Abstract Submitted
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Cosmic Interactions and dark matter Replace this text with your abstract title. SURESH AHUJA, Retired — Several phenomenological approaches and ad-hoc assumptions have been attempted for description of experimental characteristics there and for getting reliable physical conclusions. Antideuteron and antihelium nuclei have been proposed as promising detection channels for dark matter because of the low astrophysical backgrounds expected. Scattered DM flux by cosmic-ray protons, and the resulting emission of secondary -rays and high-energy neutrinos from proton excitation, hadronization, and the subsequent meson decay has been analysed. An energy-dependent coalescence mechanism developed previously was extended to estimate the production of light antinuclei. The uncertainty in the coalescence parameter and its effect on the expected antiparticle flux present is given.. Direct search for interactions of antimatter with dark matter under direct constraints can result in interaction of ultralight axion-like particles (dark-matter candidates) with antiprotons. If antiprotons have a stronger coupling to these particles than protons do, such a matter–antimatter asymmetric coupling could provide a link between dark matter and the baryon asymmetry in the Universe. To estimate both potential exotic contributions and their backgrounds, one usually employs the coalescence model in momentum space. In a recent developed coalescence model based on the Wigner function representations of the produced nuclei states. Tthe model describes the production of various antinuclei both in electron-positron annihilation and in proton-proton collisions. Replace this text with your abstract body.

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