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Simplified Models of Dark Matter & Experimental Complementarity

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The evasive nature of Dark Matter (DM) has been challenging experimentalists and theorists alike for decades. In order to bridge both approaches, we investigate the phenomenology that two different simplified models would imprint on various experiments, stressing the importance of the complementarity that they offer. We start by analysing the *dark sequential* Z' *portal*, where direct detection and collider searches put the strongest bounds on this simplified model with a Majorana fermion as the DM candidate. Then we move on to consider a heavy right-handed neutrino as the mediator between the Standard Model and the dark sector and get constraints coming from indirect detection searches.

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