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MeerKAT and dark matter

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Radio indirect detection has evolved into a promising approach to probe the nature of dark matter. This will only be enhanced by the construction of the full SKA. In the mean-time, MeerKAT's potential as a dark matter detector has largely been ignored. In this work we will present simulations of the sensitivity of MeerKAT to diffuse radio emissions and apply them the dwarf galaxy Reticulum II to determine the potential of MeerKAT to probe the WIMP parameter space. We demonstrate that, by leveraging its angular resolution, MeerKAT has the potential to produce constraints tighter than Fermi-LAT results in dwarf spheroidal galaxies.

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