

Erratum: Low-dimensional model for adaptive networks of spiking neurons **[Phys. Rev. E 111, 014422 (2025)]**

Bastian Pietras , Pau Clusella , and Ernest Montbrió 



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The initial conditions and the low-dimensional model used to generate the numerical simulations in Fig. 5 were incorrectly specified. In the caption of Fig. 5 and the discussion of that figure at the end of Sec. IV and in Sec. V, the firing rate equations should be given as Eqs. (20)–(22) rather than Eqs. (22) and (23). After Eq. (20b), the initial conditions should be given as $R(0) = x_0/(\pi \tau_m) \geq 0$ and $V(0) = y_0$, where $x_0 \geq 0$ and $y_0 \in \mathbb{R}$ correspond to the half-width at half-maximum and center, respectively, of the Lorentzian distribution of initial voltage variables $V_j(0)$. In Appendix A, in the text referring to Fig. 5, it should say “. . . a Lorentzian centered at y_0 with half-width at half maximum x_0 and” The final sentence of Appendix A should be “This allows an immediate fit with the FREs (20)–(22) with $R(0) = x_0/(\pi \tau_m) = 0.01 \text{ ms}^{-1}$, $V(0) = y_0 = -0.8$, and $A(0) = \gamma = \bar{c} = 0$.”

Finally, in Appendix A, the expression for $R(t)$ should be

$$R(t) = \frac{1}{\tau_m \pi} \text{Re} \left\{ \frac{1 - Z^*(t)}{1 + Z^*(t)} \right\}.$$

None of the conclusions of the paper are affected.