Table S2: χ^2 test to check if $\mathbf{P}(\theta|\mathbf{r})$ is independent of r. The distributions for five different step size were compared using a χ^2 test. The table indicates the χ^2 statistic values. For all comparisons, $df = 20$, $p < 0.0001$. Each column and row represents a step size as indicated in bold.

	r = 0.015cm	**r = 0.054cm**	**r = 0.093cm**	**r = 0.350cm**
r = 0.015cm		0.5767e+008	0.6215e+008	0.6390e+008
r = 0.054cm	1.7876e+008		0.0078e+008	0.0143e+008
r = 0.093cm	1.7468e+008	0.0087e+008		0.0035e+008
r = 0.350cm	1.5588e+008	0.0159e+008	0.0032e+008	