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Charge fractionalization on quantum Hall edges MARIANNE RYPESTOEL, University of Oslo, MATS HORSDAL, University of Leipzig, HANS HANSSON, Stockholm University, JON MAGNE LEINAAS, University of Oslo — Interactions between edges of quantum Hall bars give rise to Luttinger Liquid behavior with a nontrivial interaction parameter g . This leads to fractionalization of localized charges that propagate along the edges. We focus on fractionalization in systems with variable g and the separation of a charge into a sharply defined front pulse and a broader tail. The possibility of detecting the front pulse through noise measurement is discussed and illustrated by numerical simulations of a simplified Hall bar model.

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