Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Coulomb drag at zero temperature ALEX LEVCHENKO, ALEX KAMENEV, University of Minnesota — We show that the Coulomb drag effect exhibits saturation at small temperatures, when calculated to the third order in the interlayer interactions. The zero-temperature transresistance is inversely proportional to the third power of the dimensionless sheet conductance. The effect is therefore the strongest in low mobility samples. This behavior should be contrasted with the conventional (second order) prediction that the transresistance scales as a certain power of temperature and is almost mobility-independent. The result demonstrates that the zero-temperature drag is not an unambiguous signature of a strongly-coupled state in double-layer systems.

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Date submitted: 01 Dec 2007 Electronic form version 1.4