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Magneto-oscillations in differential resistivity in intensely irradiated two-dimensional electron systems[1] HUNG-SHENG CHIANG, ANTHONY HATKE, MICHAEL ZUDOV, University of Minnesota, MAXIM KHODAS, Brookhaven National Laboratory, MAXIM VAVILOV, University of Wisconsin, LOREN PFEIFFER, KEN WEST, Princeton University — We have studied non-linear magnetotransport in very high Landau levels of two-dimensional electron systems subject to intense microwave radiation. We have observed a new class of microwave-induced magneto-oscillations in differential resistivity. In contrast to microwave-induced oscillations reported earlier, the period of these oscillations is governed not only by microwave frequency but also by its intensity. The effect is best observed in the vicinity of the cyclotron resonance and its harmonics at strong enough ac and dc electric fields. Comparison with theoretical calculations offers a unique way to determine the microwave intensity seen by 2D electrons.

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