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Influence of there-body recombination on formation of dark atoms

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Nowadays dark matter models with thier own dark interaction becoming more popular. They solve a number of problems of cold dark matter model (Λ CDM). The simplest viable model of self-interacting dark matter (SIDM) is a model with dark Coulomb-like interaction (with dark photon “ y ” as carrier) and a set of two types of particles: dark electron (e_y) and dark proton (p_y). In present work, the concentration of relict (residual) neutral dark atoms was estimated due to three-body recombination ($p_y^+ + e_y^- + e_y^- \rightarrow H_y + e_y^- + Y$).

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