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**Non-Markovian effects in the quantum noise of interacting nanostructures** CLIVE EMARY, TU Berlin, DAVID MARCOS, RAMON AGUADO, ICMM, TOBIAS BRANDES, TU Berlin — We present a theory of finite-frequency noise in non-equilibrium conductors, and in particular, interacting nanostructures. We employ a quantum master equation approach and treat correlations between the system and the reservoirs in a nonMarkovian fashion. These correlations are pivotal in properly describing current fluctuations in situations where the measuring frequency is larger than both the applied voltage and the temperature. We explicitly show the importance of nonMarkovian effects in different contexts, including the finite-frequency current noise through a double quantum dot charge qubit and the short-time counting statistics of quantum dots.

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