


CESE Plus features

Welcome window provides a convenient starting point for the program.



Welcome

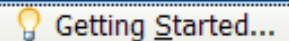
Welcome to CESE Plus

Version: 2.0.0

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Simulogic Inc.
Serial: 5000001

CESE Plus is a powerful and easy to use simulation environment for cell electrophysiologists. CESE Plus allows you to simulate action potentials, membrane conductances, and changes in ionic concentrations using a variety of state of the art computer models of cell electrical activity.

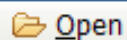
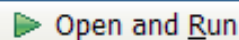
To learn more about using CESE Plus, click on **<Getting Started>** button below.



Recent Model Parameters



br_200bcl.mdl
 br_ctrl.mdl
 hh_ctrl.mdl
 lr_II_500pulses.mdl
 lr_II_ead.mdl
 lr_I_supernormal.mdl

Check for Updates

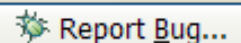


To check whether updates are available for the CESE Plus version you are using, click on **<Check for Updates>** button

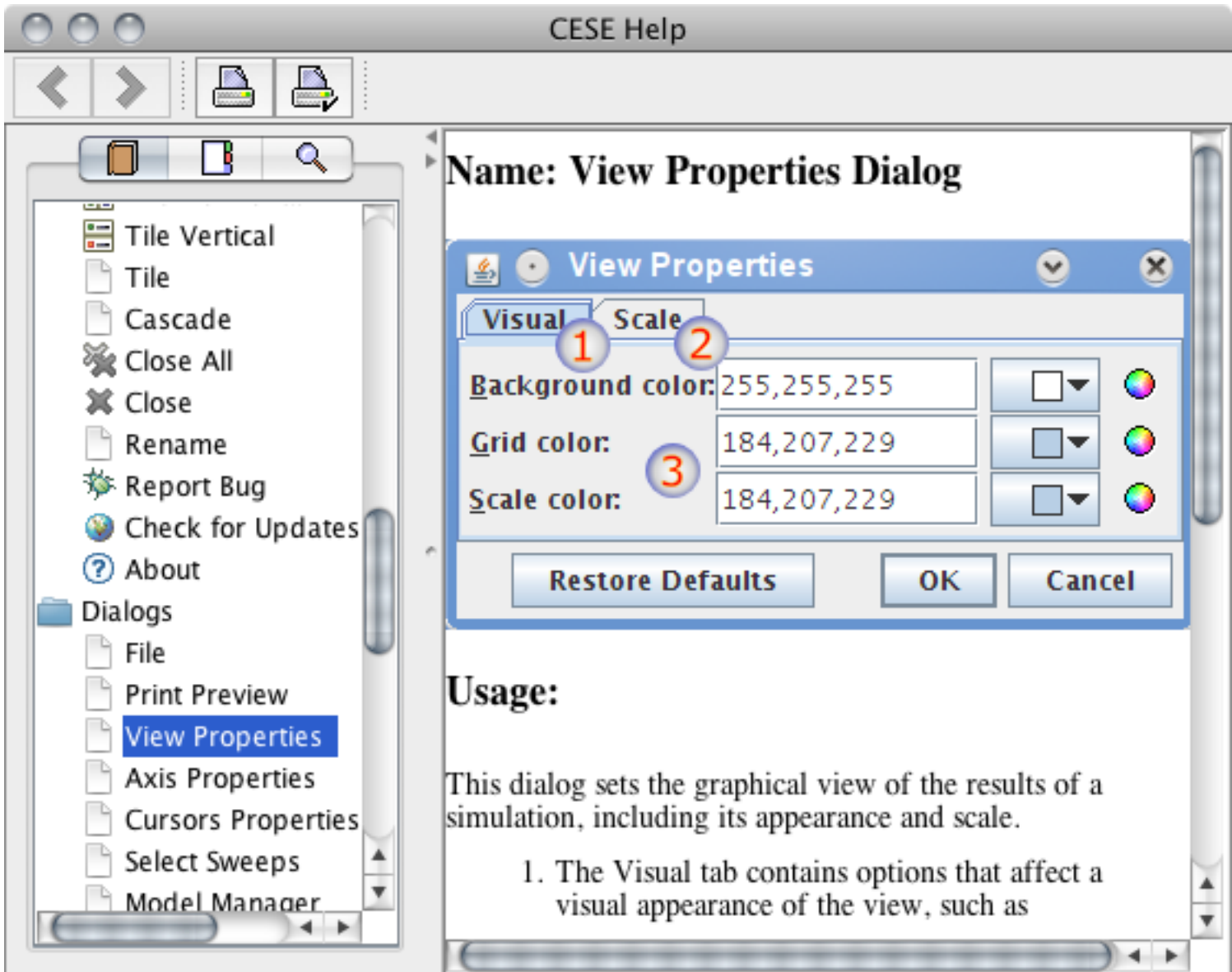
