

Abstract Submitted
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Subharmonics of microwave induced resistance oscillations in the presence of high electric fields S. CHAKRABORTY, A.T. HATKE, L.W. ENGEL, NHMFL, M. MANFRA, J. WATSON, Purdue University, M.P. LILLY, J. RENO, Sandia National Lab — We investigate the photoresistance of a two-dimensional electron system to high power microwave radiation, using a Hall bar within the slot of a coplanar waveguide (CPW) capable of electric fields in excess of 100 V/cm. The contacts of the Hall bar were screened within the ground plane of the CPW. Our measurements focus on longitudinal transport at magnetic fields larger than that of the cyclotron resonance at the frequency applied to the CPW. We observe a series of subharmonic resonances that can have amplitude in excess of the cyclotron resonance photoresistance as well as different power and temperature dependence.

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