2011 Tōhoku Earthquake

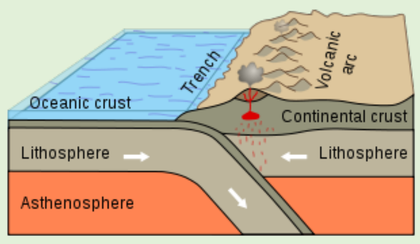
How fast does earthquake travel?

P waves: ~21600-50400 km/hr
S waves: ~14400-21600 km/hr
Boeing 747: ~920 km/hr

Event Date: March 11, 2011

Large amount of energy build up

The pacific plate is sliding underneath the continental plate of Japan and building up a tremendous amount of energy.

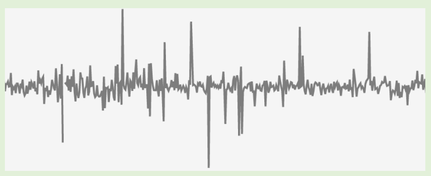


Tōhoku quake begins

The earthquake begins on local time 14:46:24. The subduction zone releases tremendous amount of energy and was recorded as a magnitude 9.1, the largest in Japanese history.

The earthquake lasted 6 minutes

The earthquake caused one of the largest tsunami and history. The amount of energy released by the quake can power the entire City of Los Angeles for an year.

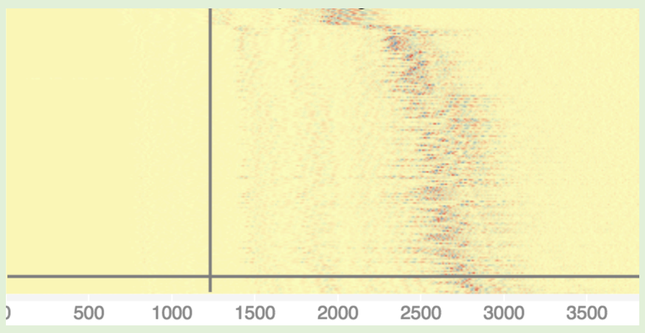


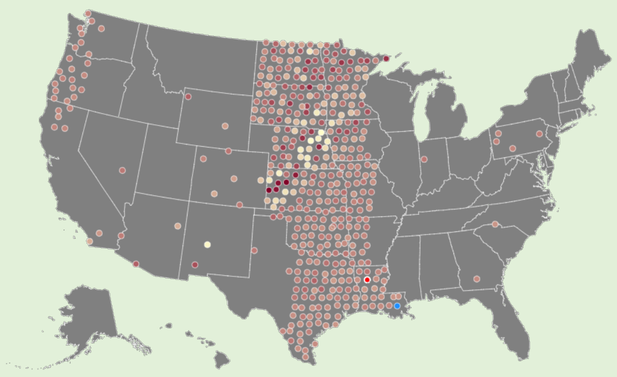
Waves travel across the world

Earthquake creates two different form of waves, p waves and the s wave. P waves is caused by compression of the earth and S waves is the shear motion. It travels through the earth's surface, mantle, and the core.

P waves reaches the U.S.

After about 18 minutes, transportable arrays in the U.S. recorded the Primary waves..



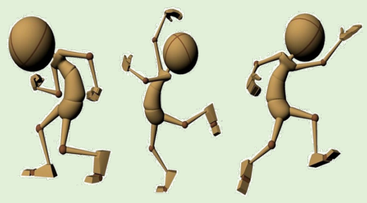


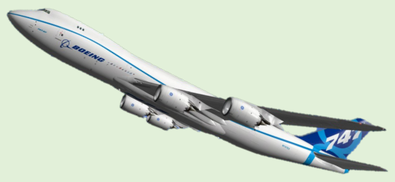
S waves hit the U.S

30 minutes after the quake, transportable arrays in the U.S. recorded the Secondary waves..

00:00:00 Takes off from Chicago

Tension build up for a Geology Conference in Toronto





5 mins

Looking out the window and see some clouds

10 mins

Reaching cruising altitude of 35,000 feet

15 mins

30 mins Somewhere over Detroit….

Earthquake travels really fast and most of the time they are very destructive…

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