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**Spectral properties of correlated systems with electron-phonon coupling** ELIZABETH NOWADNICK, Stanford University and SLAC, STEVEN JOHNSTON, IFW Dresden, ANDREY MISHCHENKO, RIKEN and RRC Kurchatov Institute, BRIAN MORITZ, Stanford University and SLAC, NAOTO NAGAOSA, RIKEN and University of Tokyo, THOMAS DEVEREAUX, Stanford University and SLAC — Results from a variety of experiments, including single particle probes such as ARPES and STM, and multi-particle spectroscopies such as optical and Raman responses, have revealed the importance of the electron-phonon interaction in strongly correlated electron materials. We present a determinant quantum Monte Carlo study of the single-band Hubbard-Holstein model, which treats electron-electron and electron-phonon interactions on an equal footing. We focus on the behavior of the single- and multi-particle dynamical properties of the model, such as the spectral function and optical conductivity, as a function of electron-phonon coupling and Hubbard U.

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