

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

A. Ritz<sup>†</sup>

*Department of Physics and Astronomy, University of Victoria, Victoria BC V8W 3P6, Canada*

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.

---

\*Work supported by the Natural Sciences and Engineering Research Council of Canada.

<sup>†</sup>*E-mail:* aritz@uvic.ca