Quick guide for using BoxModel

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There are two main tables (see Figure 1), the table with all the parameter values and the one with initial conditions. Parameters can be edited right in the table. When a parameter is changed the initial condition table is updated showing the steady state conditions at the initial load. One can toggle between using non-dimensional and dimensional parameters. This also affect the results so that if dimensional is on, the results are presented in dimensional units as well.

When the model is run, a simulation using the loads specified by “Initial load”, “Final load”, “Scenario start” and “Scenario end” is run. Between t = 0 and t = “Scenario start” the load will be equal to the “Initial load”, between “Scenario start” and “Scenario end” load will linearly increase to “Final load”, and after “Scenario end” loads are kept constant at “Final load”.

A real load scenario is also available, providing actual loads from 1900 to 2010 (year 0 to 110 in dimensional model time) and thereafter kept constant.

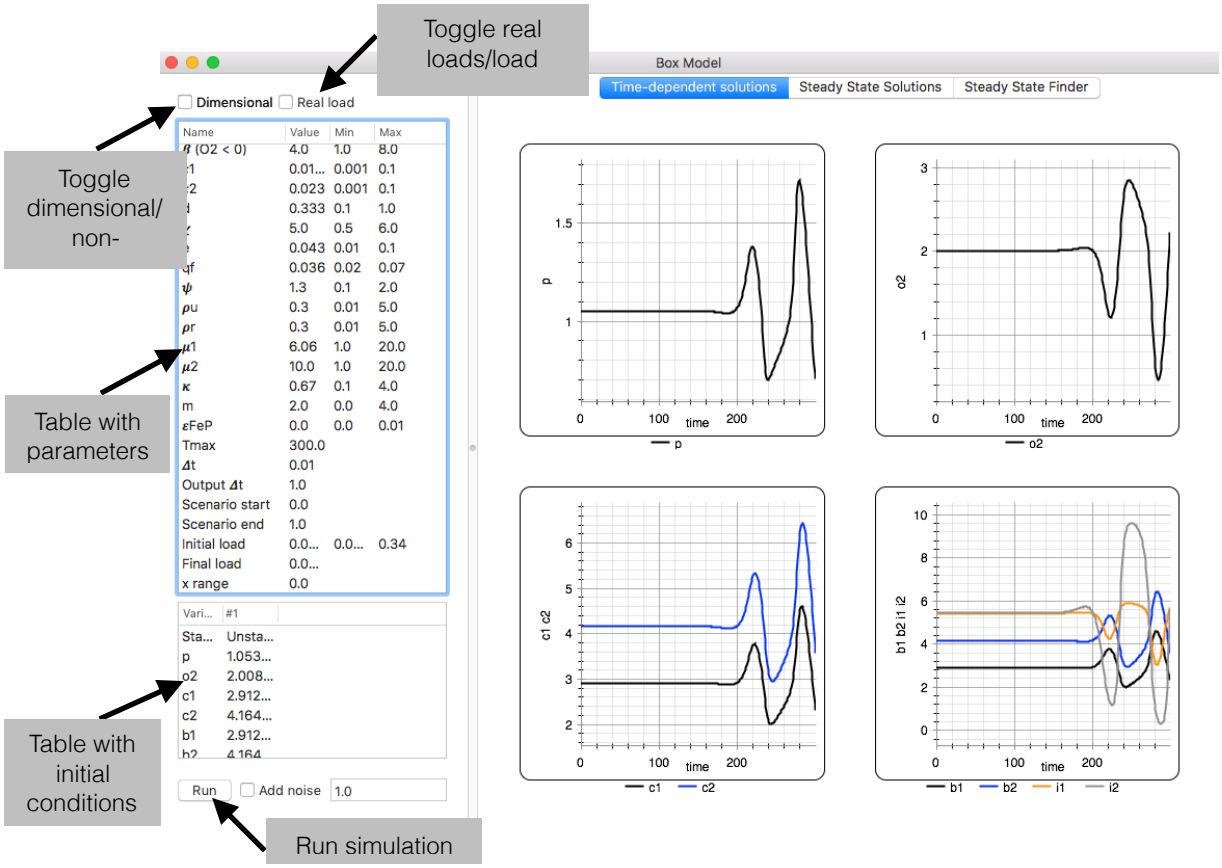

FIGURE 1: BASIC TABLES AND CONTROLS. “ADD NOISE” IS AT PRESENT NOT AVAILABLE.

