

## Custom Propagation Run

The Custom Propagation Run menu item allows the user to add custom seismic Propagation Database files to ComMIT using the MOST model, defining the seismic parameters of an earthquake using the standard for fault plane description as described in the MOST manual (e.g., specifying epicenter, length, width, depth, slip, dip rake and strike). Selecting this item opens a new window for the creation of this new propagation run:

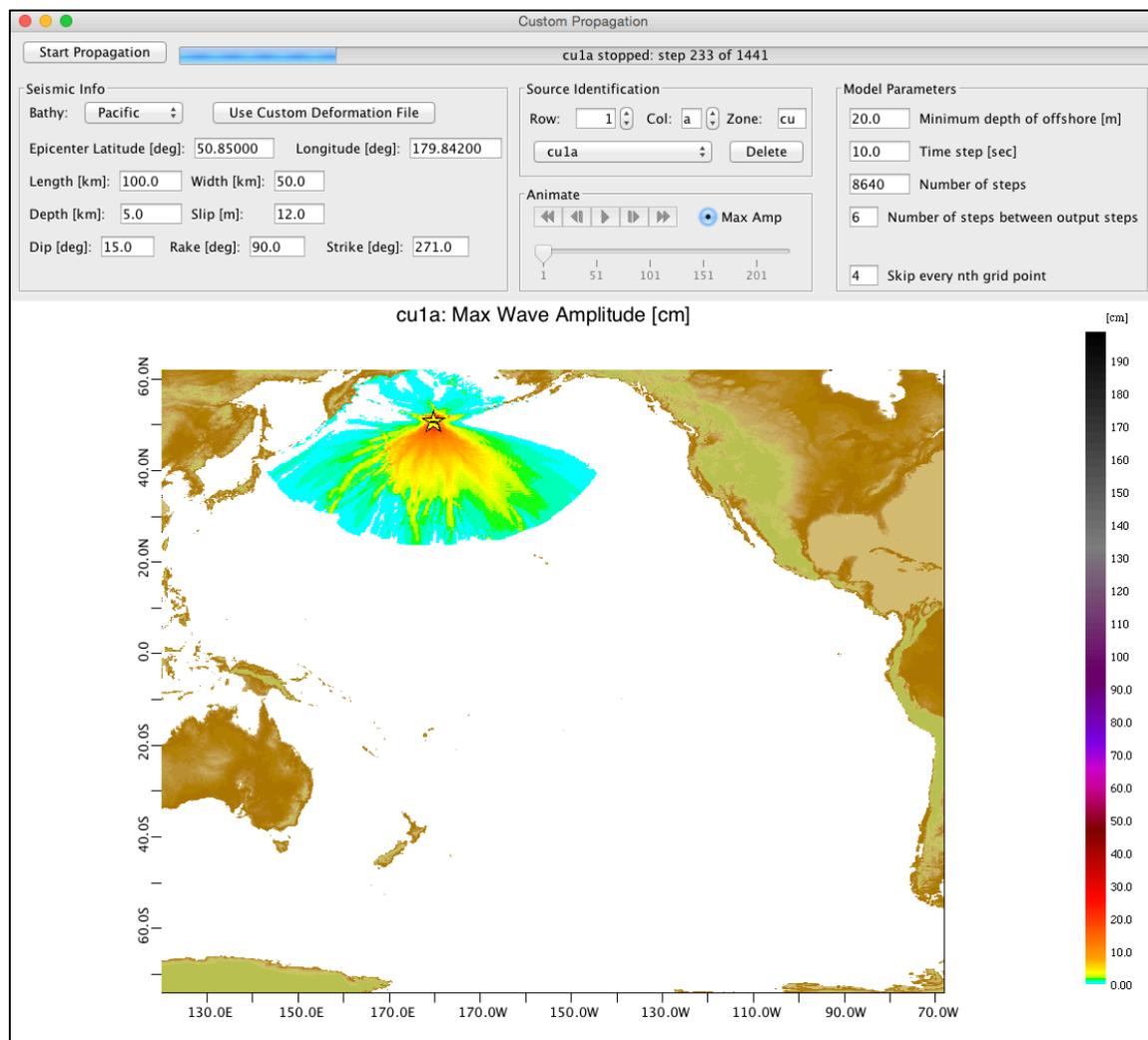


Figure 1: The Custom Propagation window showing maximum wave amplitude as the model runs.

This interface is very similar to the main ComMIT window, in that the propagation model is run with a “Start Propagation” button at the top, with a progress bar showing model progress, and output is animated with the animate buttons or wave maximum amplitude is shown. Full propagation runs can take several hours to run as the grid sizes are considerable. The parameter selection at the top allows the user to set Seismic Info, Source Identification information, or Model Parameters.

