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## Investigation of FSR photon suppression in two positron decay mode of dark matter particles by means of MC generators.

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In this work we consider hypothetical decay of a dark matter particle into two positrons with final state radiation (FSR):  $X^{++} \rightarrow e^+e^+\gamma$ . We investigate possibility of FSR suppression with respect to the analogous decay of  $X^{++} \rightarrow e^+e^-\gamma$  in quantum mechanical case. This is done with the use of MC generators. Such suppression would help explaining positron anomaly in cosmic rays, where accompanying gamma radiation contributing to isotropic gamma-ray background (IGRB) leads to a contradiction. Such suppression is to be expected due to the so-called “single-photon theorem”, which connects the quantum mechanical case to the classical one, where such a radiation is simply nonexistent. Our results show that suppression indeed does occur and intensifies with an increase of photon energy, which should assist in resolving the above-mentioned contradiction.

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