Information and Support



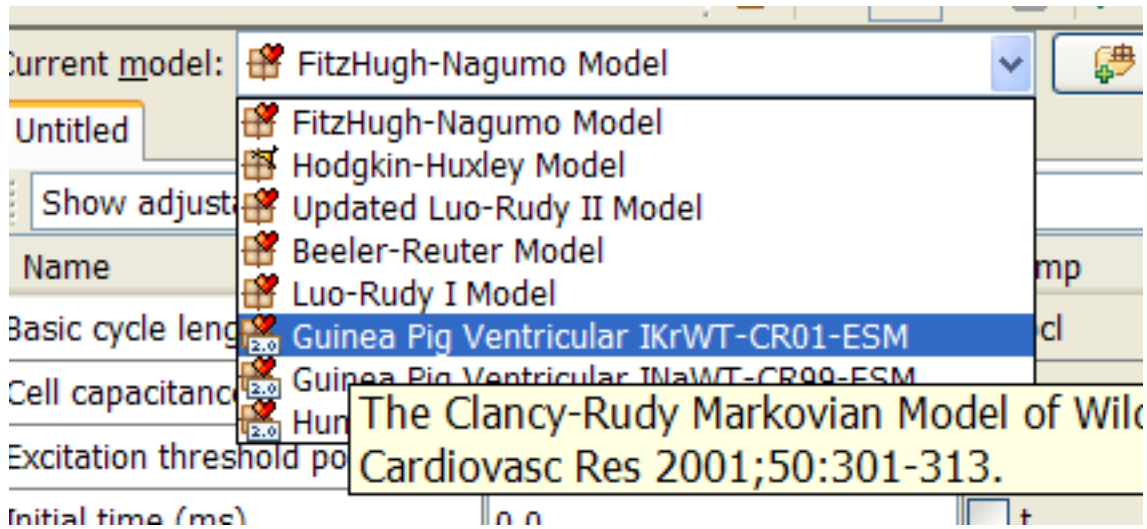
- Visit Simulogic Inc. website at www.simulogic.com. There you will find most recent news about our products, comprehensive tutorials, and technical notes.
- Our support team loves to hear from you. Please email us (support@simulogic.com) with questions and comments.
- Click on **<Report Bug>** button below to report a bug or request a new feature online.



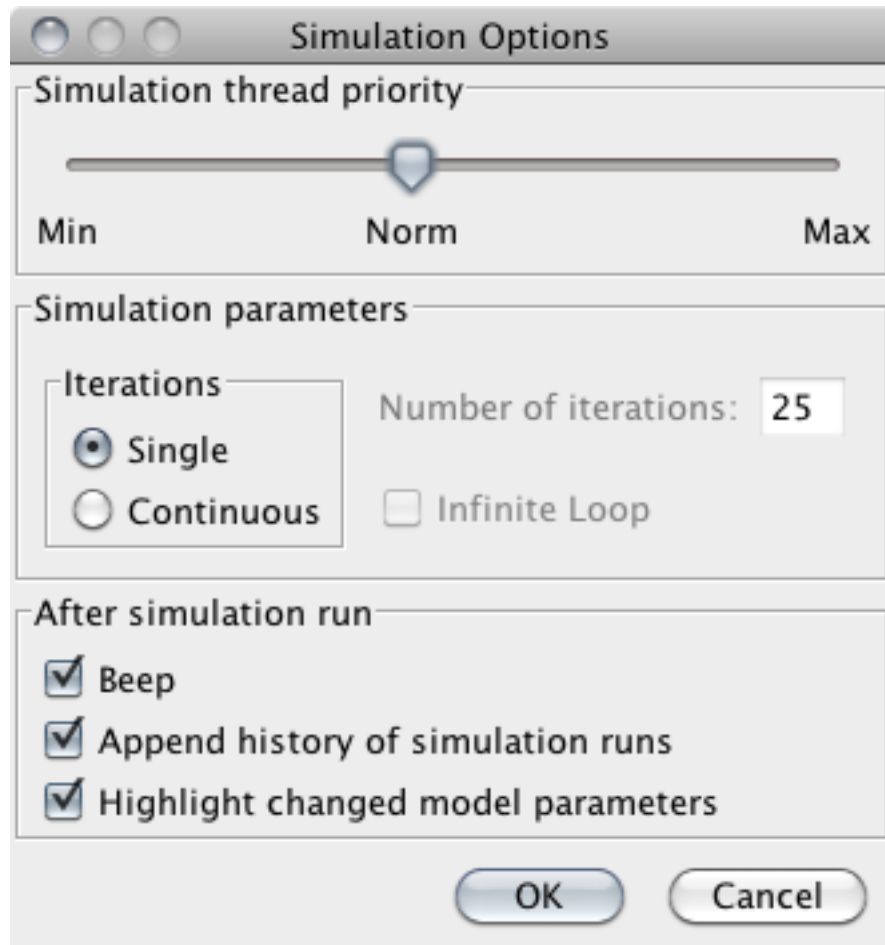
Online help is included - get an instant description of every major program dialog or a user interface element with a handy "What this?" feature.



Select a model from the list. Simulated outputs from different models can be superimposed and compared.



Control the parameters of the simulation run.



Get access to dozens of model parameters. Set a new parameter value once, or precisely control it over the course of simulation with "clamping". Model parameters can be saved to a file and re-used later.

Current model: Updated Luo-Rudy II Model Model Manager...

