

Abstract Submitted
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Imaging the Vortex Density of States in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$ ¹ YI YIN, M. ZECH, T. L. WILLIAMS, Harvard University, GENDA GU, Brookhaven National Laboratory, J. E. HOFFMAN, Harvard University — We use a low temperature scanning tunneling microscope (STM) to image vortices in the high temperature superconductor $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$, in magnetic fields up to 9T. We locate the vortices via their increased local density of states near ± 7 meV. We investigate the dependence of the vortex halo on several parameters, including applied magnetic field and proximity to surface impurities.

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