A STUDY OF THE GAMMA FAMILY CHARACTERISTICS PRODUCED IN AA INTERACTIONS ABOVE 10 PEV

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Large scale X-ray emulsion chambers (XREC) experiment results were used as an alternative method of Primary Cosmic Ray (PCR) composition investigation by Tashkent group of Pamir Collaboration. On the basis of MCO Quark-Gluon String model, a number of selection criteria of gamma-families initiated by primary PA- and AA – interactions in XREC were proposed.

It is obtained that the average spatial characteristics \( <R_{1E}> \) (the distance of leading \( \gamma \)-quantum from family centre) and \( <p> = \frac{R_{1E}}{<R>} \), where \( <R> = \frac{\Sigma R}{n} \) – family lateral spread, considerably larger than the corresponding values predicted by MCO – model. These results pointed to increasing of the transverse momenta of secondary particles in AA- interactions at the energies above \( 10^{16} \) eV.