
Browsing NSTX/Globus-M Databases and Performing EFIT Reconstructions on a PC

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Ioffe Institute, Columbia University joint work

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Expanding analysis capabilities on NSTX and GLOBUS-M

MOTIVATION

- Develop browser interface to display and analyze data from NSTX and GLOBUS-M databases on PC Windows 9x/NT.

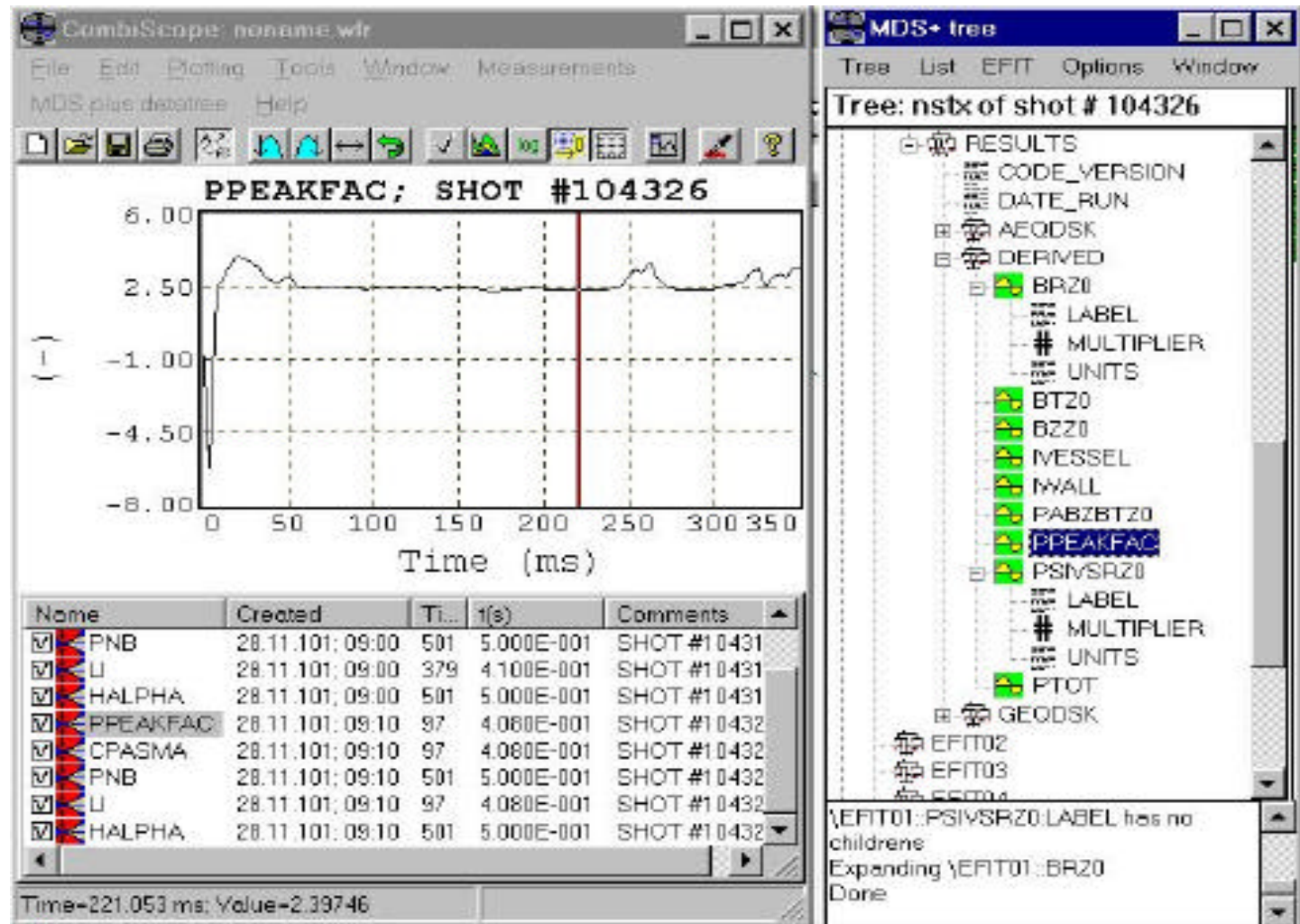
ACHIEVED GOALS

- Provides access to NSTX datatree from any PC through WEB connection
 - Makes it possible to search for nodes and tags in the NSTX datatree
 - Accumulation of data signals in files on personal computer for further analyzes
 - User friendly graphic output for presentation use
 - Full compatibility with GLOBUS-M database
- Perform EFIT reconstructions for NSTX and GLOBUS-M plasmas.
 - Easy way to design any tokamak configuration for EFIT use.
 - Reprocess equilibria improve accuracy and/or implement different models



