

Abstract Submitted
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A search for WIMPs with the CoGeNT public dataset MATTHEW BELLIS, Siena College, CHRIS KELSO, University of North Florida, JUAN COLLAR, University of Chicago — Since December 2009, the CoGeNT experiment has recorded interactions in the detector with the goal of either detecting dark matter or setting stringent limits on the mass and cross-section of these particles, assuming that dark matter is a form of WIMP (Weakly Interacting Massive Particle). The collaboration has made public this dataset to the broader community and this analysis is based on that dataset. We perform an unbinned, maximum likelihood fit to the data, accounting for known backgrounds and systematic effects. {articlar care is paid to detector effects which can mimic the energy distribution of WIMP interactions. We model the WIMP signal, parametrized by energy deposition and time of year, mass, cross-section, and choice of local WIMP velocity distribution. Monte Carlo studies are performed to verify the stability and sensitivity of the fits and all code used in the analysis is made publicly available. The current status of this analysis will be presented.

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