Summary of 'simple_hh'

1 Assignments

$$\alpha_{ca,m} = \cfrac{\overbrace{\overbrace{\overbrace{\overbrace{\left(\overbrace{\underbrace{\langle 4.05\ \text{ms}^{-1}\rangle}_{ID:58549520/284,US:12(M/M:3037.5/5062.5)} + \overbrace{\langle 0.0\ \left(10^6\right)\text{m}^{-2}\cdot\text{kg}^{-1}\cdot\text{s}^2\cdot\text{A}^1\rangle}^{ID:58551504/285,US:0(M/M:0.0/0.0)} \cdot \right.}^{ID:56631120/286,U}}^{ID:56626128/287,US:13(M/M:3037.5/5062.5)}}^{ID:56626512/296,US:13(M/M:-975.193055584/4880.9}}{\overbrace{\overbrace{\overbrace{\left(\underbrace{1.0}_{ID:58551184/288,US:0(M/M:0.75/1.25)} + \underline{\quad\exp\quad}\left| x = \left(\overbrace{\underbrace{\langle -15.32\ \text{mV}\rangle}_{ID:58550928/289,US:-6(M/M:-0.01915/-0.01149)} + \right.}^{ID:56626256/290,US:-2(M/M:-0.15532/0.08468)}\right.\right.}^{ID:61251728/292,US}}^{ID:56626448/294,US:13(M/M:-1}}^{ID:56626320/295,US:13(M/M:-1225.38881281/6133.16}}$$

$$\alpha_{kf,n} = \cfrac{\overbrace{\overbrace{\overbrace{\left(\underbrace{\langle 5.06\ \text{ms}^{-1}\rangle}_{ID:58535056/385,US:13(M/M:3795.0/6325.0)} + \overbrace{\langle 0.0666\ \left(10^6\right)\text{m}^{-2}\cdot\text{kg}^{-1}\cdot\text{s}^2\cdot\text{A}^1\rangle}^{ID:58535824/386,US:17(M/M:49950.0/8325}\right.}^{ID:55762256/387,US:}}^{ID:56612304/388,US:14(M/M:-4264.0/11720.0}}^{ID:56612688/397,US:12(M/M:-444.093262908/2133.5}}{\overbrace{\overbrace{\overbrace{\left(\underbrace{5.12}_{ID:58535632/389,US:3(M/M:3.84/6.4)} + \underline{\quad\exp\quad}\left| x = \left(\overbrace{\underbrace{\langle -18.396\ \text{mV}\rangle}_{ID:58536208/390,US:-5(M/M:-0.022995/-0.013797)} + \right.}^{ID:56612432/391,US:-2(M/M:-0.158396/0.081604}\right.\right.}^{ID:61252112/393,US:3}}^{ID:56612624/395,US:8(M/M:-2}}^{ID:56612496/396,US:8(M/M:-20.9822210039/136.798}}$$

$$\overbrace{\overbrace{\overbrace{\left(\underbrace{\langle 0.462\ \text{ms}^{-1}\rangle}_{ID:58529168/439,US:9(M/M:346.5/577.5)} + \overbrace{\langle 0.0082\ \left(10^6\right)\text{m}^{-2}\cdot\text{kg}^{-1}\cdot\text{s}^2\cdot\text{A}}^{ID:58531408/440,US:14(M/M:6150.0/102}\right.}^{ID:61221456/441,U}}^{ID:56611728/442,US:11(M/M:-686.0/128}}^{ID:56613968/451,US:9(M/M:-52.1377129557/259}$$

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2 State Variable Evolution

$$\frac{d}{dt} \overbrace{V}^{ID:58571280/15,US:-2(M/M:-0.14/0.1)} = \overbrace{\overbrace{1.0}^{ID:55745744/559,US:0(M/M:0.75/1.25)} \cdot \overbrace{\left\langle 0.1 \left(10^{12}\right) \mathrm{m}^2 \cdot \mathrm{kg}^1 \cdot \mathrm{s}^{-4} \cdot \mathrm{A}^{-2} \right\rangle}^{\overset{ID:61249104/561,US:37(M/M:75000000000.0/1.25e+11)}{ID:61248912/560,US:37(M/M:75000000000.0/1.25e+11)}}}^{ID:55744656/562,US:15(M/M:-9256.73405573/17599.264149)} \cdot itot$$

$$\frac{d}{dt} \overbrace{ca_m}^{ID:58571856/301,US:1(M/M:-0.3375/1.6275)} = \frac{\overbrace{\left(ca_{m,\infty,cl} - \overbrace{ca_m}^{ID:58571856/301,US:1(M/M:-0.3375/1.6275)} \right)}^{\overset{ID:58554384/305,US:14(M/M:-14035.0609634/7539.81910583)}{ID:58552656/303,US:1(M/M:-1.87700348677/1.58563410404)}}}{\tau_{ca,m}}$$

$$\frac{d}{dt} \overbrace{kf_n}^{ID:58570896/206,US:1(M/M:-0.3375/1.6275)} = \frac{\overbrace{\left(\infty_{kf,n} - \overbrace{kf_n}^{ID:58570896/206,US:1(M/M:-0.3375/1.6275)} \right)}^{\overset{ID:58537040/429,US:13(M/M:-6867.97240928/3439.28041458)}{ID:58539280/428,US:1(M/M:-1.87711616861/1.56064035482)}}}{\tau_{kf,n}}$$

$$\frac{d}{dt} \overbrace{ks_n}^{ID:58570512/140,US:1(M/M:-0.3375/1.6275)} = \frac{\overbrace{\left(\infty_{ks,n} - \overbrace{ks_n}^{ID:58570512/140,US:1(M/M:-0.3375/1.6275)} \right)}^{\overset{ID:58532688/455,US:9(M/M:-157.937622678/283.013784863)}{ID:58532368/454,US:1(M/M:-1.87911912204/1.56958306685)}}}{\tau_{ks,n}}$$

$$\frac{d}{dt} \overbrace{na_h}^{ID:58571088/492,US:1(M/M:-0.3375/1.6275)} = \frac{\overbrace{\left(\infty_{na,h} - \overbrace{na_h}^{ID:58571088/492,US:1(M/M:-0.3375/1.6275)} \right)}^{\overset{ID:58549008/494,US:13(M/M:-6812.17192804/2379.89685579)}{ID:58548880/493,US:1(M/M:-1.87690994664/1.587184469)}}}{\tau_{na,h}}$$

$$\frac{d}{dt} \overbrace{na_m}^{ID:58570704/465,US:1(M/M:-0.3375/1.6275)} = \frac{\overbrace{\left(\infty_{na,m} - \overbrace{na_m}^{ID:58570704/465,US:1(M/M:-0.3375/1.6275)} \right)}^{\overset{ID:58544912/468,US:14(M/M:-8377.94262919/12088.638837)}{ID:58544720/467,US:1(M/M:-1.87649884661/1.586869518)}}}{\tau_{na,m}}$$