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Magnetotransport of a Quantum Hall Double Layer at Landau Level Filling $1/2 + 3/2$ ¹ WU XING-JUN, LIU RUIYUAN, MI JIAN, ZHANG CHI, Peking University, PFEIFFER LOREN, WEST KEN, Princeton University, DU RUI-RUI, Rice University — The effect of interlayer-tunneling on electron transport in quantum Hall double layers in the regime of exciton condensation state at Landau level filling factor one ($1/2+1/2$) has been well established, in that the interlayer coherence promotes a huge zero-bias conductance peak due to resonantly-enhanced tunneling (e.g., Phys. Rev. Lett. 84, 5808, 2000) . Consequently, an in-plane magnetic field is found to suppress this tunneling. Recent theoretical work, on a similar system consisting of two layers with fillings $1/2+3/2$, suggests that here the resonant-enhanced tunneling would be suppressed and an in-plane magnetic field, conversely, would play a promoting role in tunneling. We investigate this regime in high-mobility GaAs/AlGaAs bilayers of suitable parameters and with individually contacted layers. Preliminary results and a brief discussion will be presented.

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