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Title: Spectral form factor in the chaotic phase of generic periodically kicked interacting quantum many-body systems

Abstract: I shall discuss the emergence of random matrix theory (RMT) spectral correlations in the chaotic phase of generic periodically kicked interacting quantum many-body systems by analytically calculating spectral form factor (SFF) up to two leading orders in time. The presence or absence of time-reversal symmetry will be considered in investigating all three of Dyson's symmetry classes. I shall explain how (e.g., the mechanism, nonuniversal behavior) and when (timescales) many-body quantum systems acquire a universal RMT form. We have developed an ingenious scheme to include contributions to the SFF from many diagrams of different permutations of basis states. We provide general rules to calculate the contribution of various diagrams and discover reduced diagrams that contain information on the contribution to the SFF in the ergodic phase. Our results for the SFF give the universal SFF at a longer time and the nonuniversal part of SFF at a short time, which goes beyond the RMT predictions.