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Full counting statistics for current through each channel of orbital degenerate Anderson impurity with exchange interactions RUI SAKANO, ISSP, the university of Tokyo, AKIRA OGURI, YUNORI NISIKAWA, Department of physics, Osaka city university — We study non-equilibrium currents, current fluctuations and cross-correlations of the currents through Kondo-correlated quantum dots at low applied bias-voltages, using full counting statistics. To elucidate impact of dot-site interaction to these current properties in crossover between noninteracting and some Kondo states, renormalized perturbation theory or local Fermi liquid theory are employed. The exact form of the cumulant generating function up to third order of bias-voltage is derived in term of renormalized parameters. Specifically, crossover behavior of the Fano factor (ratio between noise and current) and current crosscorrelations for two-fold orbital case is discussed with using computed renormalized parameters by numerical renormalization group.

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