Abstract Submitted
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Disentangling the in- and out-of-plane components of the microwave surface resistance in Tl-2201[1] S. MAHYAD AGHIGH, JAMES DAY, JORDAN BAGLO, Department of Physics & Astronomy, University of British Columbia, Vancouver, V6T 1Z1, Canada, DARREN PEETS, Max Planck Institute Festkorperforsch, D-70569 Stuttgart, Germany, LUDIVINE CHAUVIERE, PINDER DOSANJH, RUIXING LIANG, WALTER HARDY, DOUG BONN, Department of Physics & Astronomy, University of British Columbia, Vancouver, V6T 1Z1, Canada, UBC SUPERCONDUCTIVITY GROUP (MICROWAVE MEASUREMENT) TEAM, UBC SUPERCONDUCTIVITY GROUP (MATERIAL DEVELOPMENT) TEAM — Investigation of $Tl_2Ba_2Cu_1O_x$ (Tl-2201) properties is important as it provides access to the overdoped side of the superconducting dome. We are measuring the surface resistance of Tl-2201, $R_s(\omega,T)$, using a bolometric technique well established by our group. Experimentally separating the in- and out-of-plane components of R_s for Tl-2201, however, is challenging due to demagnetization effects. To account for this complication, we are measuring R_s of an isotropic replica sample of NbZr in two specific orientations where the field is parallel and perpendicular to the crystal plane. In this talk I will describe the modified bolometric technique, share the technical difficulties encountered in preparing the replica, and present the most up-to-date results.

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