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Tunneling between edge states in a quantum spin Hall system¹ ANDERS STRÖM, HENRIK JOHANNESSON, Department of Physics, University of Gothenburg, Sweden — We analyze a quantum spin Hall (QSH) device with a point contact connecting two of its edges. The contact supports a net spin tunneling current that can be probed experimentally via a two-terminal resistance measurement. We find that the low-bias tunneling current and the differential conductance exhibit scaling with voltage and temperature that depend nonlinearly on the strength of the electron-electron interaction.

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