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Spectroscopic imaging of the charge density wave in $2H$-$NbSe_2$[1] ANJAN SOUMYANARAYANAN, Massachusetts Institute of Technology, MICHAEL M. YEE, YANG HE, Harvard University, DIRK RAHN, KAI ROSSNAGEL, Kiel University, ERIC W. HUDSON, Pennsylvania State University, JENNIFER E. HOFFMAN, Harvard University — Transition metal dichalcogenides are an ideal playground to study the interplay between charge density waves (CDWs) and superconductivity. We perform atomically resolved scanning tunneling microscopy and spectroscopy at cryogenic temperatures on the chalcogenide polytype $2H$-$NbSe_2$ to study the energy, temperature and spatial dependence of the CDW. By comparing our results with a tight-binding model, we disentangle the spectral behavior of the CDW phase in the material.

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