

Geology 15 Activity 4 Locating an Earthquake Activity

NAME Key DATE 9/30/13

1. Look at all four records from this one earthquake.

a. Which station do you think is closest to the epicenter?

Lick

b. Which station is the furthest from the epicenter?

Berkeley

2. Reading the arrival times of the P and S waves (Reading the phases). Read the arrival times for the P and S waves for Stanford, Lick (Observatory), and Berkeley. Fill in the times in the table below. San Andreas Observatory has been done for you. Use the travel time curve and the S-P interval to determine the distance for each station.

Station	P- time (hr:mn:sec)	S -Time (hr:mn:sec)	S-P Time (sec)	Distance (km)
San Andreas Observatory	20:36:53.5	20:36:59	5.5	40
Stanford	20:36:58.5	20:37:08.5	10	73
Lick	20:36:51.5	20:36:56	4.5	33
Berkeley	20:37:04.5	20:37:18.5	14.5	107

3. Locate the earthquake by drawing circles around the appropriate stations, using the scale provided on map.

b. Draw a small circle indicating where you determine the epicenter to be.

c. Which Bay Area fault do you think this earthquake is located on? Calaveras fault

4. How many seconds did it take the P wave to travel to SAO?

7 s

b. What is the origin time of this earthquake? 20 hrs 36 min 46.3 sec

20:36:53.5

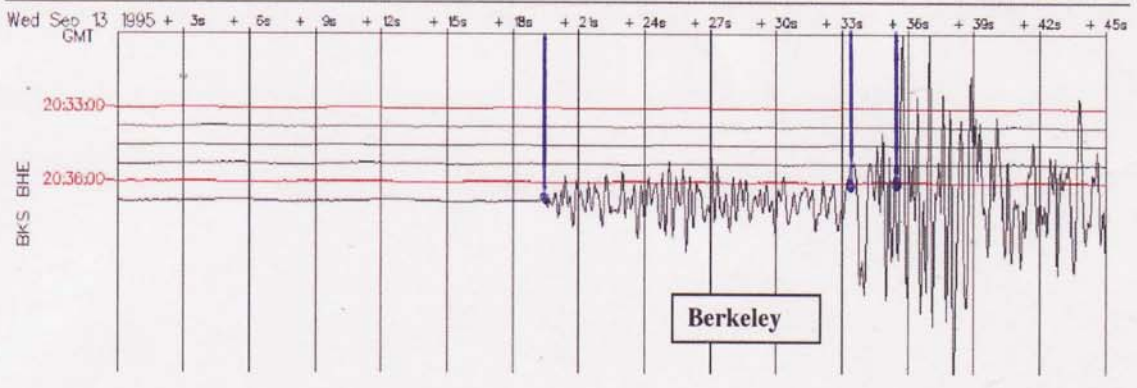
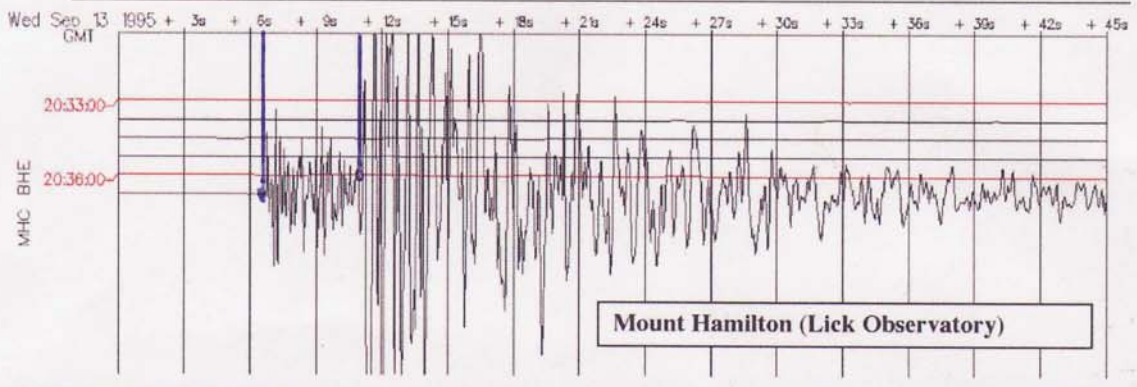
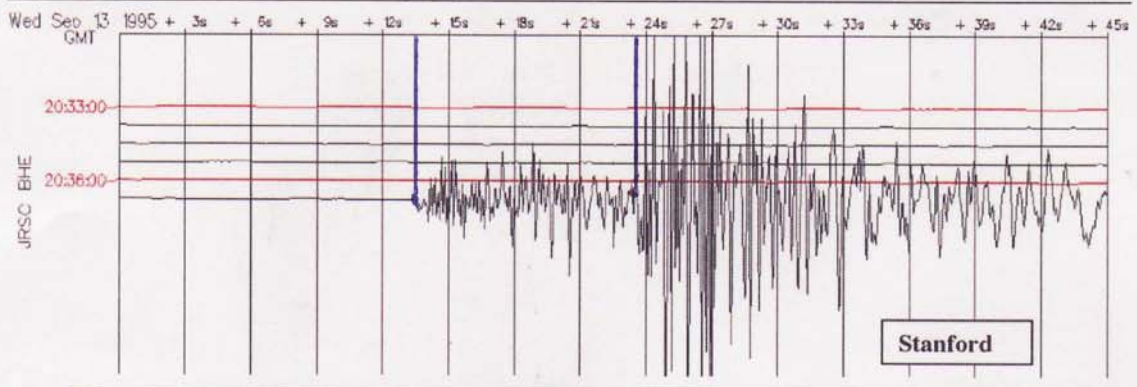
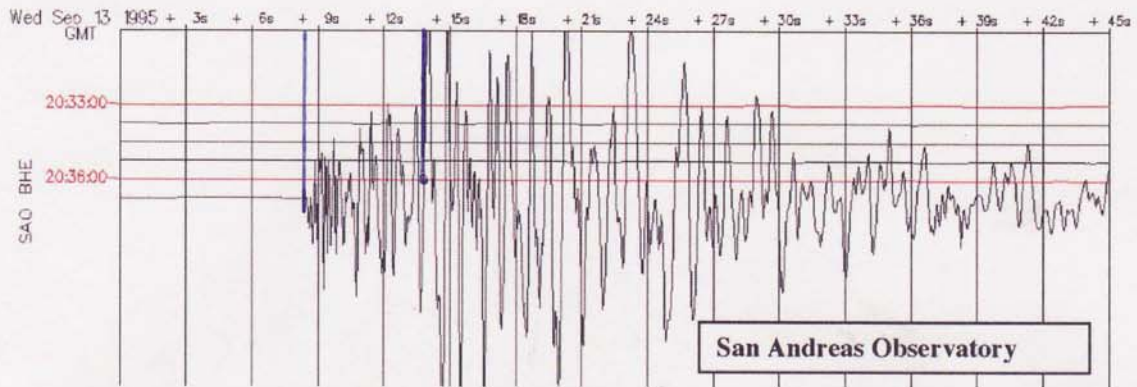
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20:36:46.5

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