

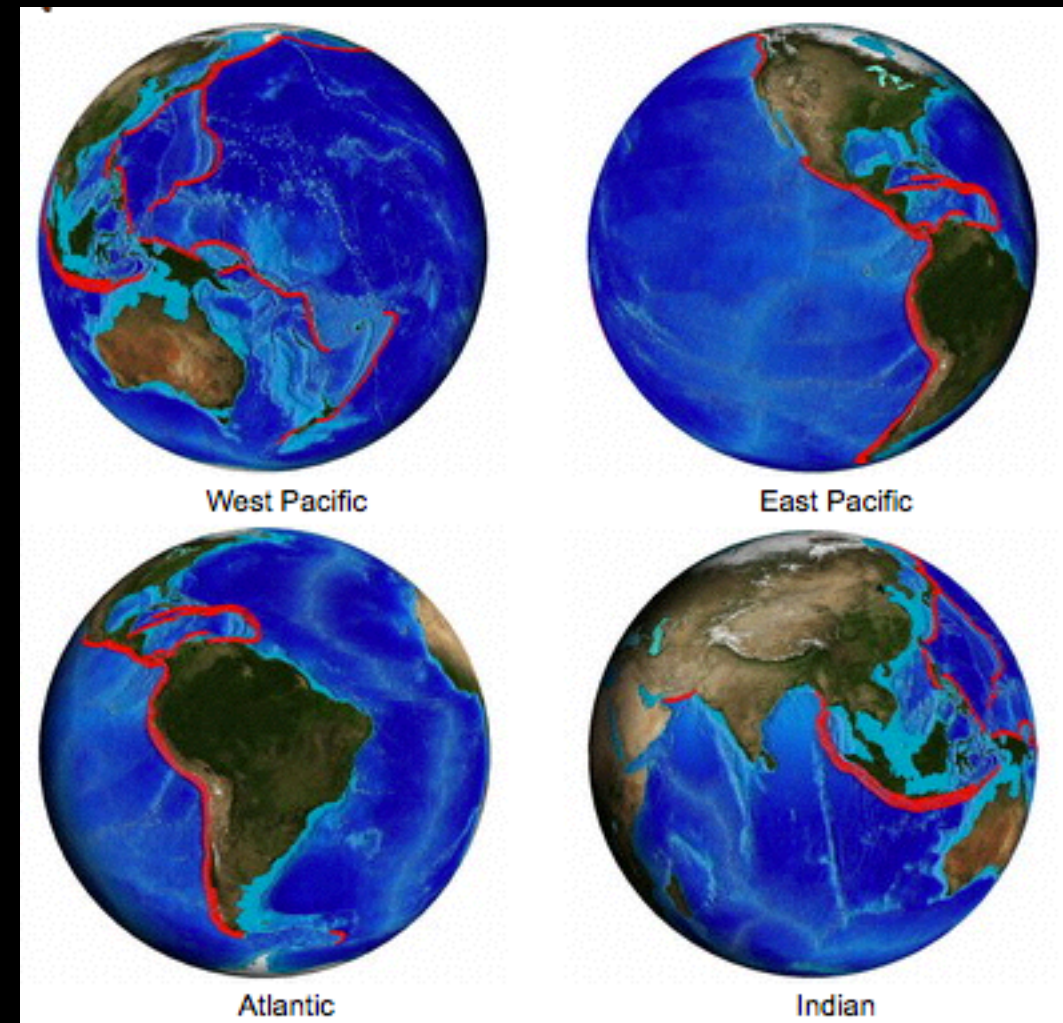
The ComMIT System: Development and Use of a Robust Modeling Tool

About ComMIT

- An easy-to-use tool for tsunami inundation modeling with the NOAA's operational model
- ICG/IOTWS recommended tool for developing inundation maps for coastal communities after the 2004 Indian Ocean tsunami
- Based on accepted standards and benchmarks
- Uses NOAA's operational database of propagation model runs

