

EAS 4801: Planetary Sounds

Quiz 2 (1 pts each, 5 pts total; 01/24/2020)

Name:

Student ID:

1: A magnitude 7.8 strike-slip earthquake occurred in 2001 in northwestern China. If the total rupture duration is about 60 s, and it is a supershear rupture (i.e., rupture speed larger than the S wave speed of 3 km/s), the total rupture length could be about

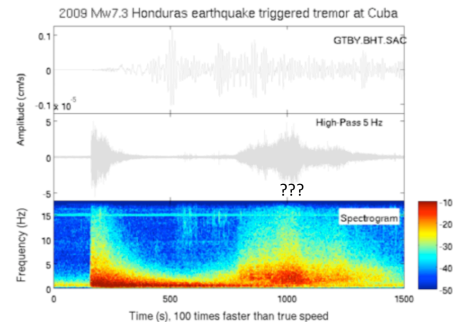
- a) 60 km
- b) 180 km (OK if you answer 180 km as well)
- c) 300 km
- d) 1500 km

2: If the string of ukulele has a total length of 40 cm, what is the wavelength for the fundamental mode?

- a) 10 cm
- b) 20 cm
- c) 40 cm
- d) 80 cm

3: The plot below shows the seismic recording in Cuba generated by a magnitude 7.3 earthquake off the coast of Honduras. The distance between the earthquake source and station is about 1200 km. Based on what you have learned in this class, please identify what is the seismic phase starting at 700 s (marked as a question mark).

- a) T Phase (hydroacoustic wave converted to seismic wave near stations)
- b) P Phase
- c) S Phase
- d) Surface wave phase



4: Please identify which type of wave attenuates the LEAST in a medium?

- a) High frequency sound wave in the air
- b) Low frequency sound wave in the air
- c) High frequency acoustic wave in the ocean
- d) Low frequency acoustic wave in the ocean

5: Which of the following seismic phase has the longest period?

- a) Free oscillation of the earth
- b) Teleseismic P wave
- c) Teleseismic S wave
- d) Teleseismic surface wave