Untitled

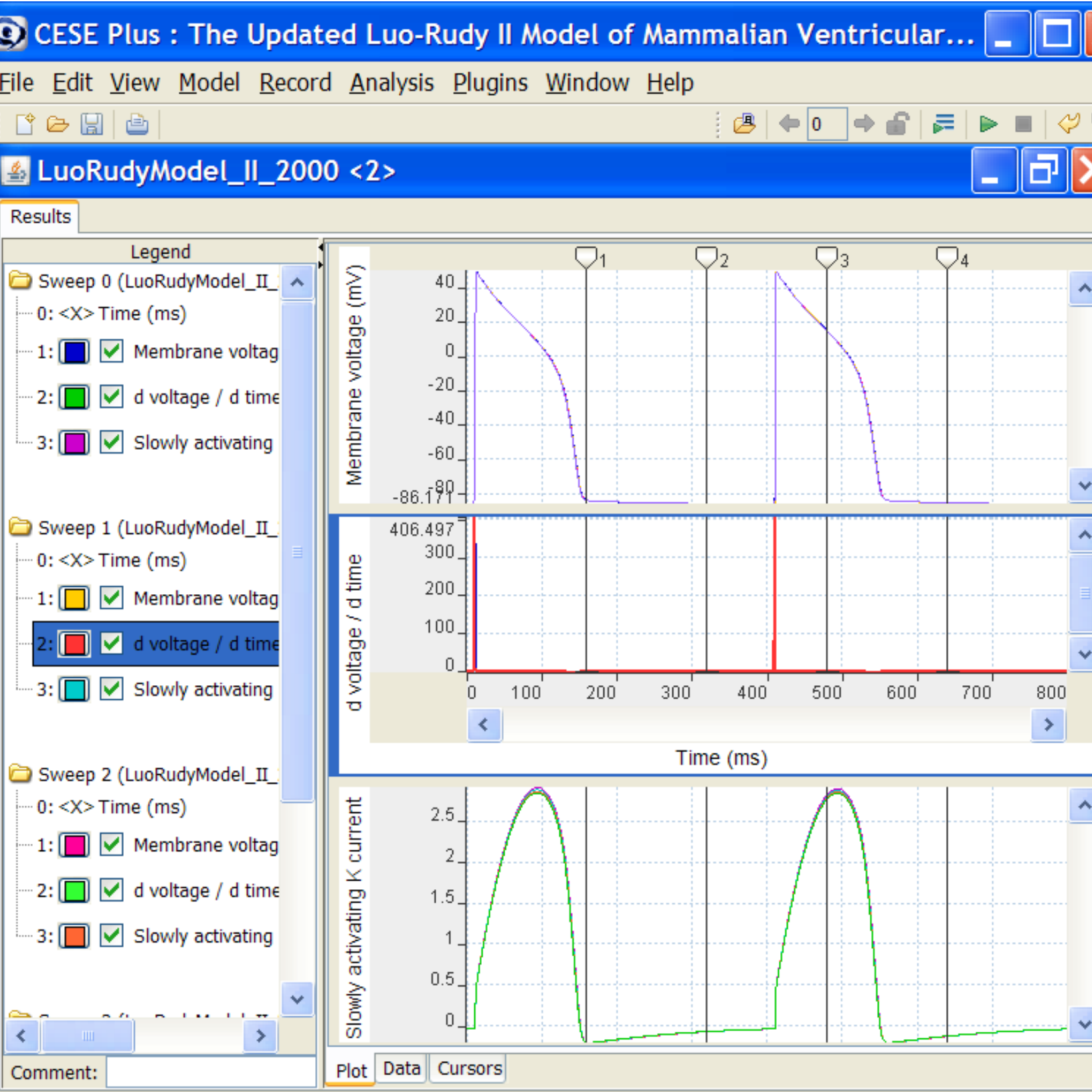
Show adjustable model parameters

Name	Value	Clamp
Activity coefficient of Na in	0.75	<input type="checkbox"/> ganai
Activity coefficient of Na out	0.75	<input type="checkbox"/> ganao
Basic cycle length (ms)	400.0	<input type="checkbox"/> bcl
Calmodulin buffered Ca co...	0.004630295228877943	<input type="checkbox"/> cmdn
Calsequestrin buffered Ca ...	3.9252550700455386	<input type="checkbox"/> csqn
Equalilibrium constant of buf...	0.00238	<input type="checkbox"/> kmcmdn
Equalilibrium constant of buf...	0.8	<input type="checkbox"/> kmcsqn
Equalilibrium constant of buf...	5.0E-4	<input type="checkbox"/> kmtrpn
Extracellular Ca concentrati...	1.8	<input type="checkbox"/> cao
Extracellular K concentratio...	5.4	<input type="checkbox"/> ko

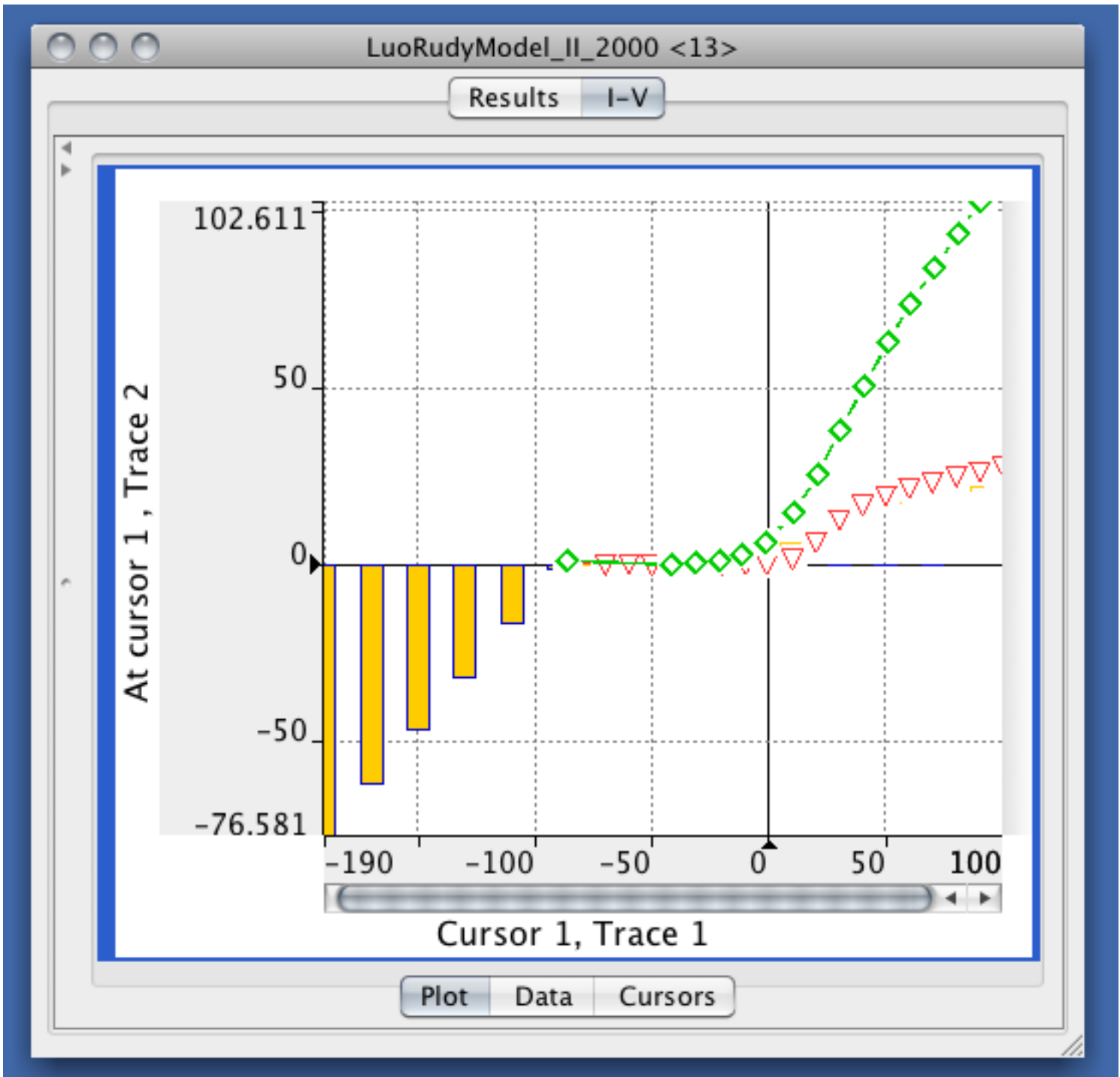
Select parameters for display Append Sweep to Active Window

