Abstract Submitted
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Relationships involving spatial transitions for Brownian particles within a potential-well. ROSS BRODY, University of Maine — Using an optical tweezer apparatus we have trapped single latex spheres and analyzed their Brownian motion within a potential well. By considering transitions from various initial and final positions within the well, we experimentally show that the ratio of conditional probabilities, $P(x_f, t + \Delta t|x_i, t)/P(x_i, t + \Delta t|x_f, t)$, is independent of Δt. We also show the instanton times corresponding to last-touch-first-touch (LTFT) trajectories obey the equality, LTFT($x_i \rightarrow x_f$)=LTFT($x_f \rightarrow x_i$), shown by Bier et al. [Phys. Rev. E **59**, 6422 (1999)].

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