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Abstract for an Invited Paper for the MAR15 Meeting of the American Physical Society

Heterogeneity in motor driven transport

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I will discuss quantitative analysis of particle tracking data for motor driven vesicles inside an insulin secreting cell. We use this method to study the dynamical and structural heterogeneity inside the cell. I will discuss our effort to explain the origin of observed heterogeneity in intracellular transport. Finally, I will explain how analyzing directional correlations in transport trajectories reveals self-similarity in the diffusion media.