

MASS COMPOSITION OF PRIMARY COSMIC RAYS WITH ENERGY ABOVE 10 PEV DERIVED FROM OBSERVATION OF HALO EVENTS IN X-RAY EMULSION CHAMBERS

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New simulations of gamma-hadron families with halo induced by PCR with energy $E_0 > 10\text{PeV}$ are performed by MC0 code of quark-gluon string model. Previously it has been proved that MC0 code satisfactorily describes experimental data for PCR energy $E_0 < 10\text{PeV}$ under assumption of normal PCR composition. Analysis shows that MC0 code is close to two another versions of quark-gluon string model (MQ and QGS Jet) and comparison with experimental data confirms that at $E_0 \geq 100\text{PeV}$ experimental flux of events with halo area $S \geq 300\text{mm}^2$ is 5-10 times larger than calculated one. The possible reasons for observed difference are discussed.