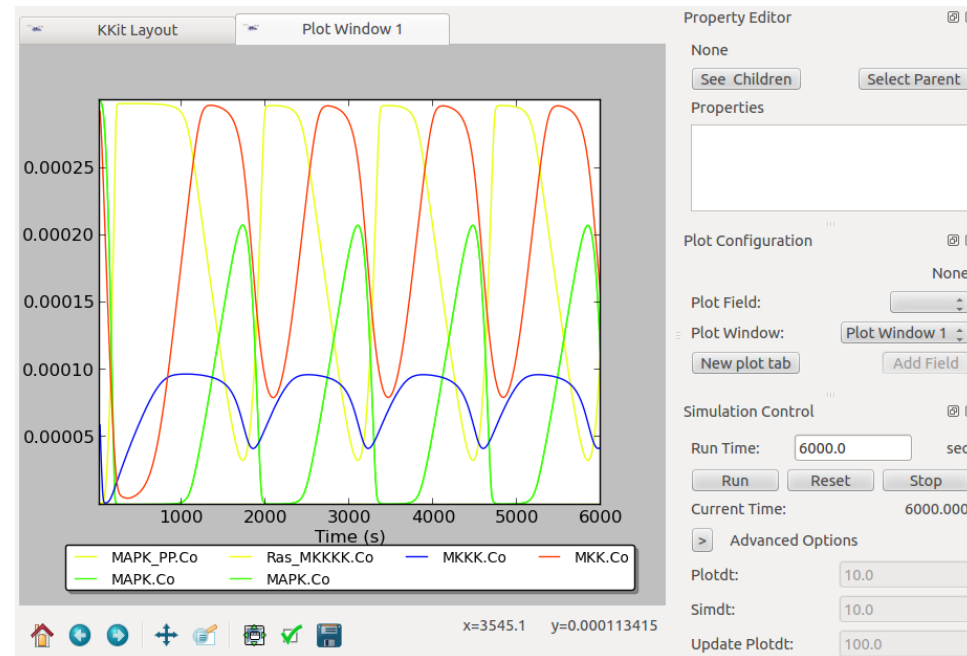
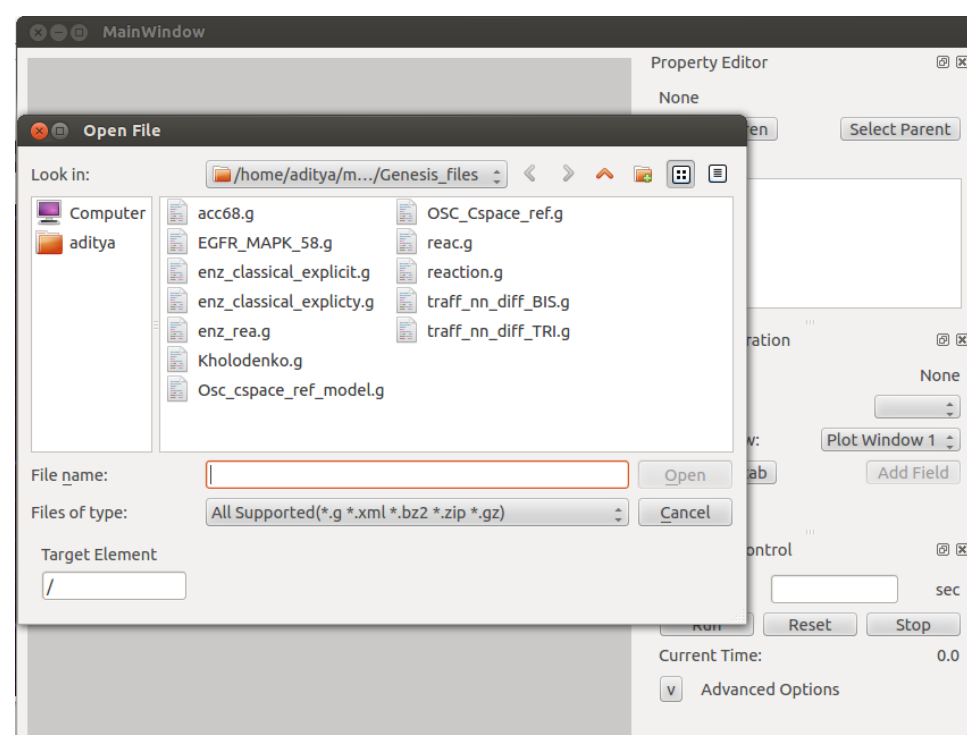


