

Invisibles 14 Workshop



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Type: Non spécifié

Explaining CoGeNT and DAMA with backgrounds

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The CoGeNT and DAMA/LIBRA collaborations both claim possible evidence for light Dark Matter scattering in their detectors. For the former this is in the form of a low-energy excess and for the latter an approximately 9.3 sigma evidence for an annual modulation. However the Dark Matter parameters favoured by these experiments are in tension with searches from e.g. LUX, XENON100 and SuperCDMS. We demonstrate that the low-energy excess seen by CoGeNT is the result of surface events, and when these are correctly accounted for there is less than one sigma evidence for Dark Matter. We also explain the annual modulation seen by DAMA as resulting from neutrons produced by a combination of atmospheric muons and solar neutrinos scattering in the material around the detector.

Partially based on ArXiv:1405.0495

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Classification de Session: Poster presentation