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Indirect detection probes for Minimal Dark Matter 5plet

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We critically reassess the Minimal Dark Matter model and propose novel indirect detection signatures. Specifically, we compute the photon flux associated with the originally proposed accidentally stable SU(2) 5-plet, arising from Dark Matter bound state formation and Sommerfeld-enhanced annihilations. Our analysis reveals several distinctive spectral features that constitute promising targets for gamma-ray searches. We then examine the constraints on the 5-plet from current FERMI-LAT observations of the Galactic diffuse emission, and evaluate the projected sensitivity of the upcoming Cherenkov Telescope Array (CTA) in observations of Dwarf Spheroidal Galaxies.

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