

Abstract Submitted  
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**Non-linear transport in microwave-irradiated 2D electron systems at the cyclotron resonance subharmonics**<sup>1</sup> HUNG-SHENG CHIANG, ANTHONY HATKE, MICHAEL ZUDOV, School of Physics and Astronomy, University of Minnesota, LOREN PFEIFFER, KEN WEST, Bell Labs, Alcatel-Lucent — We study microwave photoresistivity oscillations in a high mobility two-dimensional electron system subject to strong dc electric fields. We find [1] that near the second subharmonic of the cyclotron resonance the frequency of the resistivity oscillations with dc electric field is twice the frequency of the oscillations at the cyclotron resonance, its harmonics, or in the absence of microwave radiation. This observation is discussed in terms of the microwave-induced sidebands in the density of states and the interplay between different scattering processes in the separated Landau level regime. [1] A. T. Hatke, H.-S. Chiang, M. A. Zudov, L. N. Pfeiffer, and K. W. West, Phys. Rev. Lett. accepted for publication.

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Michael Zudov

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