Charge-statistics separation and probing non-Abelian states for quantum Hall plateau at $\nu=5/2$\(^1\) FEIFEI LI, DIMA FELDMAN, Department of Physics, Brown University, Providence, Rhode Island 02912, USA — Several states were proposed for quantum Hall plateau at $\nu=5/2$. We suggest a transport experiment that can distinguish six of the candidate states. The proposal involves measurements of current and shot noise in a geometry with three quantum Hall edges connected by two quantum point contacts. Unlike interference experiments, this approach can distinguish Pfaffian and anti-Pfaffian states as well as different states with identical Pfaffian or anti-Pfaffian statistics. Moreover, the transport is not sensitive to the fluctuations of the number of quasiparticles trapped in the system.


1This work was supported by the NSF under Grant No. DMR-0544116 and the BSF under Grant No. 2006371.