Aging processes in reversible diffusion-limited reactions VLAD EL-
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— Reversible diffusion-limited reactions display anomalous (i.e. slow) dynamics
characterized by a power-law relaxation toward stationarity. In contrast to previous
studies that focused on the time-dependence of this relaxation, we study here the
nonequilibrium behavior of various simple reversible reaction-diffusion models in the
aging regime. Starting from the exact Langevin equations describing these models,
we derive expressions for two-time autocorrelation and autoresponse functions and
obtain a simple aging behavior for these quantities. The autoresponse function is
thereby found to depend on the specific nature of the chosen perturbation of the
system.

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