
The equations in this paper are, for the most part, wrong. In particular, Eq. (4) and those derived from it do not include all leading effects in the limit of high threshold. Furthermore, we do not, at present, know how to write such formulas correctly in closed form. However, regarding the central issue of the zero crossings of correlations of biased distributions, the qualitative arguments and the details of the numerical results depicted in the figures remain unchanged.


The conductance fluctuation due to the motion of a single impurity $\delta G_1$ is correctly given by Eq. (3),

$$ (\delta G_1)^2 \approx (e^2/h)^2 (\Omega/N_f l^d) (L/l)^2 - d \alpha (k_F \delta r). $$

However, in the discussion that followed, we stated erroneously that for strong individual impurity scatterers $\Omega/N_f l^d \approx 1$. This is correct only for $k_F l \approx 1$. Using the standard expression for the mean free path $l^{-1} \approx (N_f/\Omega) \sigma$ and setting the average scattering cross section $\delta \approx 4\pi k_F^{-2}$, we conclude that the factor $\Omega/N_f l^d$ should be $(k_F l)^{-2}$ in three dimensions and for thin films and wires, and $(k_F l)^{-1}$ for the strictly two-dimensional geometry. Thus, the motion of a single strong scatterer changes the conductance of a square metallic film of thickness $t > l$ by $(e^2/h) \times (k_F^2 h)^{-1/2}$ and not $(e^2/h) (l/t)^{1/2}$ as stated in the paper. The important result that the conductance change is independent of sample size remains unchanged. In one dimension, multiple visits can still enhance the conductance change up to the saturation value of $e^2/h$.

The physical argument based on interfering Feynman paths is really designed for the $k_F l \approx 1$ limit and gives the correct answer in that case. The application to 1/f noise in the paper is based on Eq. (3) and remains valid. The prediction of 1/f noise in metallic glass is made in the $k_F l \approx 1$ regime and is also unaffected.