

Abstract Submitted  
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**Magnetoresistance oscillations in two-dimensional electron systems induced by both AC and DC fields**<sup>1</sup> MICHAEL ZUDOV, WENHAO ZHANG, LOREN PFEIFFER, KEN WEST, University of Minnesota — We report on magnetotransport measurements in a high-mobility two-dimensional electron system subject simultaneously to AC (microwave) and DC (Hall) fields. We find that DC excitation affects microwave photoresistance in a nontrivial way. Photoresistance maxima (minima) evolve into minima (maxima) and back, with some new minima appearing as zero-resistance states. Most of our observations are explained in terms of indirect electron transitions using a new, “combined” resonant condition. Strong coupling and interplay of AC- and DC-induced effects call for a theory treating both excitation types within a single framework.

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Michael Zudov

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