EQUIVALENCE OF ENSEMBLES FOR STHOCASTIC PROCESSES

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We study, in the ensemble of constant
particle number, processes in which a cluster of particles is
annihilated and particles are created catalytically in active sites.
In this ensemble, particles belonging to a cluster of ℓ particles jump to ℓ distinct active sites. As examples of our prescription, we analyze numerically three nonequilibrium systems that annihilate cluster of particles that are identified as conserved versions of the pair annihilation contact model, triplet annihilation contact model and pair contact process. We show also how to set up the constant particle number ensemble from the constant rate ensemble.

[1] C.E.Fiore and M. J. de Oliveira, Phys. Rev. E **72**, 046137 (2005).