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Microwave-induced resistance oscillations at low temperatures[1]
PETER MARTIN, MICHAEL ZUDOV, School of Physics and Astronomy, University of Minnesota, Minneapolis, Minnesota 55455, JOHN WATSON, MICHAEL MANFRA, Department of Physics, Purdue University, West Lafayette, Indiana 47907, JOHN RENO, Sandia National Laboratories, Albuquerque, New Mexico 87185, LOREN PFEIFFER, KENNETH WEST, Department of Electrical Engineering, Princeton University, Princeton, New Jersey 08544 — At low temperatures, the amplitude of microwave-induced resistance oscillations in two dimensional electron systems is predicted to scale as $1/T^2$. In contrast to this prediction, our experiments shows that the amplitude tends to saturate at low temperatures, even in the regime of very low microwave intensities. In this talk we will discuss radiation-induced heating as a possible source of the observed saturation and ways to estimate actual temperature of irradiated 2D electrons.

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