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**Sub-eV thresholds for dark matter direct detection** YONATAN KAHN, Princeton Univ — Probing light dark matter down to the observationally-allowed limit of a few keV requires direct detection experiments with sub-eV thresholds. I will survey two recent proposals for direct detection of keV-MeV dark matter, using superconductors and Dirac semimetals as targets, which hold great promise for significantly increasing experimental sensitivity to dark matter in this mass range which interacts with electrons. Both approaches require single-excitation detection in bulk materials and go hand-in-hand with recent advances in detector technology.

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