- Rapidly activating K current (uA/uF)
- Rapidly activating K time-dependent activation
- Reversal potential of rapidly activating K current (mV)
- Sarcolemmal Ca Pump
 - Sarcolemmal Ca pump current (uA/uF)
- Slowly Activating Potassium Current
 - Reversal potential of slowly activating K current (mV)
 - Slowly activating K current (uA/uF)
 - Slowly activating K time-dependent activation 1
 - Slowly activating K time-dependent activation 2
- Sodium-Calcium Exchanger
 - Na-Ca exchanger current (uA/uF)
- Sodium-Potassium Pump
 - Na-K pump current (uA/uF)
 - Voltage-dependence parameter of inak
- Total Current
 - Total Ca ion flow (mM/ms)

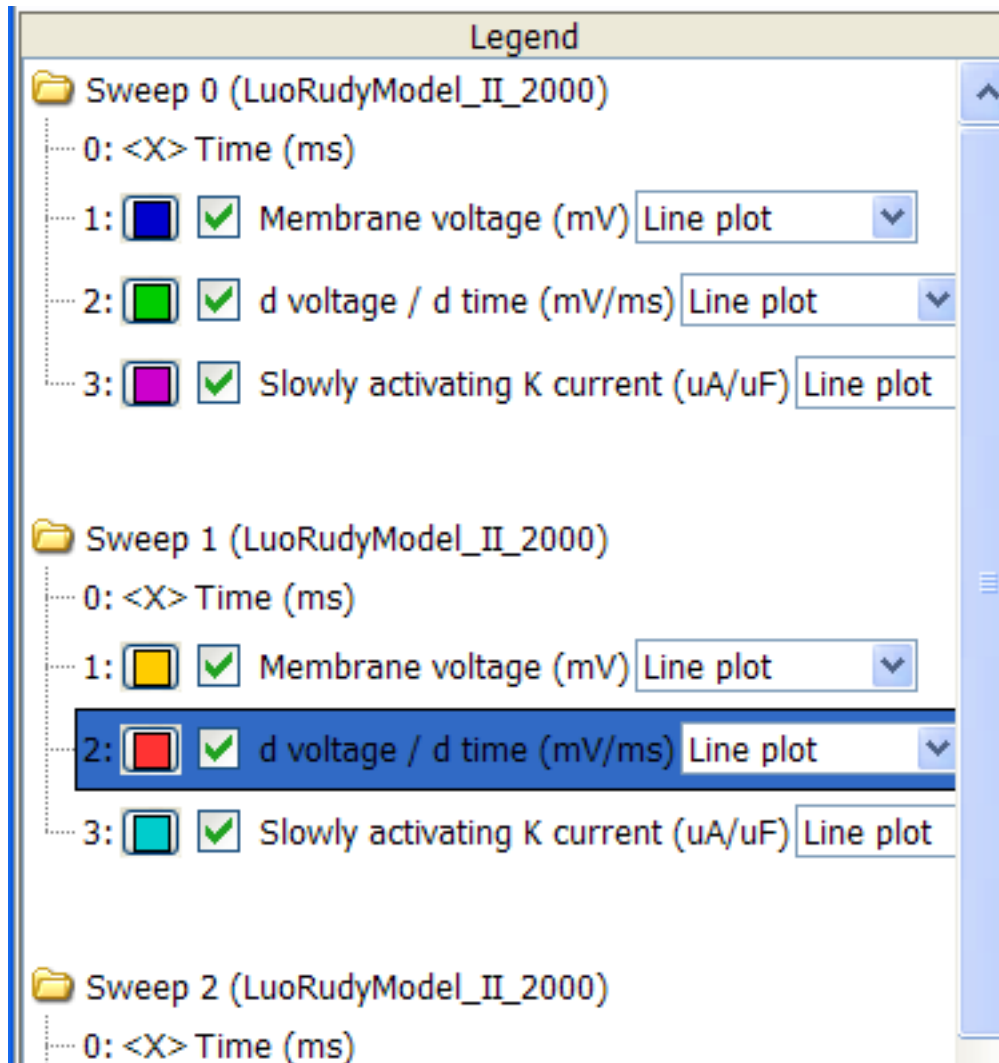
Choose model parameters to be displayed as results. Simulated values from selected parameter will be added as a trace to the results window. Each trace can be displayed in the separate panel ("split view") or all traces can be combined in the same plot area.



