

Abstract Submitted
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Nonlinear magneto-transport in two dimensional electron system with anisotropic mobility¹ WILLIAM MAYER, SERGEY VITKALOV, Physics Department, City College of the City University of New York, New York 10031, USA, ALEXEY BYKOV, ANDREY GORAN, Institute of Semiconductor Physics, 630092 Novosibirsk, Russia — Nonlinear magnetotransport of 2D electrons in GaAs/AlAs heterostructures with anisotropic mobility μ placed in quantizing magnetic fields is studied in Hall bar geometry. It is found, that for an electric current flowing in the direction corresponding to the low mobility, the transition of electron systems in the state with zero differential resistance occurs at considerably smaller value of the electric current than for a current flowing in the direction of the high mobility. The obtained results indicate the importance of the anisotropy of the scattering potential for the electron quantal heating.

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