



A C u

^{1,*} ² R₁ ¹

¹Department of Applied Mathematics, University of Colorado at Boulder, Boulder, Colorado 80309, USA

²

$G(x, x') = G(x - x') + G(x + x') + G(2L - x - x')$,
 $G(x) = H_\xi(x) [1 + \frac{wx}{\xi^2} (1 - \frac{x^2}{\xi^2})]$,
 $H_\xi(x) = \frac{1}{\sqrt{2D_V \text{APD}^*}} \exp(-\frac{|x|}{\xi})$,
 $\xi = \sqrt{2D_V \text{APD}^*}$, $w = 2D_V / cv^*$,
 $D_V \frac{\partial^2 V_m}{\partial x^2} = I_{\text{ion}}$,
 $T_n(x) \equiv A_n(x) + D_n(x)$

$$T_n(x) = \tau + \int_0^x \frac{dx'}{cv[D_n(x')]} - \int_0^x \frac{dx'}{cv[D_{n-1}(x')]} \quad (3)$$

$\tau = \frac{f_c}{C}$, $x = 0$,
 f_c , C ,
 f_c / C

$$c'(x) = \frac{c^3(x) - (r-1)c(x) - \alpha d'(x)}{(r-1) - 3c^2(x)}. \quad (10)$$

$c \sim 0$ for $r > r_2(\cdot)$,
 $c(x) = c_{\pm} = \pm\sqrt{(r-1)/3}$,
 $c(x) = \dots$
 $\alpha d(x) \dots$ (8)
 $(r-1)c = c^3 + \alpha d$
 $c(x) \dots$
 $c(x) = c_{\pm} = \mp 2\sqrt{(r-1)/3}$

$r_1(\cdot) \dots$
 $\beta = 0$
 $r_1(\cdot) = 1 - \eta + 3\eta\xi^{2/3} / (4\xi^{2/3} - 1 - \eta + \xi^2(w)^{-1})$
 $\eta = \alpha\gamma$
 $4\pi\xi^{2/3} - 1/3/\sqrt{3} \dots 2\pi(w)^{1/2}$
 $\beta \neq 0$
 \dots
 \dots
 $c(x) = c_n(x) = -c_{n+1}(x)$ (8)
 \dots

$\frac{1}{2} \ln \left(\frac{1+r}{1-r} \right) = \ln \left(\frac{1+r}{1-r} \right)^{1/2}$, $r = 1.2$
 $\ln \left(\frac{1+1.2}{1-1.2} \right)^{1/2} = \ln \left(\frac{2.2}{-0.2} \right)^{1/2}$
 $\ln \left(-11 \right)^{1/2}$