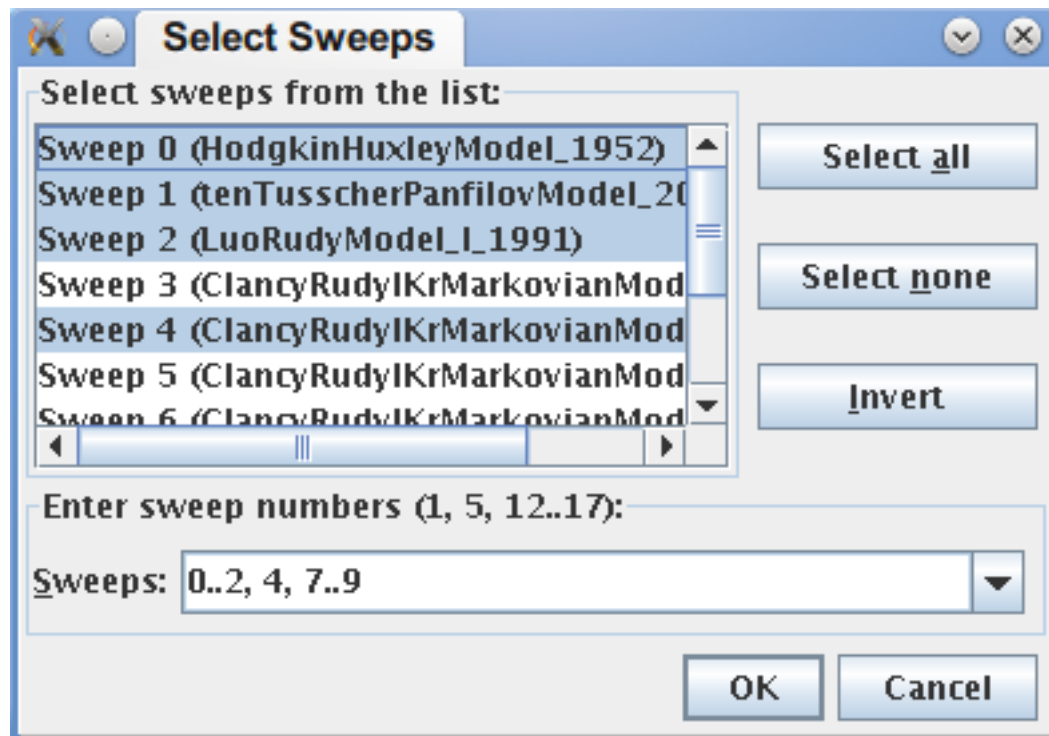
Display results with a variety of visualization options. Plot results as 2D (line, symbol, histogram, or column) plots, or view and modify the raw data in the spreadsheet.



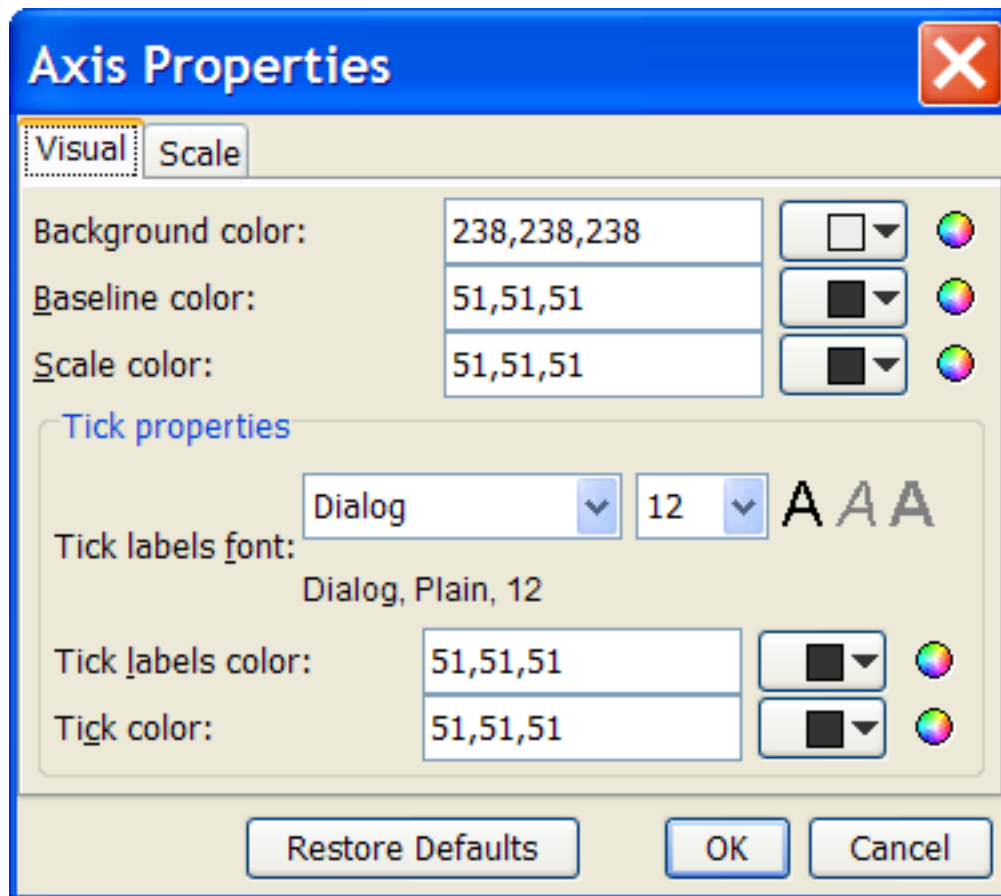
Easily change the visual appearance of plots, such as trace types and colors.



