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**High energy anomaly in hole- and electron-doped cuprates** B. MORITZ, SLAC and Stanford University, F. SCHMITT, W. MEEVASANA, Stanford University, S. JOHNSTON, University of Waterloo, E. M. MOTOYAMA, M. GREVEN, Stanford University, D. H. LU, SLAC, C. KIM, Yonsei University, R. T. SCALETTAR, University of California-Davis, Z.-X. SHEN, T. P. DEVEREAUX, SLAC and Stanford University — Recent ARPES experiments reveal the presence of a dispersion anomaly in the high $T_c$ cuprates. This universal anomaly appears at an energy of $\sim$ 300 meV in hole-doped compounds, with a similar feature reported in the half-filled parent insulators. New experiments on $Nd_{2-x}Ce_xCuO_4$ also reveal an anomaly, but at a higher energy scale of $\sim$ 500 - 600 meV. A key question concerns the origin of this anomaly. Quantum Monte Carlo simulations of the single-band Hubbard model reveal qualitative and quantitative agreement with the dispersion anomaly throughout the doping spectrum. They demonstrate that strong correlations play a key role in the development of the anomaly as well as that of spectral weight transfers that accompany doping.

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