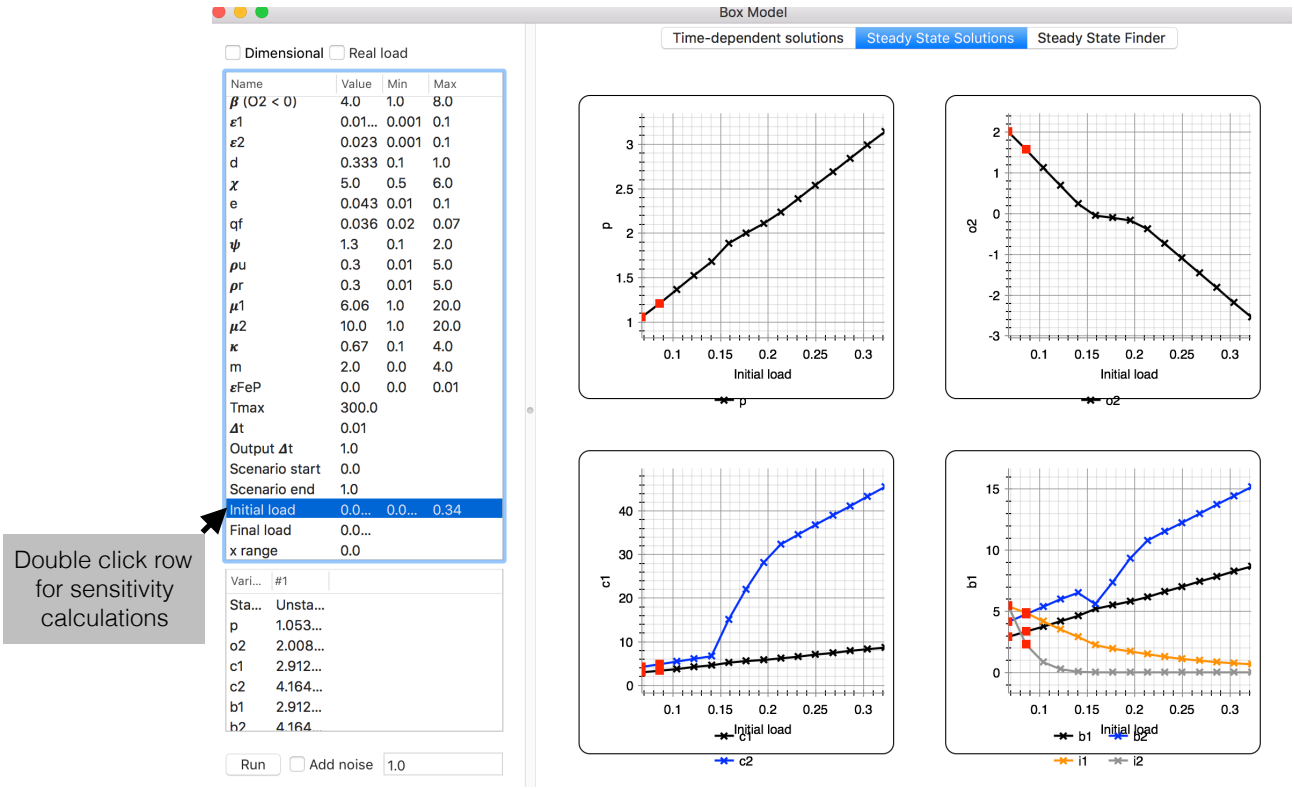

FIGURE 2: SENSITIVITY CALCULATIONS ARE PERFORMED USING THE "MIN" AND "MAX" VALUE WHEN A PARAMETER IS DOUBLE CLICKED.

The sensitivity of the steady state solution for a given parameter range can be explored by double clicking the parameter row (see Figure 2). The results are shown under the tab "Steady State Solutions". The black crosses represent stable solutions and red squares unstable solutions according to a linear stability analysis around each solution. If a parameter row is selected when running the model, these graphs will be updated as well. When dimensional parameters are used, results will be presented in dimensional units.

There are a couple of "File"-menu functions:
"**New**": Resets parameters to default settings
"**Open**": Import a previously saved parameter setting
"**Save**": Save current parameter setting as well as time series data and graphics (NB! graphics files will not be correct if not the panel been actively shown in the application). The results will be saved in a subdirectory to your "Documents" directory, i.e. "Documents/boxModel/runXX", where "XX" is a automatically updated sequential number.
"**Close**": Closes the model main window. There is at present no way of opening it again, so you will have to restart the application.
"**Print**": Prints the model window.

Under **Help** this document is available