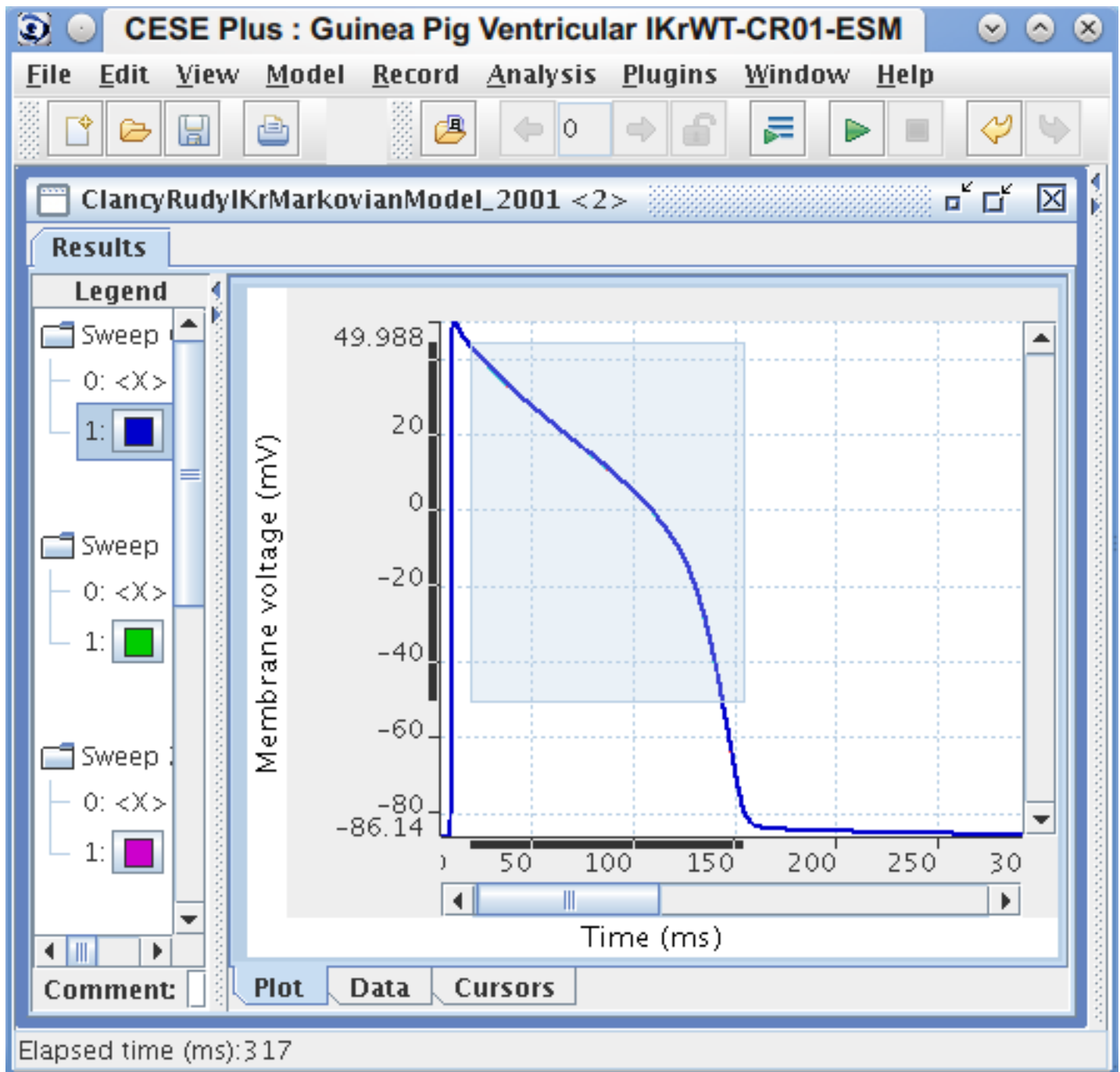
Control which sweeps are shown on the screen with Sweep selector.



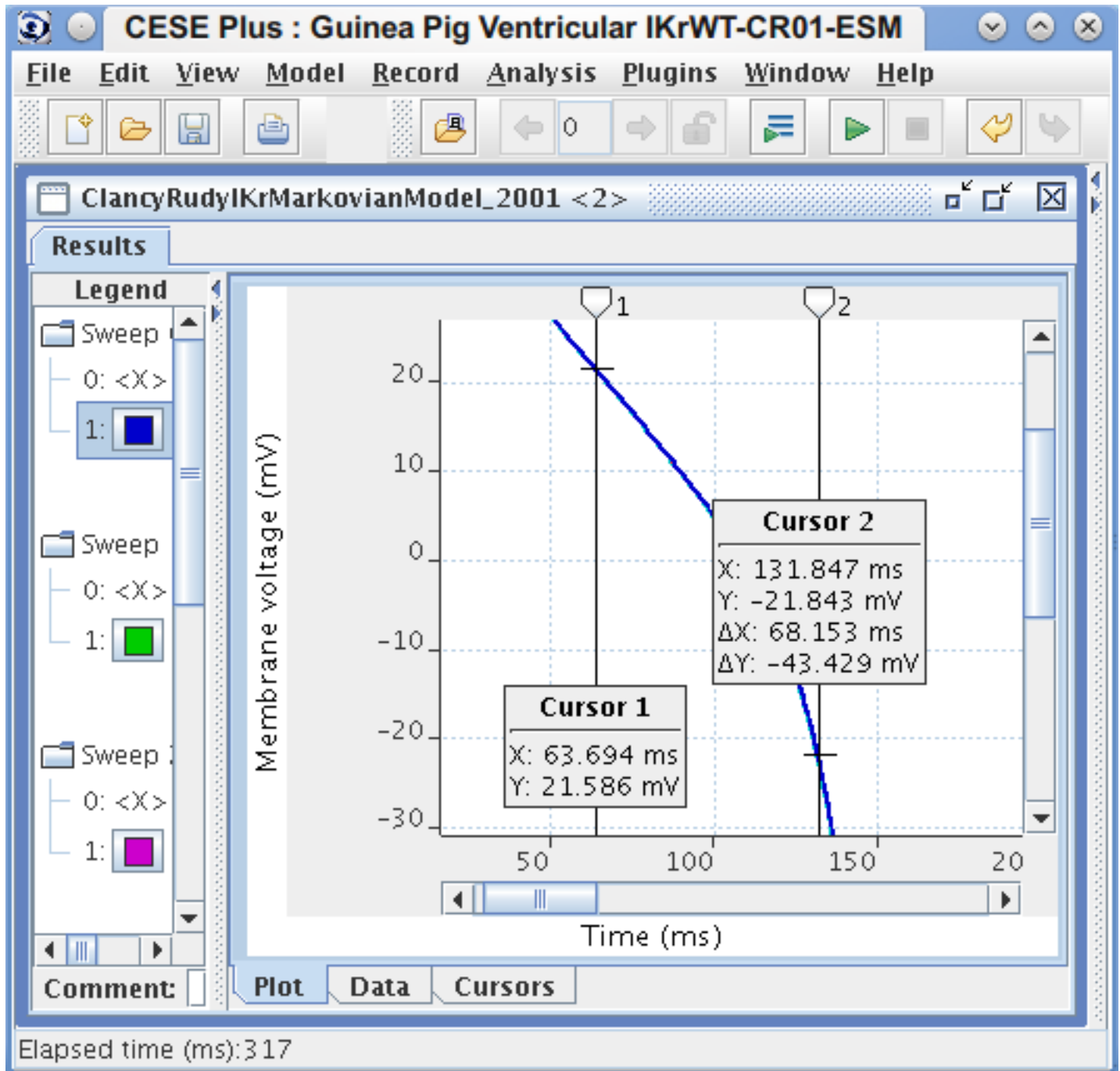
Properties of plot windows, such as axis and cursors can be modified. Selected options are saved and used for subsequent plots.



