope of the energy spectrum becomes more flat at E0>20 PeV. The strong irregularities of the energy spectrum at about 70-80 PeV are discussed in comparison with other experiments. The bump can be described by a two-component model of primary cosmic ray origin, where additional (pulsar) Fe components are included with a very flat power law energy spectrum.

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