

Towards a new agnostic top-down approach for studying dark matter signals over the entire sky

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Summary

Indirect dark matter (DM) searches have, to date, provided no compelling evidence of a typical WIMP decay or annihilation signal. Typically it has been accepted that either the galactic centre or dwarf spheroidal's will provide the strongest constraints on DM. This statement is in principle not true for all models of DM. Given the situation it is essential to have a systematic framework to predict signals for a variety of DM models allowing one to select the best targets for observation. I will first present initial steps towards a unified framework for indirect DM searches. Secondly, I will discuss scenarios in which extragalactic halos could provide the strongest constraints on DM properties and finally examine the ultimate limits one can hope to achieve with a perfect experiment.

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