DIRECT AND INDIRECT DETECTION OF PSEUDO-DEGENERATE WIMP DARK MATTER *

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WIMP dark matter candidates $\chi^0$ have interesting signatures for direct and indirect detection in regimes where there is a near degeneracy with a heavier charged state $\chi^\pm$, as occurs for example along the boundary of the coannihilation strip in the CMSSM. For small splittings of $\mathcal{O}(10)$ MeV, the scattering of WIMPs off nuclei may be dominated by inelastic recombination processes mediated by the formation of $(\chi^- N)$ bound states, leading for example to a distinct signature for direct detection. I will discuss these and other resonant processes that distinguish the detection signatures of this class of WIMP scenarios.

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