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Chiral phonons as dark matter detectors

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We propose a method for detecting single chiral phonons and their use as directional dark-matter detectors with O(meV) energy thresholds. This detection mechanism would be capable of exploring a multitude of unprobed dark-matter candidates as well as serve as a quantum sensor that can open up new directions in precision measurements for experimental physics.

Submitted on behalf of a Collaboration?

No

Author: MATAS, Marek (ETH)

Co-authors: ROMAO, Carl (ETH); SPALDIN, Nicola (ETH); CATENA, Riccardo (Chalmers University)

Presenter: MATAS, Marek (ETH)

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