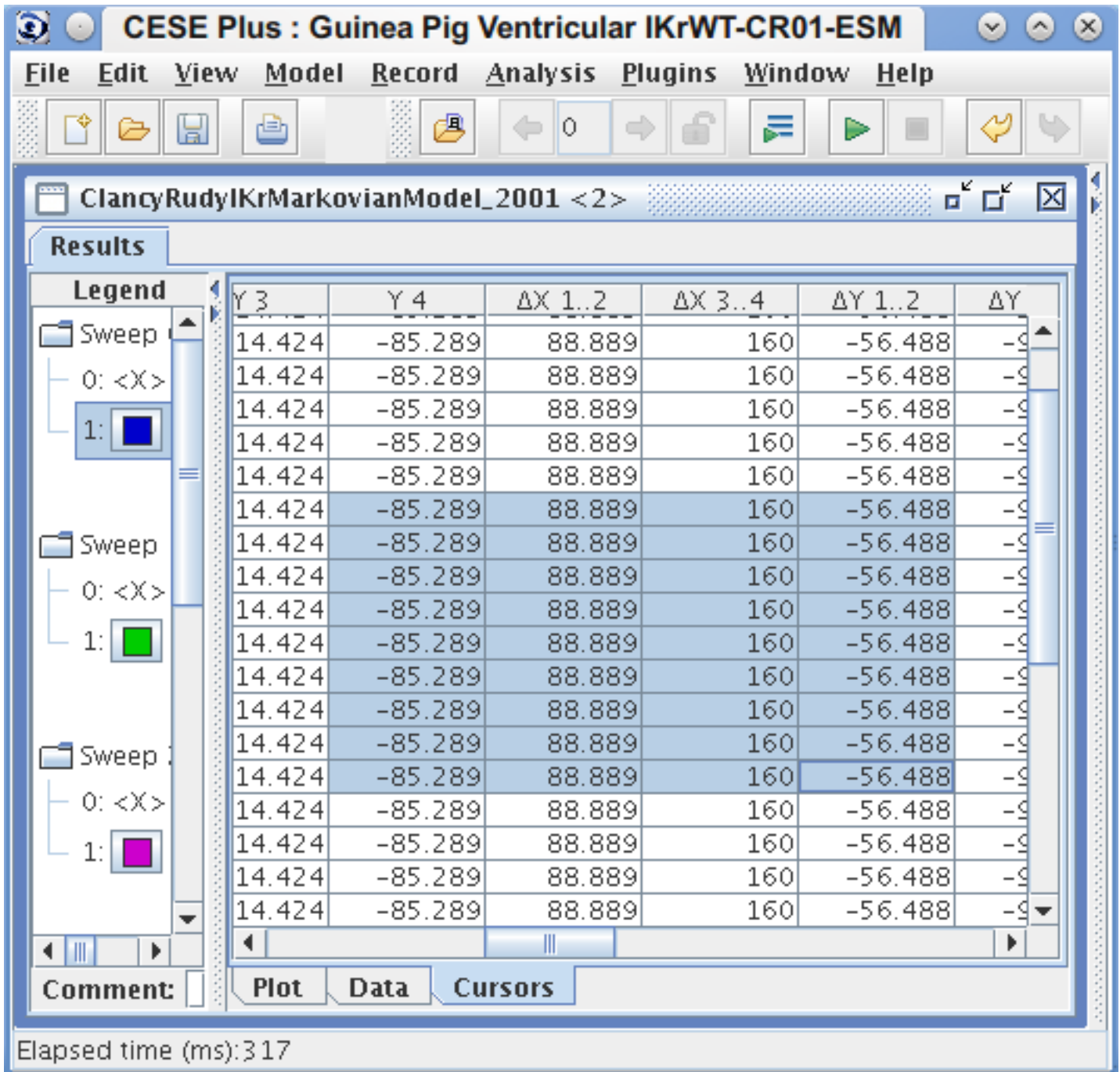
Zoom into the region of interest to take a closer look.



Use cursors to measure the selected traces, and perform online analysis (determination of peak amplitudes and times, delta amplitudes, areas under curve, standard deviations).



Raw simulated data or data from cursor analysis can be copied into the 3d party analysis software, such as MS Excel, OriginLab Origin, SPSS SigmaPlot, WaveMetrics IGOR Pro.



Export data for further analysis or insertion into the presentation or publication figure.

