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Nernst Effect in HTC cuprate from BDW CHUNXIAO LIU, University of Maryland College Park — The pseudogap regime in low hole doped high T_c cuprate superconductors exhibits peculiar experimental signatures like the detection of enhanced negative signals for Hall, Seebeck and Nernst coefficients. It has been suggested that some of these phenomena can be understood in terms of a competition between a bond density wave order and superconductivity. In this work, we theoretically studied the Nernst effect using a mean-field quasiparticle model with $\mathbf{Q}_1 = (0, 2\pi/3)$ and $\mathbf{Q}_2 = (2\pi/3, 0)$. By employing semi-classical Boltzmann dynamics, we have shown that the thermoelectric coefficient depends linearly on the absolute value of order parameter for small values of the induced gap and the contribution mainly comes from the small area of hot spot.

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