Evaluating Runge-Kutta integration error on quantum state normalization

N	T	β	rtol	atol	error	comp time
9	16.128	8.872	16.128	1.402	1.373	-146.6
9	3.442	-2.509	3.442	0.299	0.343	133.2
9	1.826	-0.363	1.826	0.159	0.119	168.5
9	0.993	-0.429	0.993	0.086	0.08	25.6
27	1.29	0.099	1.29	0.112	0.097	-175.6
27	0.483	-0.183	0.483	0.042	0.063	22.3
27	0.766	-0.475	0.766	0.067	0.039	141.6
27	0.624	0.365	0.624	0.054	0.04	-35.7
59	1.29	0.099	1.29	0.112	0.097	-175.6
59	0.483	-0.183	0.483	0.042	0.063	22.3
59	0.766	-0.475	0.766	0.067	0.039	141.6
59	0.624	0.365	0.624	0.054	0.04	-35.7
101	0.483	-0.183	0.483	0.042	0.063	22.3
101	0.766	-0.475	0.766	0.067	0.039	141.6
101	0.624	0.365	0.624	0.054	0.04	-35.7
101	0.598	-0.597	0.598	0.052	0.025	92.3