Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

**Probing the Extents of Negative Drag in the Quantum Hall Regime** GOKUL GOPALAKRISHNAN, SANGHUN AN, SARAH PARKS, YUKO SHIROYANAGI, THOMAS GRAMILA, Physics Department, The Ohio State University, LOREN PFEIFFER, KENNETH WEST, Bell Labs, Lucent Technologies — Negative drag has been used to describe the reversal of the measured drag voltage when relative densities of the conducting layers are varied in a drag measurement in the quantum Hall regime. Although each layer in the bilayer drag sample contains electrons, the behavior observed mimics that of a system where one layer contains electrons and the other contains holes. While this phenomenon was first observed [1,2] some years ago, we remain without a satisfactory understanding of the effect. An essential element for the elucidation of the basis of this effect remains a clear determination of the experimental conditions under which negative drag is observable, as its existence is destroyed by high fields and temperatures. We report on measurements which characterize these conditions. [1] X. G. Feng et al., Phys. Rev. Lett. 81, 3219 (1998) [2] J. G. S. Lok et al., Phys. Rev. B 63, 041305(R) (2001)

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Date submitted: 01 Dec 2004 Electronic form version 1.4