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# Length-dependent dynamics of microtubules

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Certain regulatory proteins influence the polymerization dynamics of microtubules by inducing catastrophe with a rate that depends on the microtubule length. Using a discrete formulation, here we show that, for a catastrophe rate proportional to the microtubule length, the steady-state probability distributions of length decay much faster with length than an exponential decay as seen in the absence of these proteins.

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