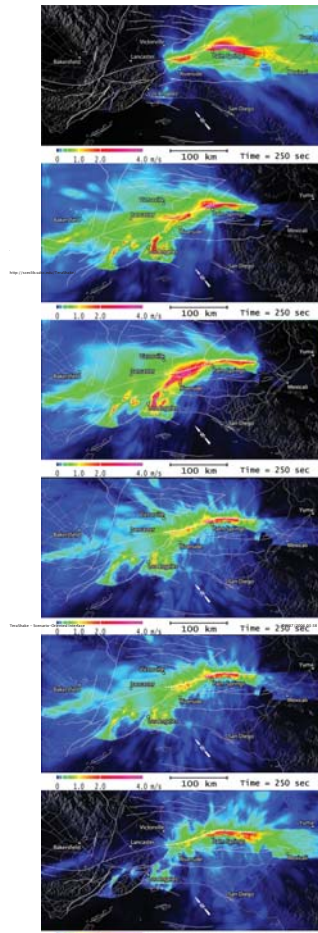


# TeraShake Source Model



Please click the image above or choose SourceModel from checkbox

- Displayable TeraShake1 Runs:
- [TS1.2](#)
  - [TS1.3](#)
  - [TS1.4](#)
- Displayable TeraShake2 Runs:
- [TS2.1.wav](#)
  - [TS2.2.wav](#)
  - [TS2.3.wav](#)

The existing SRB interface prompts the user to select one of the 6 TeraShake 1 and 2 scenarios by showing peak velocity maps. The metadata for the simulations can be viewed for a selected simulation.

# Dynamic User Interface for Cross-plot, and Filtering, Upload/Download of Time Series Data



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### TS2.1.wav

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Metadata Name	Value
simulation_id	21
mesh_xy	1500
mesh_z	200
eq_dagshake	-118.40
mesh_xy	200
rotation_angle	90.0
simulation_out_modeName	1
eq_hatched	25.81
region_surface_definition	inches
simulation_out_modeYlast	1500
simulation_out_order	24
eq_size	17.3
simulation_name	TS2.1.wav
simulation_out_modeYfirst	1
region_origin_latitude	34.5
eq_dip_km	6
simulation_level	0.04
simulation_type	KB050m
mesh_xz	3000
simulation_out_modeXlast	1500
region_origin_longitude	-117.00
simulation_out_modeXfirst	1
simulation_out_modeXskip	1
simulation_out_modeXstep	1
simulation_out_timeSamples	27728

**Synthetics display**

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The existing SRB interface allows the user to plot synthetic seismograms at sites selected from a map of the simulation area. The user may also download the digital samples for a selected site.

### Objective

We have generated a user-friendly web-interface that allows for dynamic filtering and cross-plot of time series data. The interface builds on our existing php software associated with the Storage Resource Broker (SRB) at the San Diego Supercomputer Center (SDSC), which allows the user to plot synthetic seismograms dynamically at sites selected from a map. The extension includes the possibility of dynamic low-pass filtering and cross-plotting several time histories associated with a specific site. Moreover, regular-spaced scalar data can be cross-contoured with a contour interval, labeling, etc. Also associated with the interface is software to upload and download sets of synthetic time histories and scalar contour data on a regular grid using a web browser. The interface is well suited for numerical code validation exercises, generating output such as sliprate histories, rupture time distributions, ground motion histories, and peak ground motions, as well as comparison of ensembles of ground motion scenarios.

### SC/EC Dynamic Validation Exercise Simulations

Return to website entry point

The map below shows the locations of the different earthquake scenarios. The scenarios to plot may be selected using the list below the map. Click on the fault to select the location where time histories are desired.

Return to website entry point

- test\_scenario\_1 (TEST\_SCENARIO1) [black] [size] [dip] Available locations: 151 along strike (200m spacing), 76 along dip (200m spacing)
- test\_scenario\_1 (TEST\_SCENARIO1) [red] [size] [dip] Available locations: 151 along strike (200m spacing), 76 along dip (200m spacing)
- The Problem Version 3 (TPV5\_OLSEN\_300M) [blue] [size] [dip] Available locations: 101 along strike (300m spacing), 51 along dip (300m spacing)
- The Problem Version 3 (TPV5\_OLSEN\_100M) [green] [size] [dip] Available locations: 101 along strike (300m spacing), 51 along dip (300m spacing)
- The Problem Version 3 (TPV4\_OLSEN\_100M) [cyan] [size] [dip] Available locations: 101 along strike (300m spacing), 51 along dip (300m spacing)
- The Problem Version 3 (TPV4\_OLSEN\_300M) [magenta] [size] [dip] Available locations: 101 along strike (300m spacing), 51 along dip (300m spacing)

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http://scicenter.sdsu.edu/rdm/Grid.php?sim=Dyn&mode=grid&sc=SC/EC+Dynamic+Validation+Exercise&DA

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The extension of the interface allows cross-plot of timeseries from several simulations at a selected site, with user choice of low-pass filtering and axis ranges. The facility is here illustrated using sliprate histories (right) selected from a fault map (above).

