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The Migdal Effect in Semiconductors for the Effective Field Theory of Dark Matter Direct Detection

Monday 13 May 2024 16:30 (15 minutes)

We have further developed the dark matter (DM) Migdal effect within semiconductors beyond the standard spin independent interaction. Ten additional non-relativistic operators are examined which motivate five unique nuclear responses within the crystal. We derive the generalized effective DM-lattice Migdal Hamiltonian and present new limits for the full list of interactions.

Mini Symposia (Invited Talks Only)

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