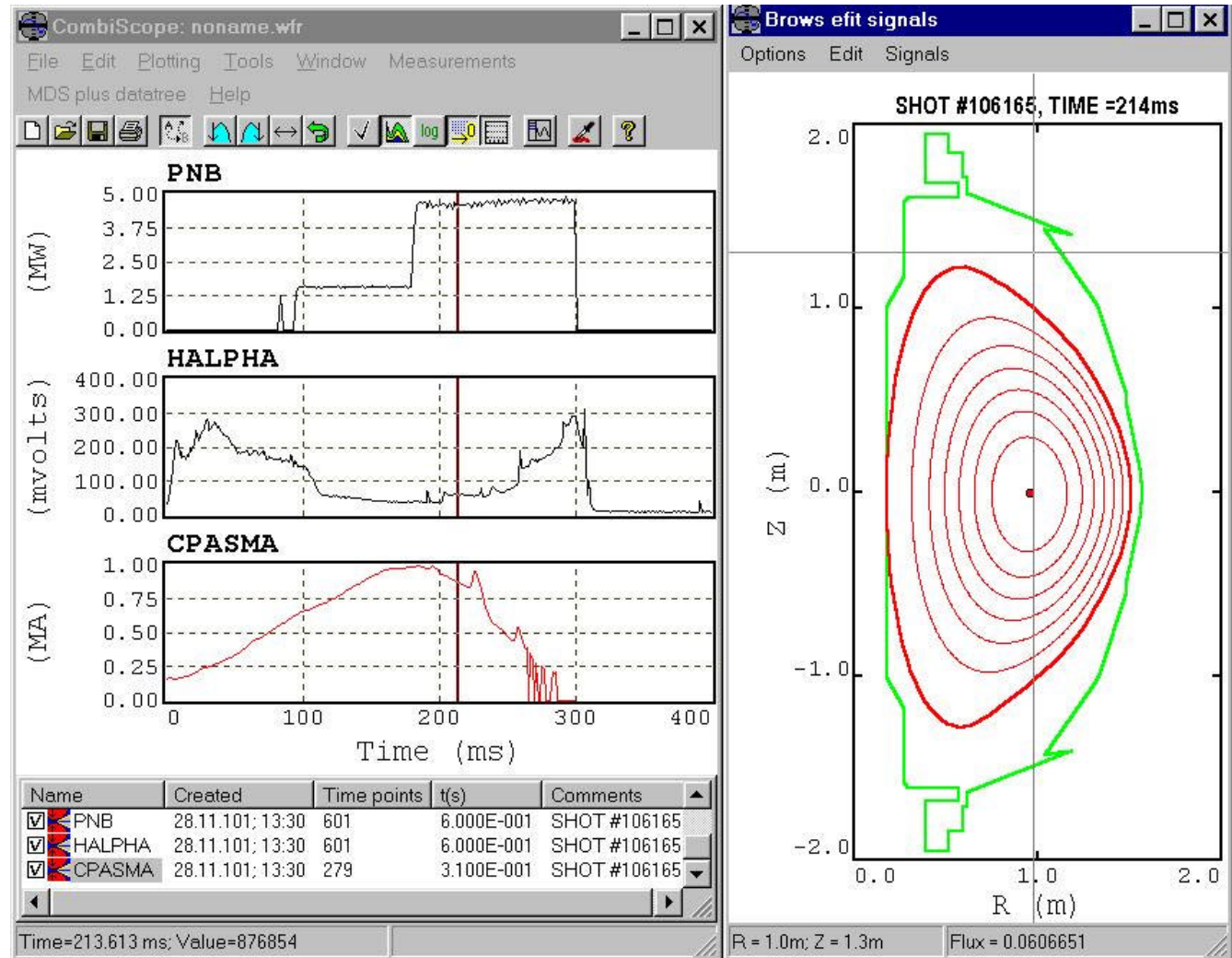
An alternative way to access experimental databases

