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Spin-orbit interactions in a helical Luttinger liquid with a Kondo impurity ERIK ERIKSSON, University of Gothenburg — We study the transport properties of a helical Luttinger liquid with a Kondo impurity and spin-orbit interactions. Such a system, which may be realized at the edge of a quantum spin Hall insulator with a gate-induced electric field, provides a mechanism to electrically control the conductance. A Rashba spin-orbit interaction may even change the nature of the Kondo screening [Eriksson et al., Phys. Rev. B 86, 161103(R) (2012)]. Considering other types of spin-orbit interactions, together with an extended non-equilibrium analysis, we further improve the understanding of these phenomena.

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