

Supplemental material for "Finite-size effect in shot noise in hopping conduction"

E.S. Tikhonov^{1,2}, V.S. Khrapai^{1,2}, dick@issp.ac.ru, D.V. Shovkun¹, D. Schuh³

1 – Institute of Solid State Physics, Russian Academy of Sciences, 142432 Chernogolovka, Russian Federation

2 – Moscow Institute of Physics and Technology, Dolgoprudny, 141700 Russian Federation

3 – Institute of Applied and Experimental Physics, University of Regensburg, D-93040 Regensburg, Germany

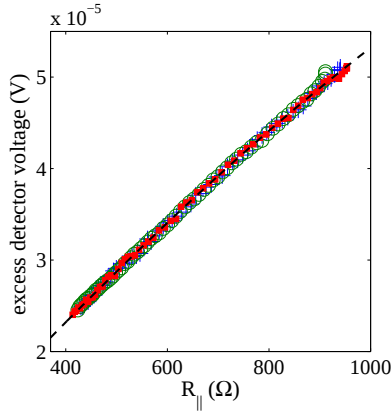


Fig. 1. Measurement of the equilibrium Johnson-Nyquist voltage noise in the dilution refrigerator. The excess voltage on the detector (normalized by T) as a function of the resistance of the sample and load R_0 in parallel. Different symbols correspond to the different bath temperatures: circle – 1.23 K, plus – 0.69 K, square – 0.125 K. The dashed line is the fit corresponding to the Johnson-Nyquist noise shunted by a stray capacitance of 3.5 pF. Note that the bath T measured with a thermometer next to the sample didn't go below ≈ 120 mK because of the power dissipated by the low- T amplifier.