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**Noise power spectrum for tunneling through a quantum dot in the Kondo Regime** AVRAHAM SCHILLER, DOTAN GOBERMAN, Racah Institute of Physics, The Hebrew University, Jerusalem 91904, Israel — The charge-current and spin-current noise spectra are calculated for tunneling through an ultrasmall quantum dot in the Kondo regime. Modeling the dot by an infinite-U Anderson model, we use the noncrossing approximation to formulate the current-current correlation function for arbitrary frequency and voltage bias. Our formulation fulfills all the basic requirements of the current-current correlation function, including current conservation and the recovery of the fluctuation-dissipation theorem at zero frequency and bias. The full temperature, voltage-bias and frequency dependences of the noise are analyzed, and the significance of the Kondo correlations that develop are discussed. Deficiencies of the slave-boson mean-field approach for calculating the noise are pointed out.

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