

Abstract Submitted  
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**Anisotropic electron-phonon coupling in Bi2212 and Bi2223<sup>1</sup>**

STEVEN JOHNSTON, University of Waterloo, THOMAS DEVEREAUX, University of Waterloo — In this talk we present calculations of self energy effects due to anisotropic electron-phonon coupling in the Bi-family of cuprates. The specific anisotropy of a number of phonon modes yields momentum-dependent signatures in the spectral function and renormalizations in the tunneling density of states both above and below  $T_c$ . The spectral functions are compared to angle-resolved photoemission and SIS break junction measurements and renormalizations at specific wavevectors and energies are in accordance with coupling primarily to the B1g phonon. Self-consistent treatment of the electron-phonon interaction is shown to display band renormalizations at energies well above that of the characteristic phonon energy.

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