• Install MOOSE:

- The latest MOOSE is currently packaged as an Ubuntu liveCD/USB. Burn livecd.iso to CD or make bootable USB using Startup Disk Creator (usb-creator-gtk) on Ubuntu 12.04. Boot off it, on your machine, or in a virtual machine (virtualbox.org).

• Quick start MOOSE:

- Double click desktop icon to launch GUI.
- ‘File’ → ‘Load Model’ (top menu), navigate to /home/moose/moose_src/Demos/Genesis_files .
- Open any .g file there, say Kholodenko.g .
- The signalling network schematic appears.
- Click the ‘Plot Window 1’ tab to show plots.
- Click run, and the plots are updated as the simulation proceeds.
- You can ‘stop’ a simulation in-between and ‘run’ again for another ‘Run Time’. ‘Reset’ and ‘run’ to start from t=0.
- Buttons below the plots allow you to pan, zoom, and save the plot figure. Home and arrow icons to switch between views.
- In ‘advanced options’, you can set the sim time step ‘simdt’ and plot resolution ‘plotdt’. Also the ‘Update Plotdt’ at which the GUI plots are refreshed. Units: seconds.

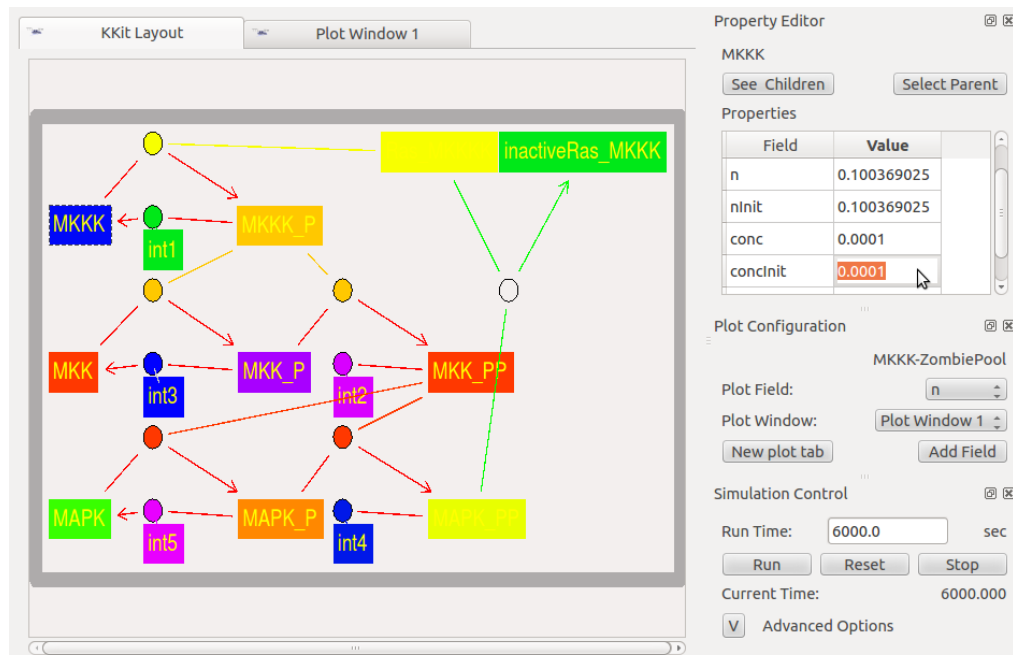


Changing Parameters:

