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Dark Matter gets DAMPE

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The Dark Matter Particle Explorer (DAMPE) satellite mission recently announced an excess in the observed electron/positron spectrum occurring around the TeV scale. This has been conjectured to be explicable in terms of the annihilation of a heavy leptophilic WIMP particle. Additionally, this hypothesis requires the presence of a dense clump of dark matter within 1 kpc of the Earth, in order for the required WIMP annihilation cross-section to fall into territory that is largely unconstrained by experiments like Fermi-LAT. We will explore the astrophysical consequences of this model, the impact of current data on its parameter space, the observability of the conjectured dark matter clump, and the projections for up-coming experiments like KM3NET. We confirm the inability of Fermi-LAT to probe the required parameter space and show that the LO-FAR array is well positioned to hunt for the nearby dark matter clump in radio frequencies and that KM3NET can deeply probe the muon coupling of such a dark matter model.

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