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Search for inelastic dark matter with the CDMS experiment

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The Cryogenic Dark Matter Search experiment (CDMS) employs a total of 30 germanium and silicon detectors at the Soudan Underground Laboratory to detect weakly interacting massive particles (WIMPs) via their scattering from the target nuclei. Previous CDMS results, released in December 2009, set the world leading limit on the spin-independent WIMP-nucleon cross section above WIMP masses of ~50 GeV/c^2 assuming elastic scattering. In a subsequent analysis we investigated the inelastic dark matter scenario which was proposed to reconcile the disagreement between the results of DAMA/LIBRA and other existing dark matter search experiments. In order to maximize the sensitivity to this particular model a refined analysis in the range from 25 to 150 keV has been performed. Results emerging from this analysis will be presented.

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