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**Non-universal shot noise in quasiequilibrium spin valves**

TERO HEIKKILA, Aalto University

Shot noise can be used as a diagnostic tool characterizing mesoscopic wires, especially the inelastic scattering in them. This characterization is based on the fact that in the absence of inelastic scattering that carries the energy away from the system, disordered wires are described by a universal Fano factor defined as the ratio of the noise power and the average current. In particular, the value of this Fano factor is invariant even for wires with non-uniform conductivity. We show that this universality breaks down in spin valves with strong electron-electron scattering. The reason for this breakdown is that the inter-spin energy relaxation due to electron-electron scattering in the absence of inter-spin charge relaxation breaks the Wiedemann-Franz relation between charge and heat conductivity. In particular, we predict that the Fano factor gets strongly suppressed for the antiparallel configuration of magnetizations.

T.T. Heikkilä and K.E. Nagaev, arXiv:1302.1372