Abstract Submitted
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Electric and magnetic field control of superconducting transition at the $LaAlO_3/SrTiO_3$ heterointerface[1] DMITRIY DIKIN, MANAN MEHTA, VENKAT CHANDRASEKHAR, Northwestern University, CHUNG WUNG BARK, CHAD FOLKMAN, CHANG-BEOM EOM, University of Wisconsin-Madison — We report on detailed measurements of the normal state-superconducting phase transition of the two-dimensional electron gas that develops at the LAO/STO interface as a function of gate voltage and magnetic field. We will discuss the specifics of the R versus T and the T-H phase diagrams for this superconductor and the potential origin of observed dissipation and hysteretic behavior. These data are analyzed in connection with magnetoresistance and Hall measurements.

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