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Gamma-rays from the Inert Doublet Model at the TeV scale.

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The Inert Doublet Model contains a neutral stable particle which is a viable dark matter candidate. I will discuss the indirect signatures of this model in gamma-rays when the dark matter mass is at the TeV scale.

In particular, I will consider the interplay between the annihilation process into two photons and the internal bremsstrahlung process $DMDM \rightarrow W^+W^-\gamma$. I will show that non-perturbative effects - the so-called Sommerfeld

enhancement- should be taken into account in order to satisfy the requirements from unitarity. I will illustrate all this

with some benchmark points, compatible with the observed relic density and all other direct and indirect detection experiments.

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