



Contribution ID: 23

Type: **contributed talk**

Is there evidence for a Dark Matter signal in CoGeNT data?

Tuesday 8 April 2014 13:00 (15 minutes)

The CoGeNT collaboration claim to have observed a signal of light Dark Matter scattering off nuclei in their detector, to a significance of approximately 2.5 sigma. I will critically assess these recent, and earlier, claims. I present a Bayesian analysis of the 1136 live days CoGeNT data, with particular focus on the removal of surface events through the use of nuisance parameters. I derive statistically robust confidence intervals using CoGeNT data, which fully incorporate this uncertainty, and show that the claims of signal in CoGeNT data are premature.

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Session Classification: Parallel 1D

Track Classification: Particle Astrophysics, Current and Future