Self Energy Corrections to Resonant Inelastic X-ray Scattering in the Cuprates¹ WAEL AL-SAWAI, ROBERT MARKIEWICZ, ARUN BANSIL,
Northeastern University — Resonant inelastic x-ray scattering (RIXS) is emerging as a powerful probe of strongly correlated systems by providing direct momentum-resolved information on charge excitations across the Mott gap. We have shown recently that long-range Coulomb interactions and self-energy corrections play an important role in modifying the electronic spectra of the cuprates.[1,2] Here we discuss model calculations to explore how plasmon and magnon corrections to the self-energy influence the RIXS spectra of the cuprates.


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