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SPICE: A Search for Light (MeV - GeV) Dark Matter Using Polar Crystal Calorimeters

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The search for dark matter has recently broadened to focus on a much wider class of candidates, including particle-like dark matter lighter than the traditional WIMP. The SPICE/HeRALD (or TESSERACT) collaboration has been formed to search for light (MeV-GeV) dark matter interactions in a variety of targets read out by TES-based calorimeters. In this talk, we describe the efforts of the SPICE project to search for light dark matter using crystalline targets including the polar crystals GaAs and Sapphire. We will detail specific thrusts of our ongoing R&D efforts: reducing low-energy backgrounds, improving energy resolution, and conducting pathfinder sub-GeV dark matter searches.

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