✓ All Files

ASCII Data Files (.dat)

CSV Data Files (.csv)

ATF Data Files (.atf)

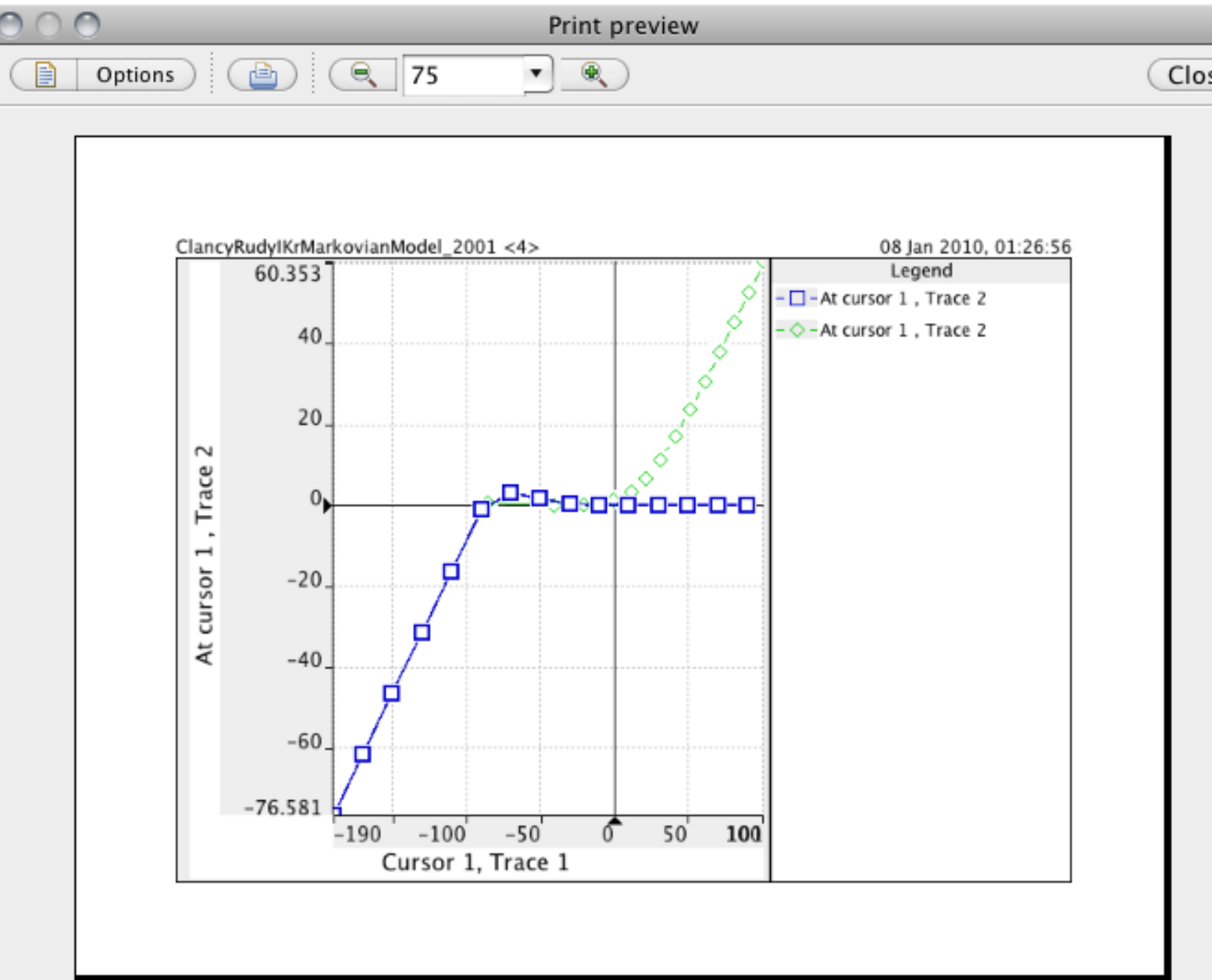
MS Excel Data Files (.xls)

NetCDF Data Files (.nc)

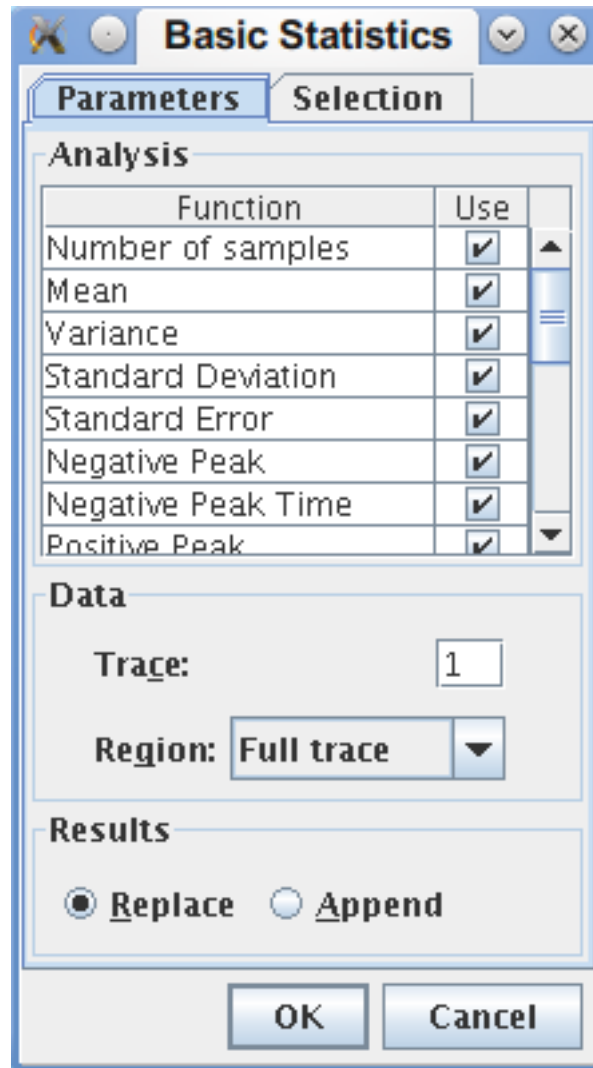
PNG Image Files (.png)

SVG Vector Graphics Files (.svg)

Print data with the flexible set of options. Printout can be previewed before printing.



Perform current-voltage or statistical analysis on selected data traces.



Use plugins to expand the capabilities of CESE Plus.