### Histogram display

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#### SC/EC Dynamic Validation Exercise simulation

**TPV5\_OLSEN\_300M**  
Location: x: 12300.00, z: 6000.00 (42,21) [Data for this time history](#)

**TPV5\_OLSEN\_100M**  
Location: x: 12300.00, z: 6000.00 (42,21) [Data for this time history](#)

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http://scicenter.sdsu.edu/rdm/PlotProc.php?sim=Dyn&mode=hist&...&sim=5y\_5max=5y\_ymin=5y\_5max=5z\_xmin=5z\_5max=5z\_ymin=5z\_5max=

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### Histogram display

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Axes:  Default  Fit to data  
Data:  Unfiltered  Filtered

**Right-hand plots:**  
Right-hand plots always show filtered data if that option is enabled above. Leave a "Modify" box unchecked below to plot data on normalized axes.

Modify Mode II axes:  
 x min  x max  y min  y max

Modify Mode III axes:  
 x min  x max  y min  y max

Modify Mode I axes:  
 x min  x max  y min  y max

### Contouring

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Return to website entry point

Select a data file to contour from the list below. Entering a single number in the contours text box will plot contours for multiples of that number. You can also enter specific contours by using a comma separated list.

**Data files:**

- TPV4\_Dunham\_FD\_300m
- TPV5\_OLSEN\_100m
- testcontour
- TPV5\_OLSEN\_300m
- TPV4\_OLSEN\_300m
- TPV4\_OLSEN\_100m
- TPV4\_Dunham\_BI\_300m
- TPV5\_Dunham\_FD\_300m
- TPV4\_DalguerDay\_DFM\_100m
- TPV4\_DalguerDay\_DFM\_300m
- TPV4\_LuisDalguer\_DEM\_300m
- TPV5\_DalguerDay\_DFM\_100m
- TPV5\_DalguerDay\_DFM\_300m
- TPV5\_DalguerDay\_DFM\_50m
- TPV5\_LuisDalguer\_DEM\_300m
- TPV5\_Ampuero\_SEM\_100m
- TPV4\_Ampuero\_SEM\_100m
- testtest

**Color for contour lines:**

- red
- blue
- green
- black
- red
- black
- blue
- yellow
- red
- blue
- green
- black

Contours to display:

Plot title:

Contour labeling:

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Contour data, such as rupture times, can be plotted for a single simulation, or cross-plotted for two or more selected data sets from different simulations for comparison and validation.

### File uploads

Return to website entry point

#### Create new simulation:

Folder name to create for simulation:

Name of simulation:

Label for dataserie 'x':  Made I

Label for dataserie 'y':  Made II

Label for dataserie 'z':  Made I

Width (in pixels) of usable portion of map:

Height (in pixels) of usable portion of map:

Copy map from another simulation or upload new map:  Copy  Upload

**If copying a pre-existing map:**  
Choose simulation from which to copy:  SC/EC Dynamic Validation Exercise

**If uploading new map:**  
Choose local image file for map (.gif):  no file selected

#### Add scenario to existing simulation:

Simulation that scenario belongs to:  SC/EC Dynamic Validation Exercise

Choose local file for dataserie 'x':  no file selected

Choose local file for dataserie 'y':  no file selected

Choose local file for dataserie 'z':  no file selected

Folder name for scenario:

Description of scenario:

Width (in cells) of scenario data:

Height (in cells) of scenario data:

Physical spacing of samples along strike:

Physical spacing of samples along dip:

Number of samples for each data set:

Sample interval in seconds:

Time value for first sample:

#### Upload new contour data:

Name for contour dataset:

Number of x nodes:

Number of z nodes:

Physical spacing of x nodes:

Physical spacing of z nodes:

Local data file:  no file selected

scientific questions about this info should be directed to [kbolsen@sciences.sdsu.edu](mailto:kbolsen@sciences.sdsu.edu) problems with execution or display should be directed to [scicenter@sciences.sdsu.edu](mailto:scicenter@sciences.sdsu.edu)

The user interface allows for upload of time series data, to either an existing or new group of simulations, as well as upload of contour data sets.