

Effects of inter-edge Coulomb interaction on transport through a point contact at $\nu = 5/2$ edge state

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The edge state of $\nu = 5/2$ quantum Hall state comprise of edge corresponding to effective filling fraction $1/2$ which is described by charge bosonic mode (chiral Luttinger liquid) and neutral chiral Majorana fermion mode. And there are two more chiral charged fermion modes due to effective filling fraction of $\nu = 2$. We calculate transport through a point contact in presence of Coulomb interaction between all the charged modes belonging to the $\nu = 1/2$ and $\nu = 2$ modes. We show that there are new fixed points in the theory which are different from the perfectly reflecting or perfectly transmitting fixed points.