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A CoGeNT Analysis: Is there evidence for a Dark Matter signal?

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Data from the CoGeNT experiment has been claimed to be compatible with a light Dark Matter particle scattering off nucleons, to a significance of approximately 2.5 sigma. I will critically assess this possibility, using the methods introduced in arXiv:1405.0495. I present a Bayesian and frequentist analysis of CoGeNT data, with particular focus on the removal of surface events. By marginalising over the uncertainty in the surface event background, I find less than one sigma evidence for Dark Matter recoils in CoGeNT data.

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