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Structured Energy Distribution and Coherent AC Transport in Mesoscopic Wires ANDREY SHYTOV, Brookhaven National Laboratory — Electron energy distribution in a mesoscopic AC-driven diffusive wire generally is not characterized by an effective temperature. At low temperatures, the distribution has a form of a multi-step staircase, with the step width equal to the field energy quantum. Analytic results for the field frequency high and low compared to Thouless energy are presented, while the intermediate frequency regime is analyzed numerically. Manifestations in the tunneling spectroscopy and noise measurements are discussed.

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