

## SBE II: Homework 3

### Experiment-5:

Shown below is the resulting plot of Calcium concentration and membrane potential when the KCa channel conductance is set to 0.

What we can tell from this plot, is that the system is approaching a steady state: the potential difference across the membrane is at 0 mV in the final time step and the Calcium concentration asymptotically approaches a constant. We can infer, from this result, that with the removal of a KCa channel, the cell membrane is able to reach an electrochemical equilibrium which prevent future spiking under the same conditions (i.e. constant applied current).

