

Abstract Submitted  
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**Measuring Phonon Velocities in  $\text{CaWO}_4$  with Phonon Imaging**

TIMOTHY HEAD, Abilene Christian University, MADELEINE MSALL, Bowdoin College — A recent search for dark matter by the CRESST experiment seeks to observe dark matter collisions with nuclei of  $\text{CaWO}_4$  using low temperature bolometric detectors which are sensitive to energy deposition on the order of 10 keV with a few percent accuracy. Determination of the amount of energy deposited depends upon details of the non-equilibrium heat flow in the absorber crystals. Our phonon images are sensitive to small angular variations in the phonon flux, and can provide phonon group-velocity data along symmetry and non-symmetry directions.

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