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Nonlinear properties of ballistic quantum dot under influence of microwave radiation[1] JINGQIAO ZHANG, SERGEY VITKALOV, Physics Department, City College of New York, ZE DON KVON, Institute of Semiconductor Physics, 630090 Novosibirsk, Russia, J. C. PORTAL , GHMFL, CNRS-LCMI, F-38042, Grenoble; INSA 135, Avenue de Rangueil 31 077 Toulouse Cedex 4, France, A. D. WIECK, Angewandte Festkorperphysik D-44780, Bochum, Germany — Microwave rectification and effects of microwave radiation (1-40 GHz) on electron DC transport through a ballistic quantum dot are studied experimentally at electron temperature down to 0.3K. The experiments demonstrate significant contribution of the ballistic electron motion to the observed nonlinearities.

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