

Abstract Submitted
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Doping Dependence of Pair-breaking and Pair-forming Processes in BSCCO THEODORE REBER, NICHOLAS PLUMB¹, YUE CAO, ZHE SUN, STEPHEN PARHAM, QIANG WANG, University of Colorado, HIDEAKI IWASAWA, Hiroshima Synchrotron Radiation Center, Hiroshima University, SHIMPEI ONO, RIKEN, GENDA GU, Brookhaven National Lab, YOSHIHIRO AIURA, AIST, GERALD ARNOLD, DANIEL DESSAU, University of Colorado — Angle resolved photo-emission spectroscopy (ARPES) provides a direct measure of electronic scattering processes in materials. However traditional methods (e.g. MDC widths) of determining the scattering processes from ARPES fail to discriminate between pairing and non-pairing interactions. Our new analysis technique, the ARPES tunneling spectrum (ATS), isolates the pairing channel from all other processes. We will report doping, angle and temperature dependence of both the pair-forming strength and the pair-breaking rate in BSCCO.

¹Now at PSI

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