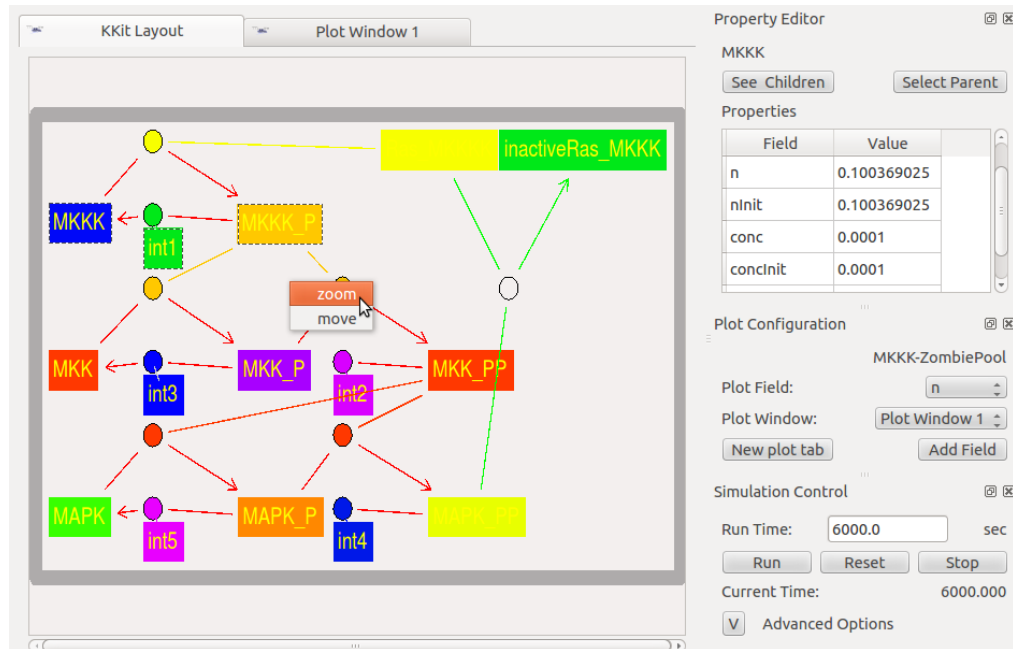
- All units are in SI.
- Switch to the KKit Layout tab
- You can see/edit properties of any object in the right 'Properties' panel by single-click on a Molecule Pool (rectangle); or double-click on a Reaction (ellipse).
- Reversible reactions are empty ellipses, with the reaction direction in green.
- Enzyme-catalyzed reactions are filled ellipses, with the reaction direction in red, and the enzyme link in the enzyme pool's colour.
- An empty unlinked box near a filled ellipse signifies an explicit enzyme complex for an explicit enzyme reaction.

Layout:

- Click and drag any pool/reaction.
- Keyboard shortcuts: 'a': fit full model; '<','>': incremental zoom out/in; numpad arrow keys: pan.
- Rubber-band select (click-and-drag) a rectangular region having a pool, which pops up a context menu to (1) zoom to selected region; or (2) move / click-and-drag the objects in the selected region.



Property Editor. Displays parent-child relationship



• Plotting:

- In the 'Plot Configuration' panel, click 'New plot tab'.
- In the 'KKit Layout' tab, select an object by single-click on a Molecule Pool (rectangle); or double-click on a Reaction (ellipse).
- All plot-able fields of the object appear in the 'Plot Field' dropdown. Select one and click 'Add Field' to add it to the newly created plot tab.
- Similarly, more object-fields may be plotted in the same tab or in new ones.
- Menubar → 'View' → 'Sub Windows' / 'Tabs' to tile the plots differently.
- Navigate the object tree by 'See Children' and 'Select Parent' (usually not needed).

• Switching Solvers:

- Select the 'Solver' from the main-menu: RungeKutta (Continuous) / Gillespie (Discrete).
- Load the model: File → Load Model.
- To switch solvers for the same model, first select solver, then (re-)load the model.

• Neuron / Electrical:

- Hodgkin-Huxley Squid demo; neuron sims.

