

Parameter	Interpretation	Value
$N$	Number of neurons	200
$T$	Simulation duration (frames)	2000
–	Imaging rate (Hz)	2.1646
$\tau_r$	Calcium rise time constant (frames)	2.6
$\tau_d$	Calcium decay time constant (frames)	5.3
$K$	Number of stimuli	10
–	Stimulus repetitions	5
–	Interstimulus interval (frames)	39
$L$	Number of latent factors	4
$\xi$	Probability of latent factor event (per frame)	0.1
$\pi$	Probability of private spontaneous event (per frame)	0.05 (0.0 - 0.3)
$\gamma_x$	Mean intensity of latent event	0.1
$\gamma_z$	Mean intensity of private spontaneous event	0.1
$\sigma^2$	Imaging noise variance	0.16 (0.04 - 0.4)