- Browsing the NSTX database
- Search for specific signals and comments
- Import and plot data
- Perform math operations on signals



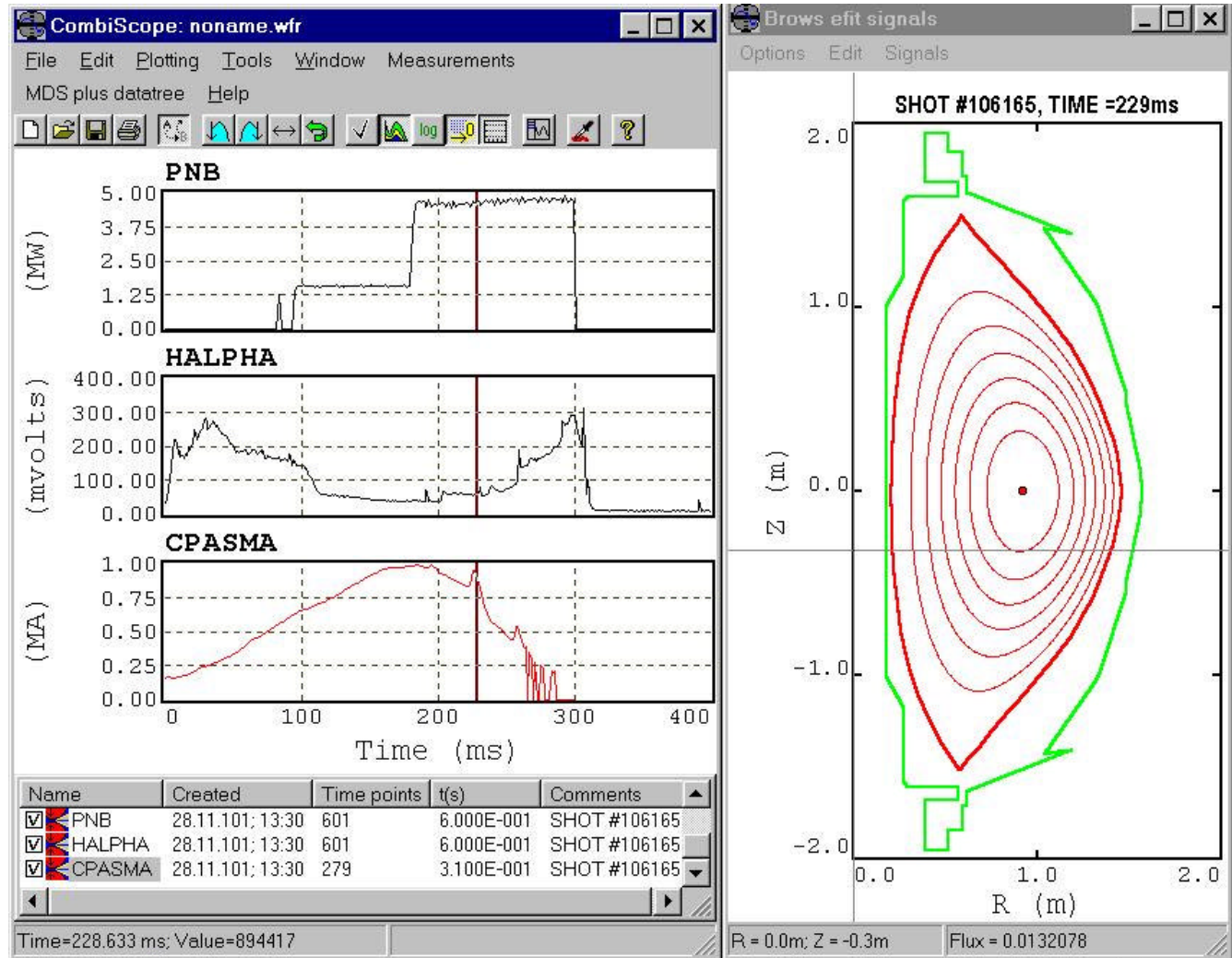
Generating EFIT animations and signals time scan

