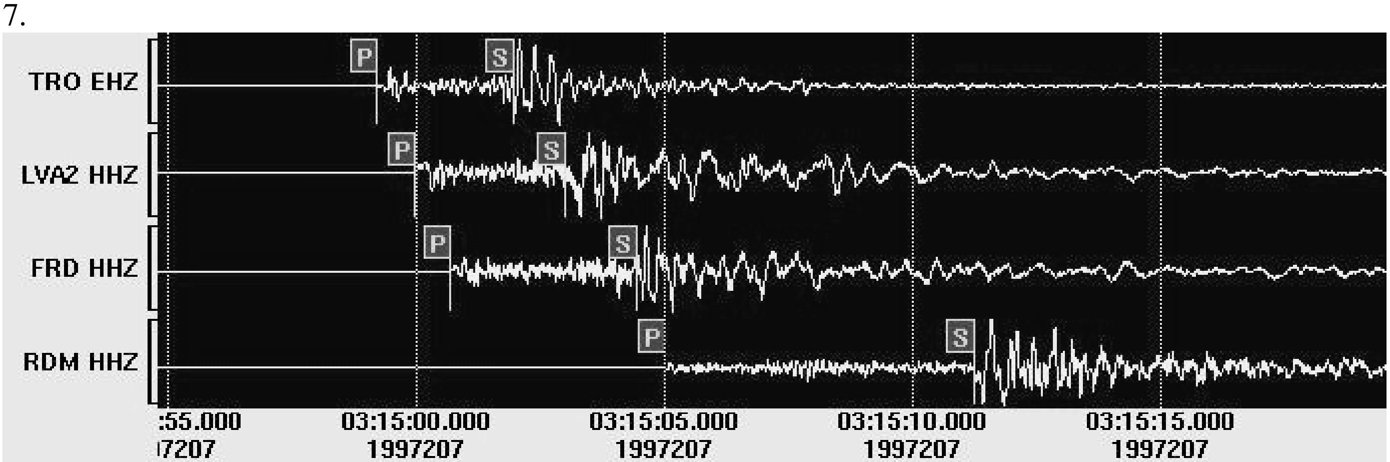
Directions: Write your responses on a separate piece of paper. Follow the instructions listed below:

1. Go to http://www.iris.edu/seismon/ and find out where the most recent earthquakes have been around the world. See if there are any listed as today. Write down the locations of any of them from today. (If there are none from today, list any from the most recent shown).
2. Go to http://eqinfo.ucsd.edu/faq/quiz.html and take the online quiz…record your score and list which question you thought was the most difficult.
3. Go to http://www.geo.mtu.edu/UPSeis/locating.html and learn how to locate the epicenter. How many stations do you need?
4. Go to http://mceer.buffalo.edu/education/exercises/soil.asp and write down a summary of what liquefaction is.
5. Go to http://earthquake.usgs.gov/image_glossary/ and look up what the difference between the epicenter and hypocenter of an earthquake is.
6. Go to http://www.crustal.ucsb.edu/ics/outreach/sb_eqs/#Welcome and find out about the earthquakes of Santa Barbara County including the 1812 earthquake….what records mention it? What marine event allegedly occurred to the ship the *Thomas Newland/Charon*? In 1925 what distinction does the Sheffield Dam have?
7.



We can measure the time separation between the S and P times to determine the location of the earthquake. (Use the data to test the method). Below is a table showing the P and S times as measured from the seismograms above. From the P and S times we can calculate the S minus P time (in seconds). By multiplying the S minus P time by a factor of 8, the difference in speed between P & S waves, we can get the approximate distance in km between the seismic station and the earthquake. For example, the S minus P time at RDM is 6.2 seconds so the distance to the earthquake is 6.2 times 8, which equals 49.6. If we draw a circle around RDM at a distance of 49.6 km on a map, we can find all possible locations of the earthquake. If we do this for all four stations, we can determine the location of the earthquake (epicenter). The map below shows circles corresponding to the distances in Table 2. All four circles intersect on the red dot. Our location has a slight error because the earthquake actually occurred at a depth of 14 km and not at the surface of the earth. Seismologists use computers to locate earthquakes but the computer programs still use the same method.

Table 2. S and P wave arrival times and distance

station	*P time*	*S time*	*S - P time*	*distance (km)*
TRO	*3:14:59.2*	*3:15:01.9*	*2.7*	*21.8*
LVA2	*3:14:59.9*	*3:15:02.9*	*3.0*	*24.1*
FRD	*3:15:00.7*	*3:15:04.4*	*3.7*	*29.8*
RDM	*3:15:05.0*	*3:15:11.2*	*6.2*	*49.6*

Use the info above & tell which letter is at the epicenter.
(Don't write on the map, just trace it or do an overlay)