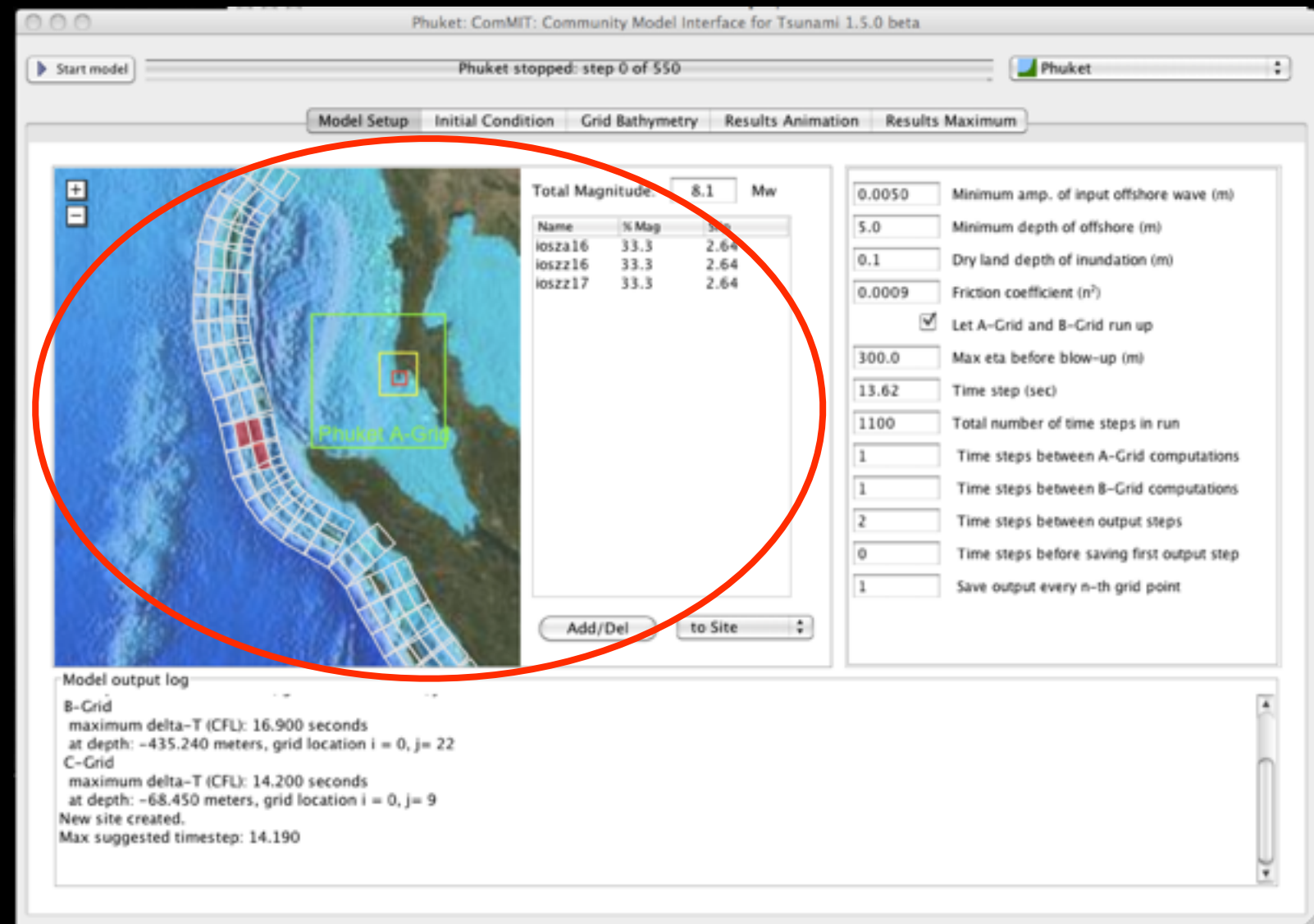
NOAA's Propagation DB

- Database of pre-run propagation models
- Fault planes (red) of 100km x 50km
- Global subduction zone coverage
- Available for NOAA operational forecast and ComMIT use



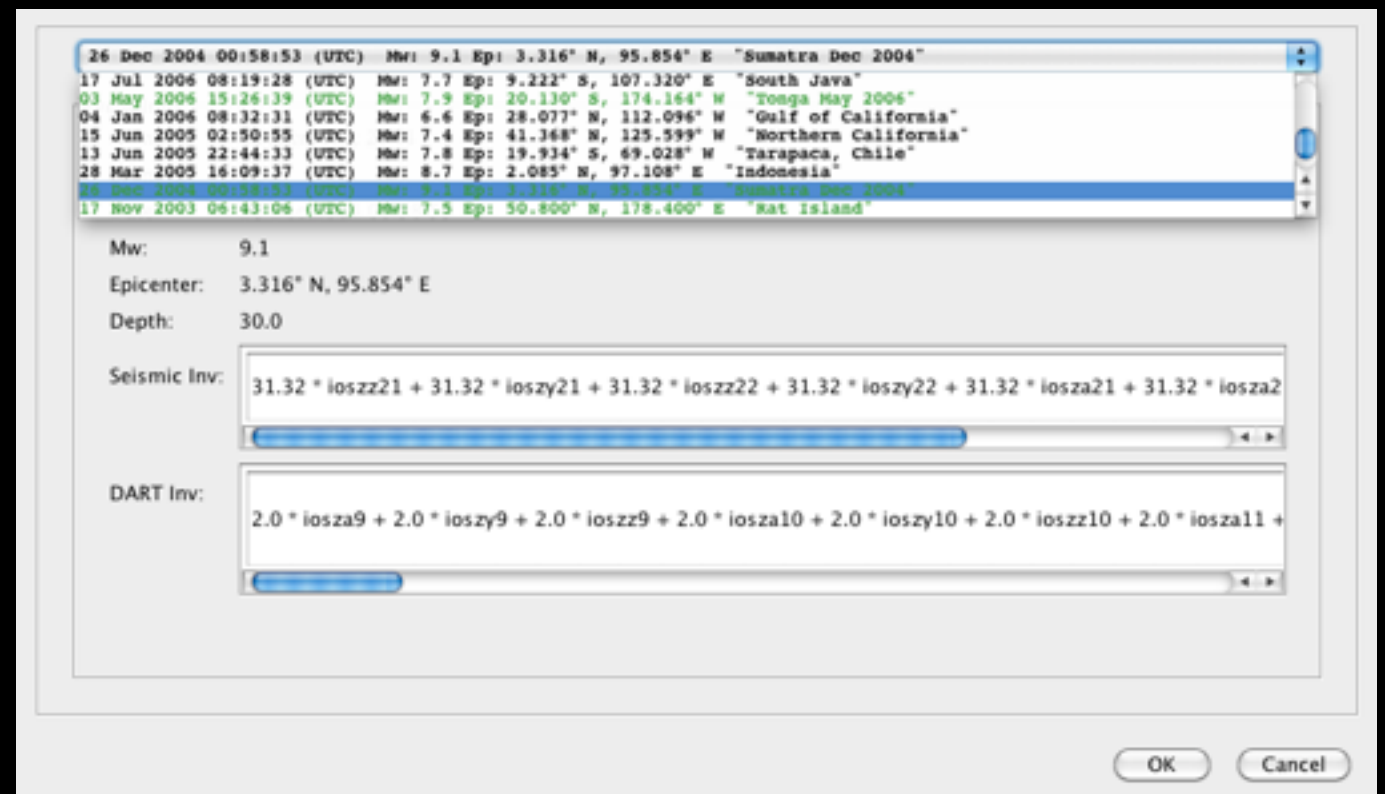
ComMIT interface to Propagation Database

Set up source scenarios
using NOAA's tsunami
propagation database



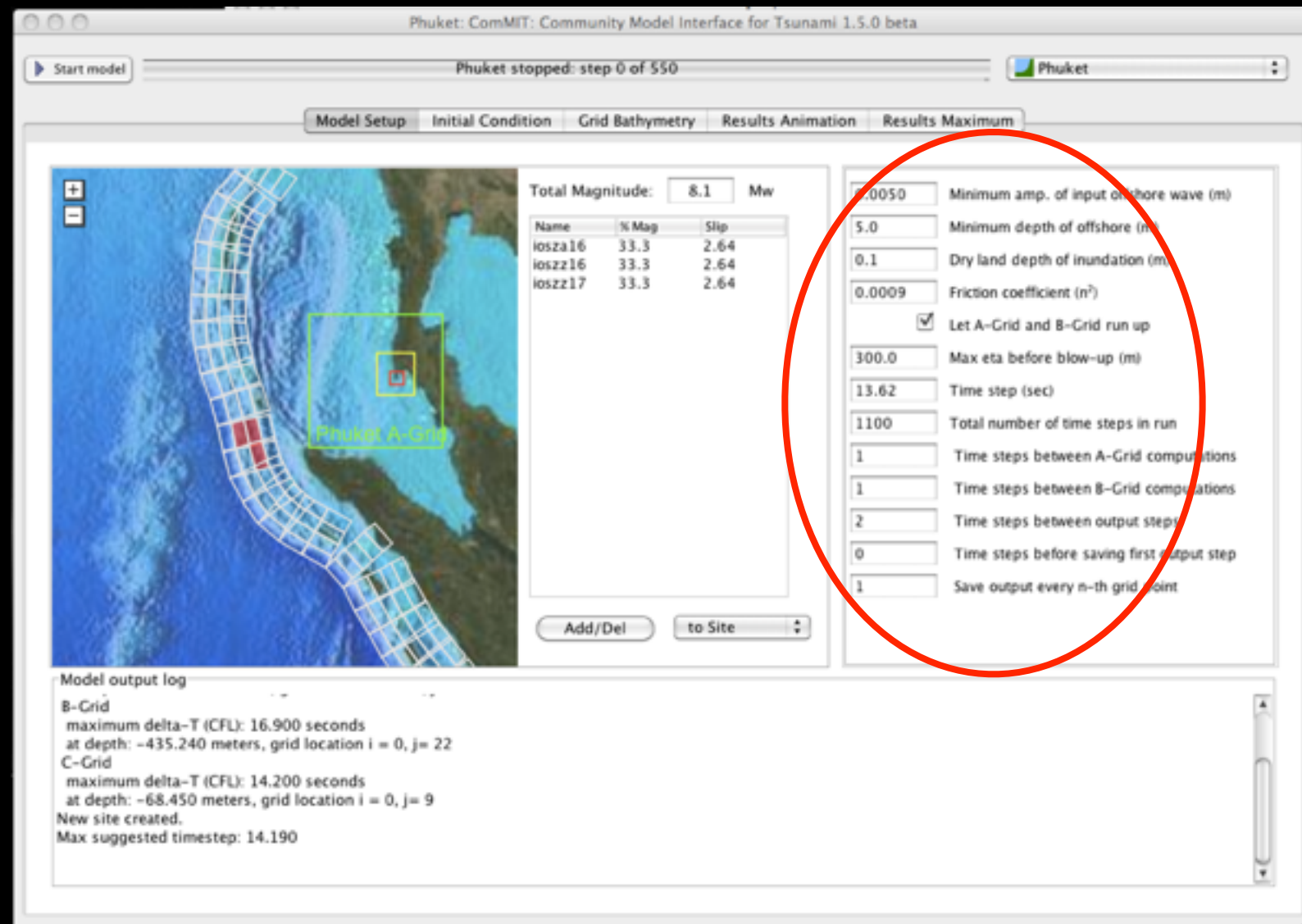
ComMIT propagation file uses

- Run model based on multiple sources for hazard assessment.
- Run model based on specific source from DART inversion for a specific event.



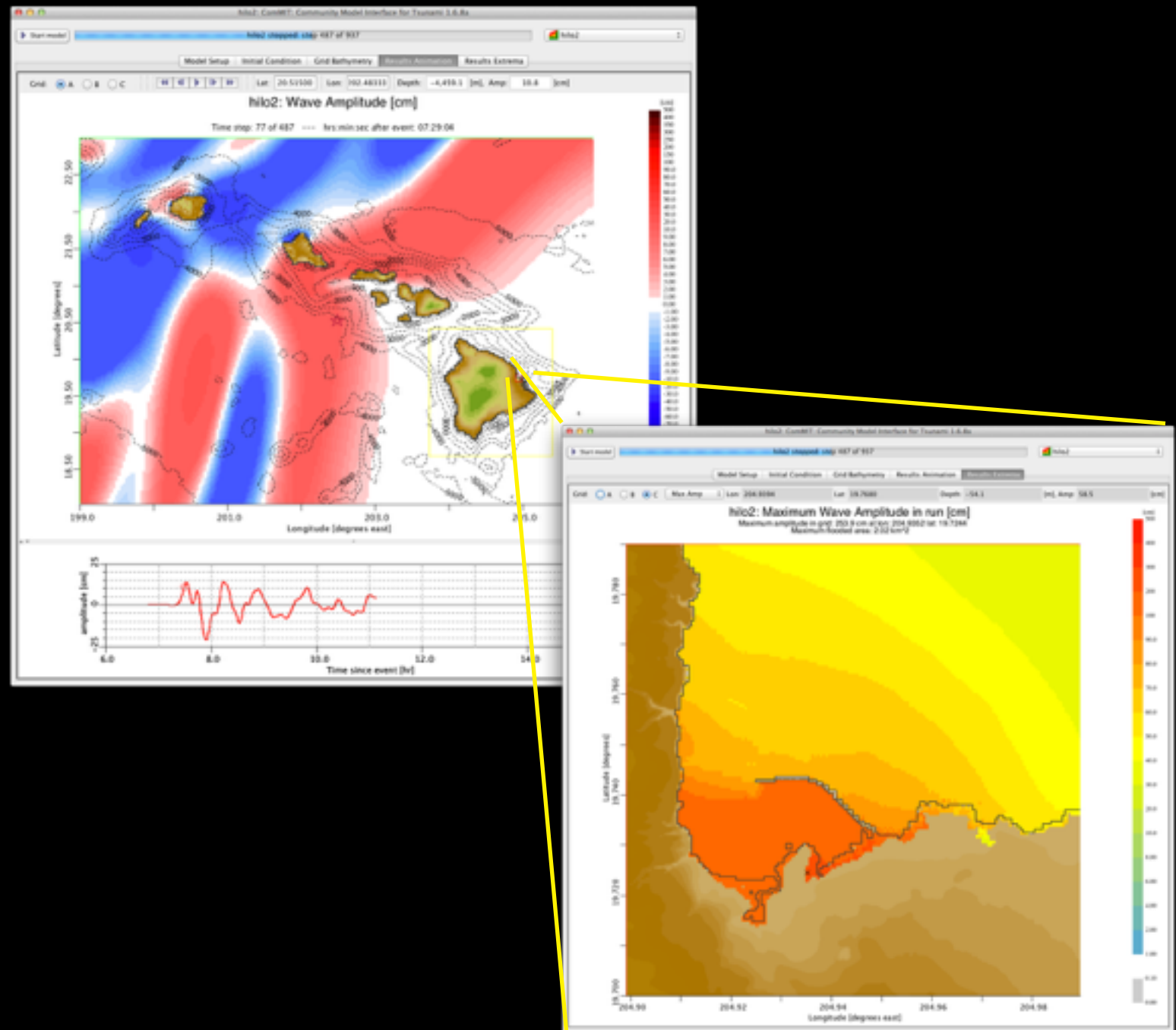
Controlling model parameters

- Allows user to control all parameters of the MOST model
- Guidance suggested for parameters based on input grid



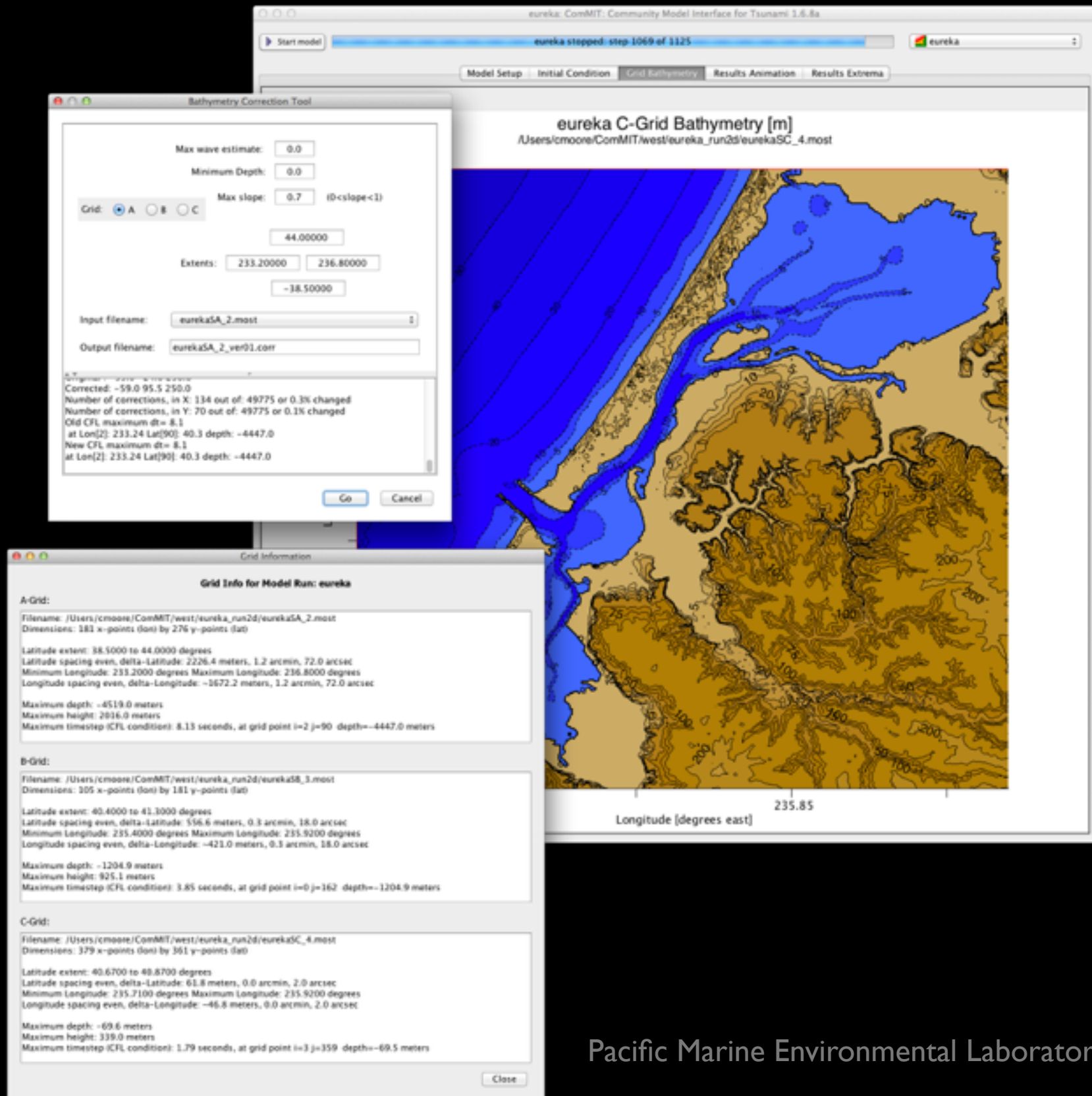
ComMIT output imagery

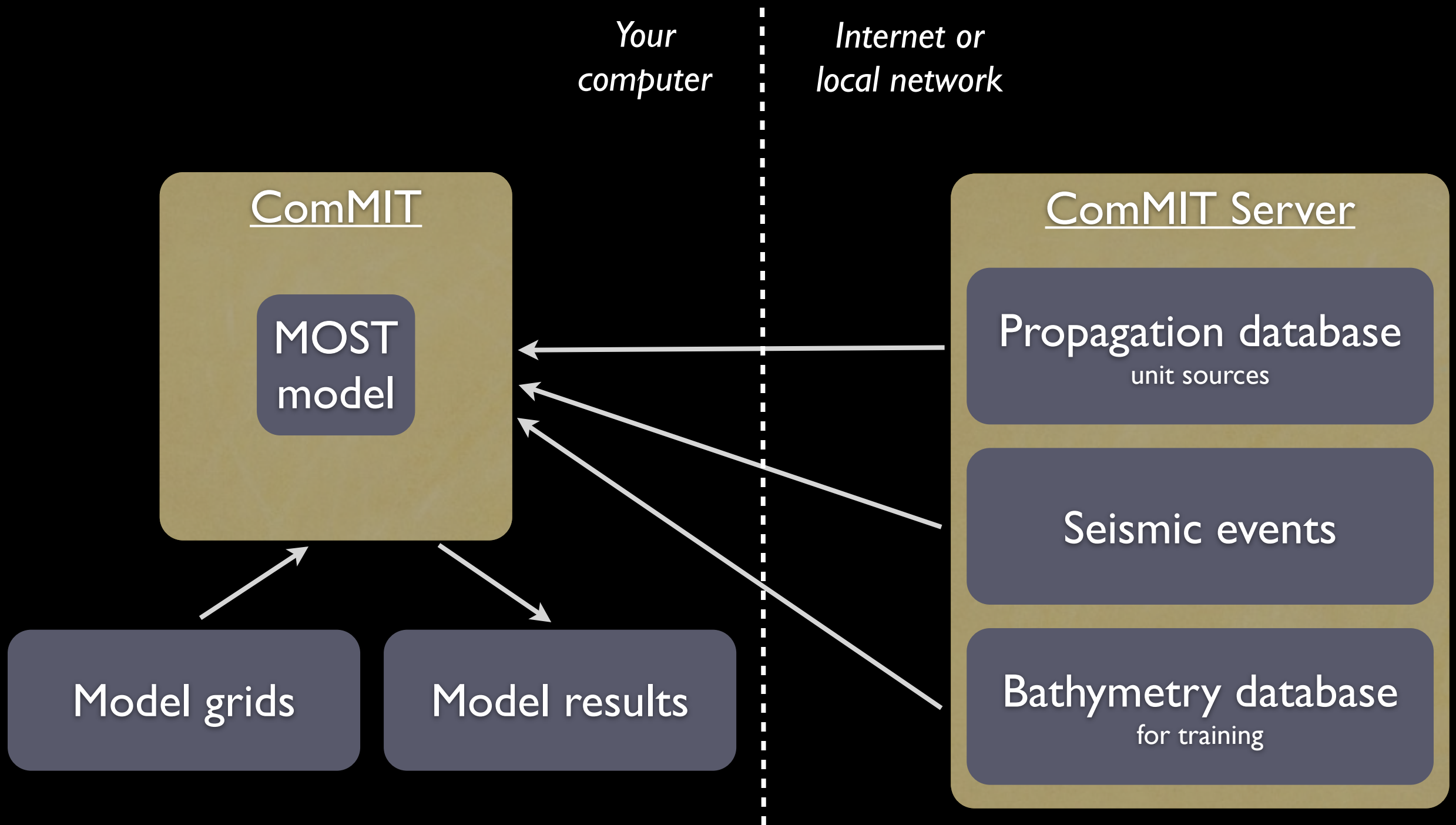
- Nested grids provide high-resolution results
- Display model results timeseries and animations
- Displays heights, currents, maxima, and statistics



ComMIT bathymetry tools

- Generate, view and modify bathymetric model grids
- Low-res bathymetry provided for training
- Grid statistics shown





Bathymetry Data

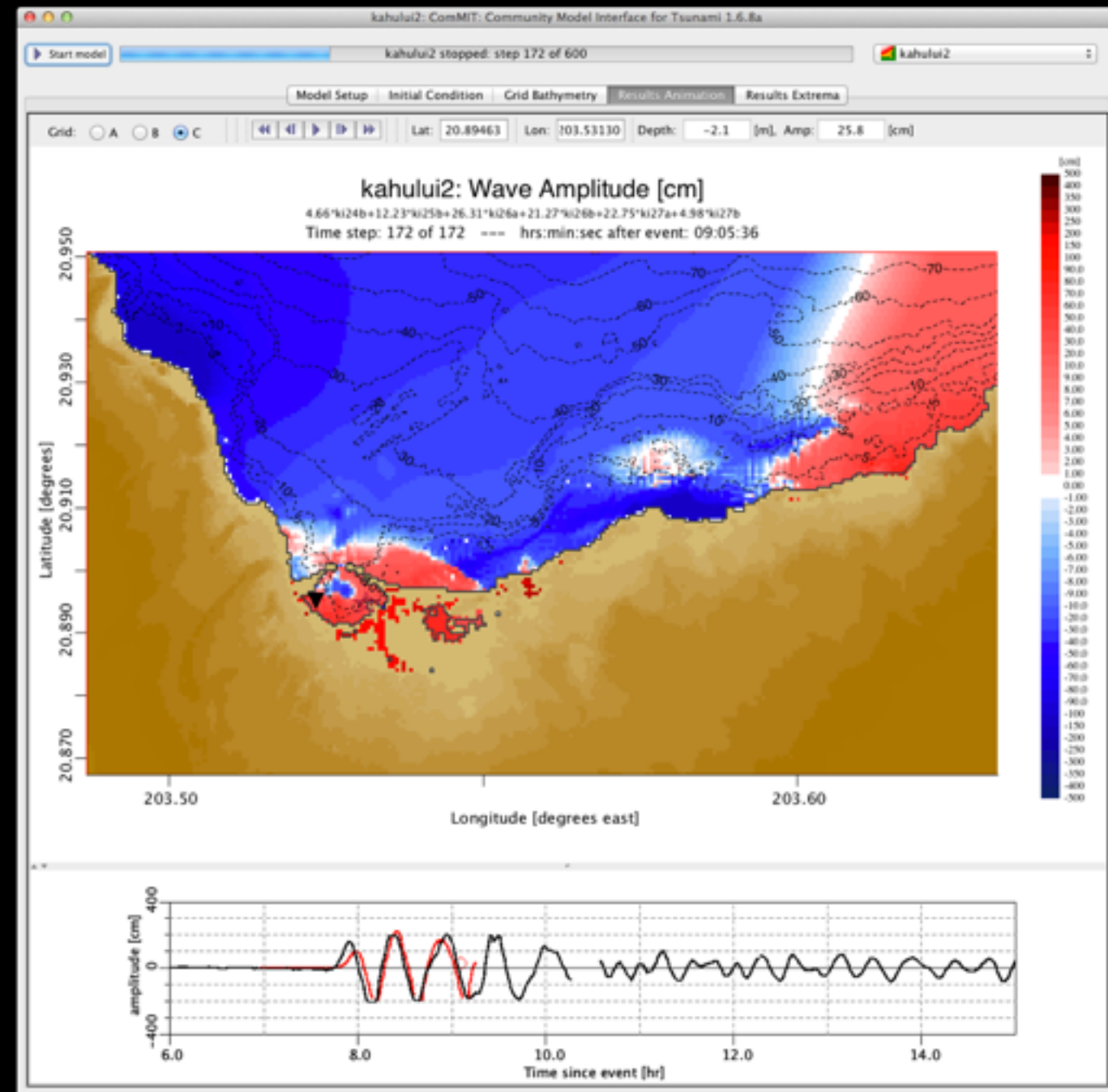
- Training will include opportunities to format participant's bathymetry for ComMIT use
- Low-resolution test bathymetry is available with near-global coverage.
- It is *not* necessary to make the data public - all bathymetry data in ComMIT stays secure

Hazard Assessments

- Training to gain expertise in hazard assessment and inundation mapping
- Group exercises with packaged grids allows hands-on learning
- Convenient data sharing allow for immediate analysis of group results
- Participants will install and run ComMIT themselves

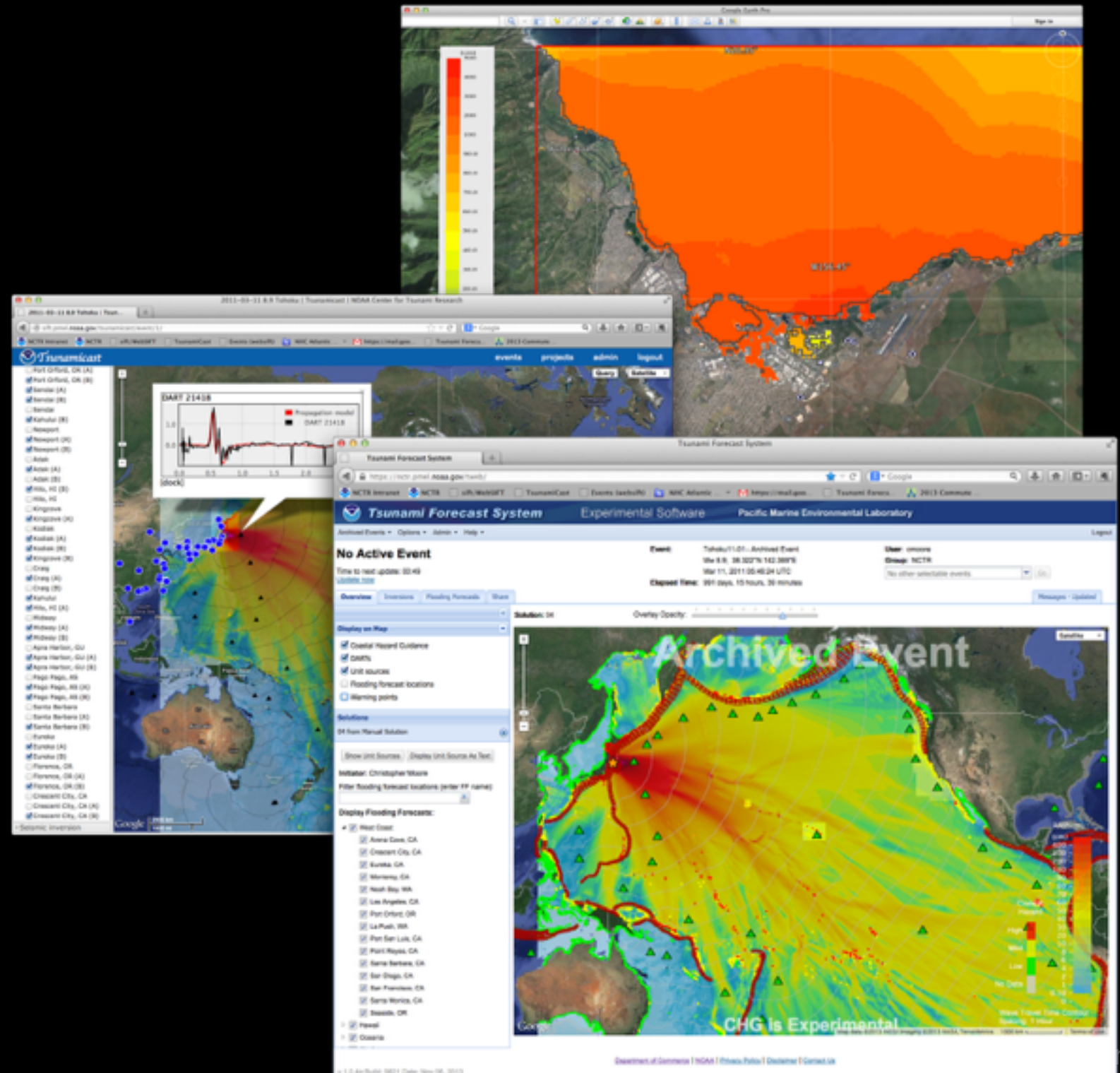
Tsunami events

- Propagation database inversions are suggested for all major tsunami events
- Tide gauge data available worldwide through web service
- Gauge data harmonically detided and comparison shown:



Sharing Results

- Google Earth
- Tweb - NOAA's new on-line forecast tool
- Simple export for emailing



Using ComMIT

Download latest version of ComMIT from

<http://nctr.pmel.noaa.gov/ComMIT/>

username: nctr

password: wave

Right-click on "Windows" link

"Save Target As"

Save to the Desktop

(end)

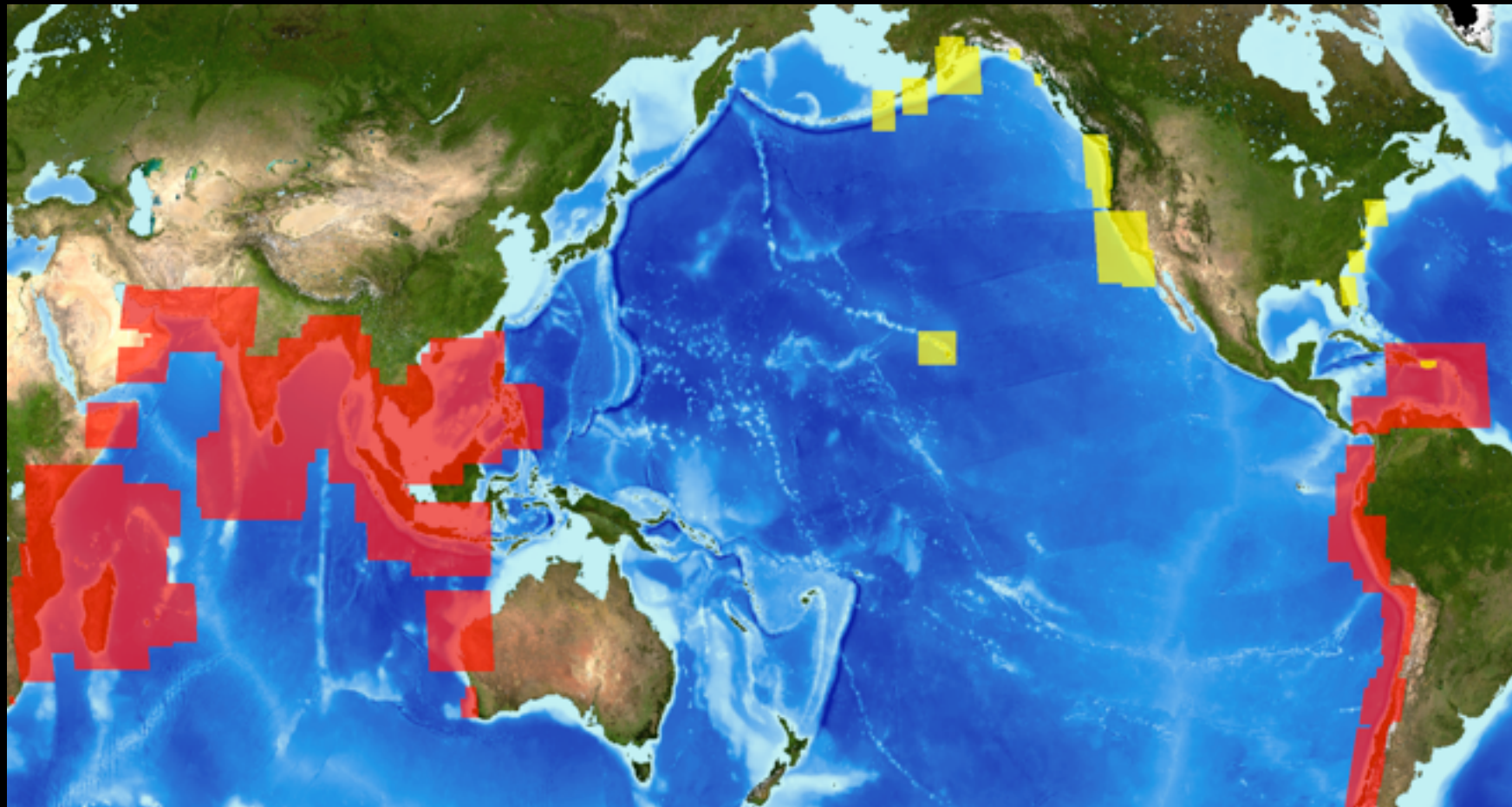
Let's Try ComMIT!

- We will now disconnect from the internet and connect to a “private” ComMIT training network
 - ➡ This local network (not connected to the Internet) gives us fast access to the databases ComMIT needs. After the training, you can use the same databases over the Internet.
- Use a Web browser to visit this address:
`http://192.168.11.12:8080/ComMIT/`
- Download the ComMIT version for your operating system. If Java is not installed on your computer, download and install it from:
`http://192.168.11.12:8080/ComMIT/download`

ComMIT design

- **Connectivity:** Modular Internet enabled design
- **Local Data Availability:** Secure Bathymetry Repository (SBR) - proprietary bathymetry grids reside in the SBR
- **Source Definitions:** Propagation Database Connection - Allows for initial condition files to be served locally or remotely
- **Research Capabilities:** Output and Analysis Modules
 - (a) Output files use netCDF conventions
 - i. Metadata describes entire run and includes enough info to re-generate the model run
 - ii. Output files adhere to the Climate and Forecast metadata convention (CF-1.2)
 - (b) Output results are displayed graphically for the modeler with the option of sharing the output file and/or graphs with other users
 - (c) OpenDAP server to share output file over the internet

Creating a global coastal inundation



Combining NOAA's **inundation forecast** models with products of ComMIT **training workshops**