

Abstract Submitted
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Spatial Variations in the Fermi Surface of Bi-2212¹ ELIZABETH MAIN, A.E. PIVONKA, I. ZELJKOVIC, Harvard, G. GU, Brookhaven, E.W. HUDSON, MIT, J.E. HOFFMAN, Harvard — In cuprate superconductors, scanning tunneling microscopy can be used to see variations in the Fermi surface on a nanometer length scale caused by doping inhomogeneity. Prior STM studies show that the local wavelength of the checkerboard, a weak charge modulation ascribed to antinodal Fermi surface nesting, varies with the size of the pseudogap in $\text{Bi}_2\text{Sr}_2\text{CuO}_{6+\delta}$ (Bi-2201) [1]. Here we report similar STM measurements in Bi-2212. We therefore confirm the local relationship between pseudogap energy and charge ordering wavevector in a second high-Tc superconductor.

[1] W. D. Wise, et al. Nature Physics 5, 213 (2009).

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