

Abstract Submitted
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Thermopower and Nernst measurements in a half-filled lowest Landau level¹ XIAOXUE LIU, PO ZHANG, CHI ZHANG, Peking Univ, RUIRUI DU, Peking Univ; RICE UNIV, LOREN PFEIFFER, KEN WEST, Princeton Univ — Recently Son presented a particle-hole symmetric (PHS) fermionic quasiparticle theory for half-filled lowest Landau level - massless Dirac composite fermions (DCF) [1] which is different from the PHS broken HLR theory [2]. Subsequently, thermoelectric transport experiments were proposed to differentiate the DCF and HLR. Motivated by this we systematically study the electronic and thermoelectric properties of $\nu = 1/2$ and $3/2$ in high-mobility GaAs/AlGaAs 2DEGs. In this talk preliminary results and a brief discussion will be presented. [1] Dam Thanh Son, Phys. Rev. X 5, 031027 (2015). [2] B. I. Halperin, P. A. Lee, and N. Read, Phys. Rev. B 47, 7312 (1993). [3] Andrew C. Potter, Maksym Serbyn, and Ashvin Vishwanath, Phys. Rev. X 6, 031026 (2016).

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