- Available to any PC user
 - Red vertical line indicates the time position of the frame
 - As mouse dragged marker scans time, flux contours are displayed
- Good visual tool for between shot plasma operation and discharge development



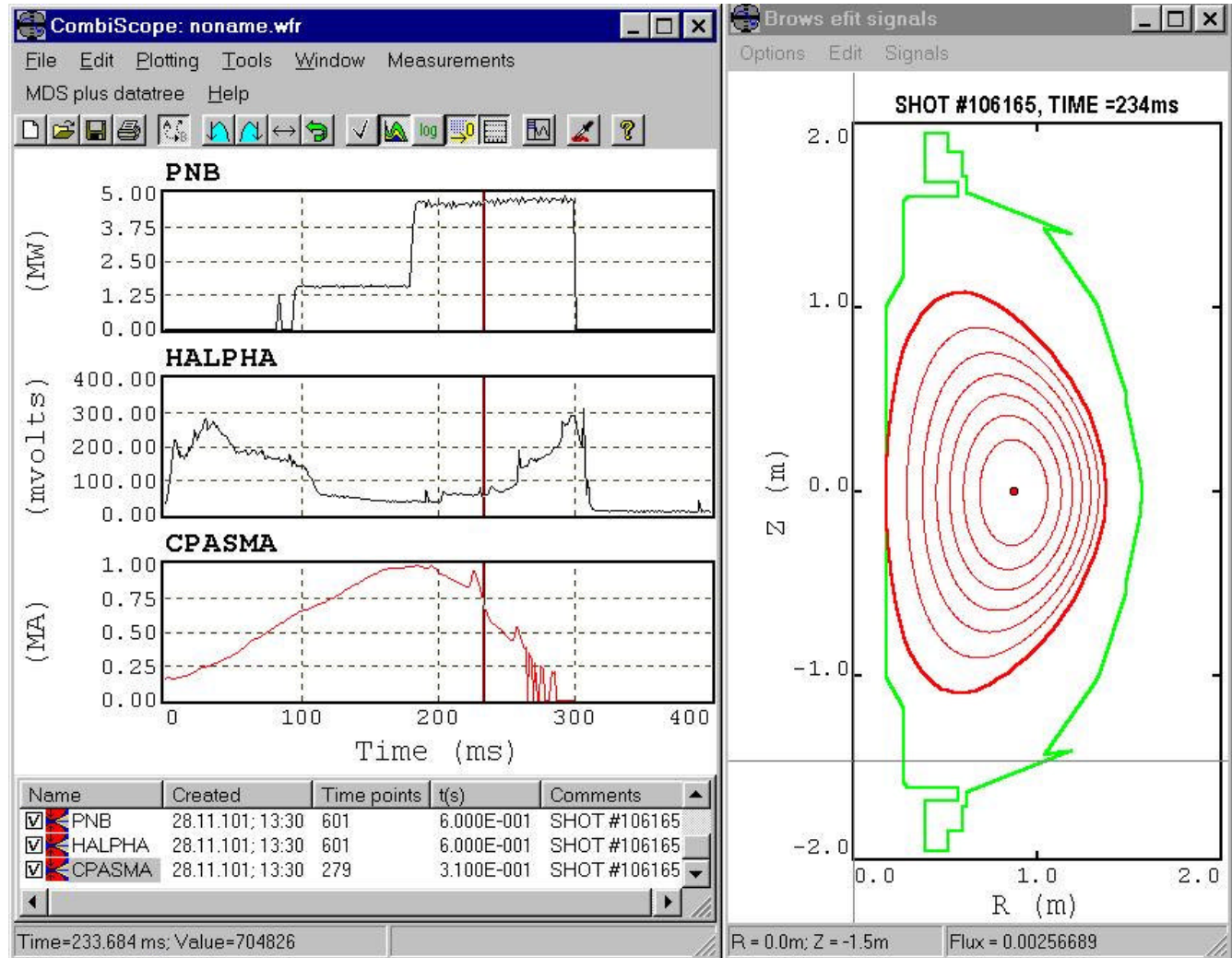
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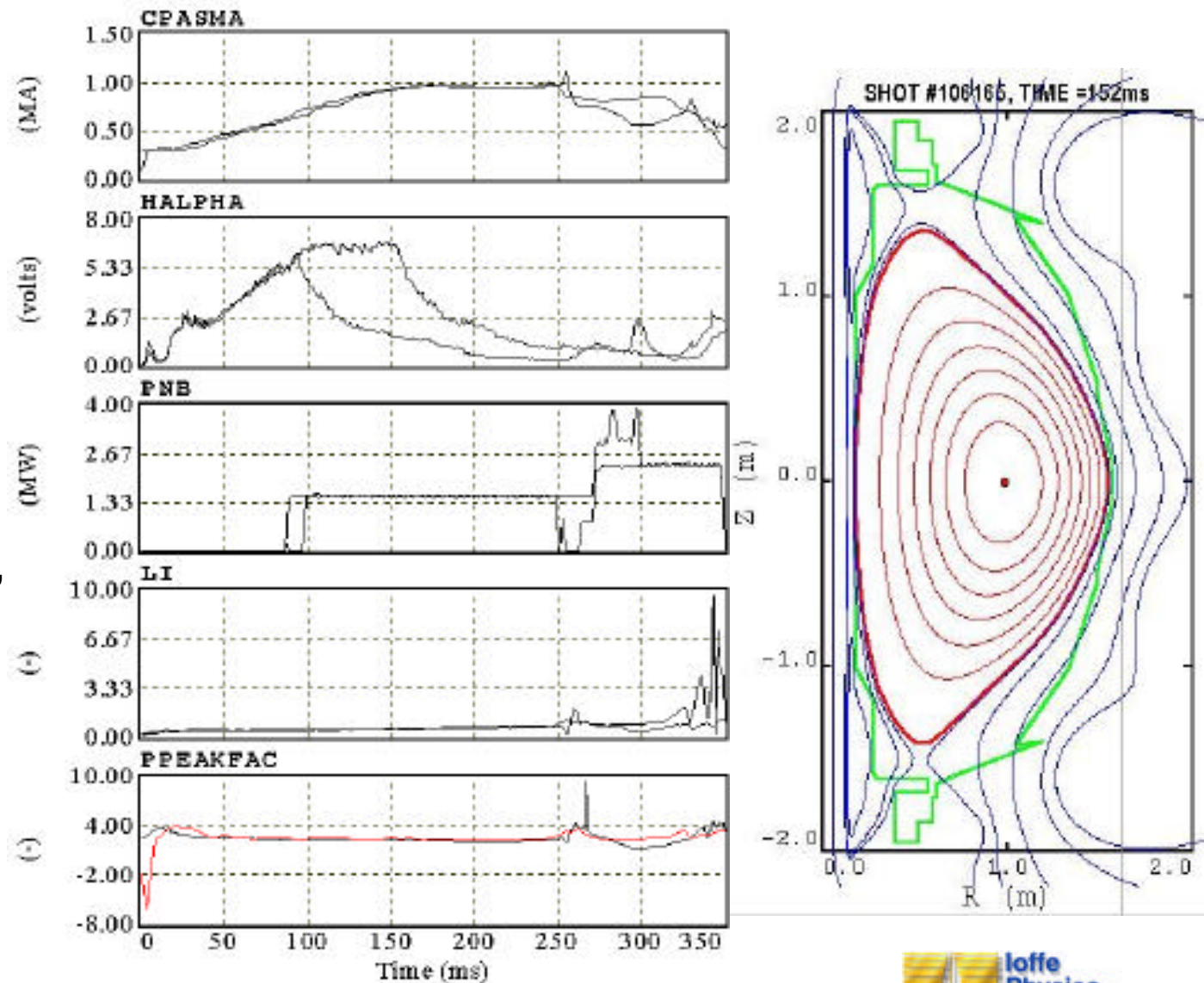
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Interface to other Windows applications

- Powerful tool for presentation preparations
- Graphic and numerical outputs can be used by Microsoft Word, Excel, PowerPoint,
- Graphic overlays, interactive signal probing



Globus-M and NSTX EFIT reconstructions on PC

- Easy pull down menus EFIT run
 - Allows tokamak design
 - Plasma modeling
- User can vary computational grid size to improve accuracy
- Graphic interface to other applications