## Seismic Info

The seismic information is entered at the top left by selecting a bathymetry file (defaults to a Pacific Ocean basin bathymetry), and entering the basic fault plane parameters. The user may double-click on the map to set the epicenter latitude and longitude, as indicated by the yellow star with fault plane outline. When the user changes parameters, the fault plane outline adjusts according to the geometry requested:

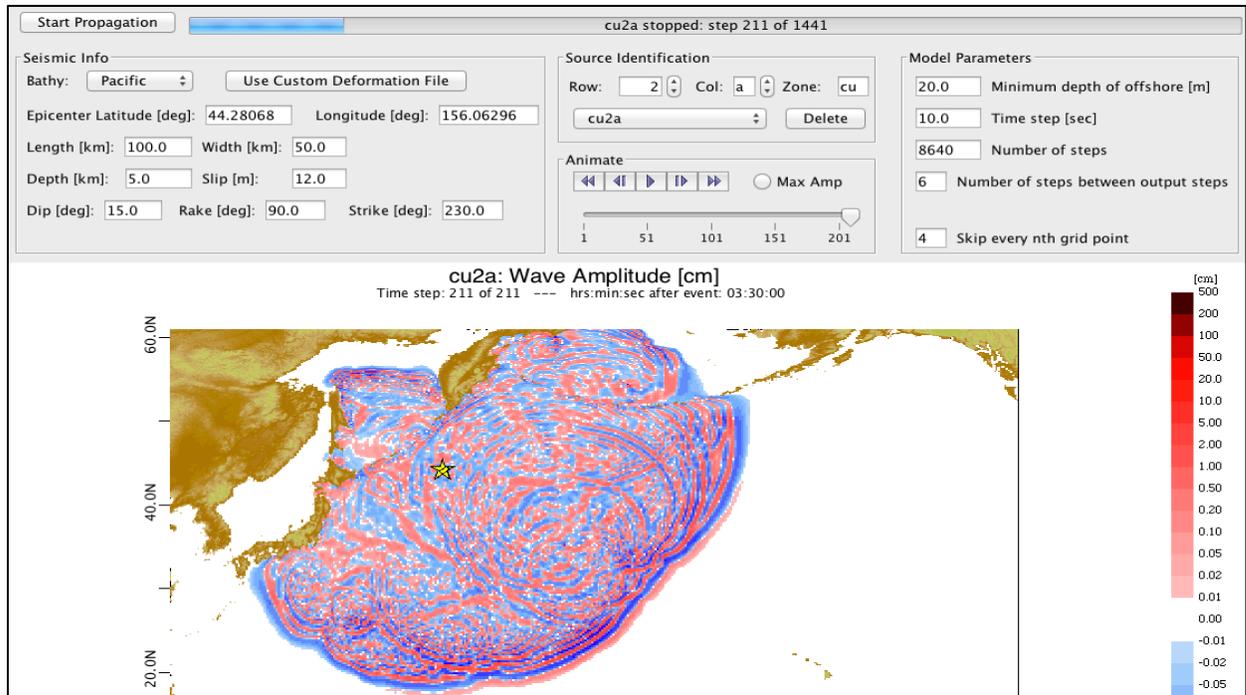


Figure 2: Configuring a custom Propagation run with a source name of cu2a and 12 meter slip.

## Source Identification

The source is given an identification to fit the NOAA Propagation Database naming convention, using the “cu” identifier to mark it as “custom”. The row number and column letter can be incremented, and many custom runs can be added and selected in the drop-down selector marked “cu2a” in Figure 2.

## Animation

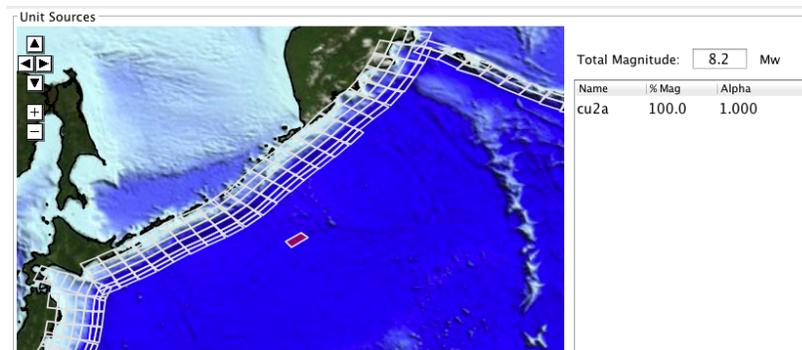
The animation buttons work just as in the main “inundation” window in ComMIT, allowing the user to “play” the animation by clicking the right-facing triangle button, to single-step through the animation, or, by using the slider bar below the animation buttons, to select a given time step. Selecting the “Max Amp” button disables the animation and instead shows the wave maximum amplitude over time as in Figure 1.

### Model Parameters

The model parameters are exactly analogous to the main ComMIT inundation model parameters, with the exception that there are no inundation algorithm settings. See the **Error! Reference source not found.** section for a description.

### Using Custom Sources

The resulting sources are automatically added to the Propagation Database in the main ComMIT window, under the Model Setup tab. Notice in this case that the user has chosen an epicenter well offshore of the normal Unit Sources. Using this source is as easy as clicking on it, choosing a Model Run location (e.g. “crescent” for Crescent City), and clicking “Start model”.



In this example, the inundation due to a custom source “cu2a” offshore of the Kuril island chain is seen in the maximum amplitude plot for Crescent City: