

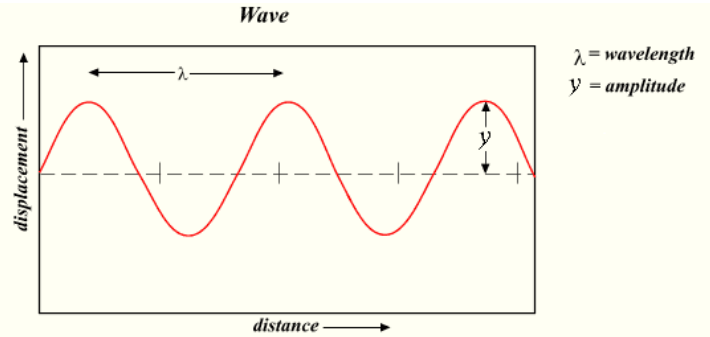
## Exploring a Current Earthquake

1. You will explore a recent earthquake in the Rapid Earthquake Viewer and complete the data table included in this worksheet.

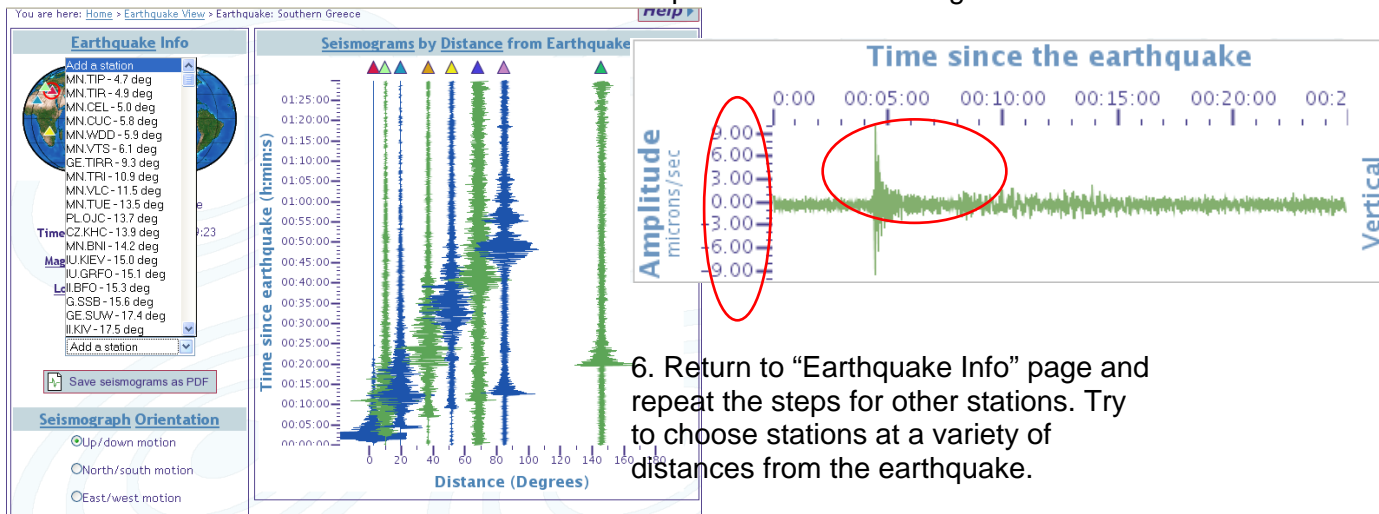
2. Go to the Rapid Earthquake Viewer (<http://rev.seis.sc.edu>) and click on the earthquake your class is studying from the list of recent earthquakes.

3. A list of stations is provided at the bottom of the page. To add more stations to the page, use the drop-down menu on the left side of the page. (See image below.) After adding the station, scroll down to the list of stations at the bottom of the page and click on the station code to access more detailed information for this station. On occasion the seismogram won't appear; click on the Save seismogram as PDF to view it.

The **amplitude** of the seismic wave is measured from the center of the seismogram to the crest of the wave. Note the unit of measure on the y axis (microns/sec, mm/sec or nm/sec).



5. In the seismogram below, the maximum amplitude of ground motion is 9.5 microns/sec. Use the maximum amplitude on the seismogram.



6. Return to "Earthquake Info" page and repeat the steps for other stations. Try to choose stations at a variety of distances from the earthquake.

4. Select 4-5 stations at a variety of distances. Explore the data for each station, recording the station's distance from the earthquake, the time since the earthquake when ground motion was detected at the station, time since earthquake when maximum amplitude was recorded, and the maximum amplitude depicted in the seismograms. Plot each location's lat/long on your map

Earthquake Region \_\_\_\_\_  
 Date / Time of earthquake \_\_\_\_\_  
 Location (latitude, longitude) \_\_\_\_\_

Magnitude \_\_\_\_\_  
 Depth \_\_\_\_\_

Select 4-5 stations at a variety of distances. Explore the data for each station, recording the station's distance from the earthquake, the time since the earthquake when ground motion was detected at the station, time since earthquake when maximum amplitude was recorded, and the maximum amplitude depicted in the seismograms. Plot each location's lat/long on your map along with the maximum amplitude in microns/sec.

Station Name and Location	Station distance to earthquake	Time since earthquake when ground motion was detected	Time since earthquake when maximum amplitude was recorded	Amplitude (units)	Amplitude (in microns/sec, convert if necessary)

Hint:

- 1000 nanometers/sec = 1 micron/sec
- 0.1 millimeters/sec = 100 microns/sec
- 1000 microns/sec = 1 millimeter/sec

For example, if the amplitude is 700 nanometers/sec, you must convert it to microns/sec:

$$700nm / sec \times \frac{1micron / sec}{1000nm / sec} = 0.7microns / sec$$