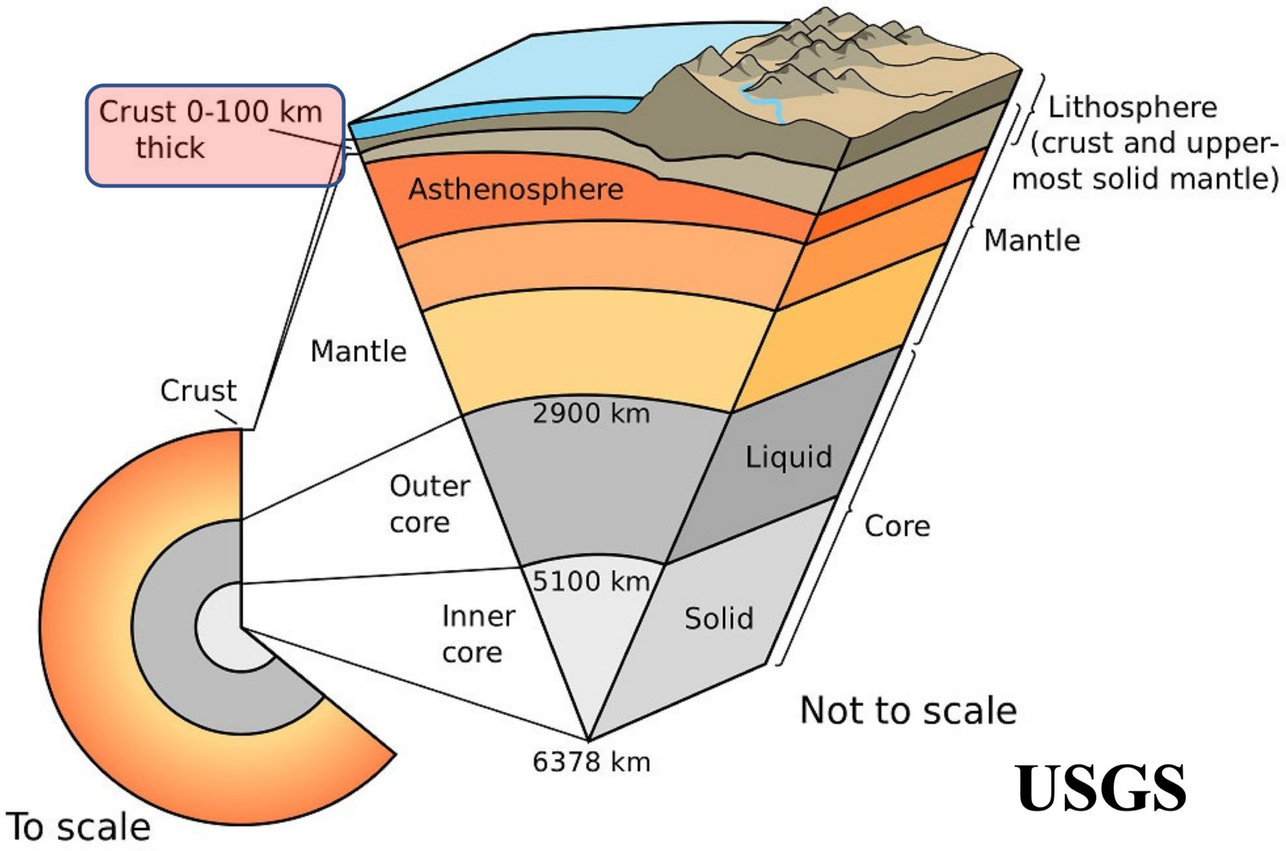
The Moho geometry

First – order discontinuity in solid Earth

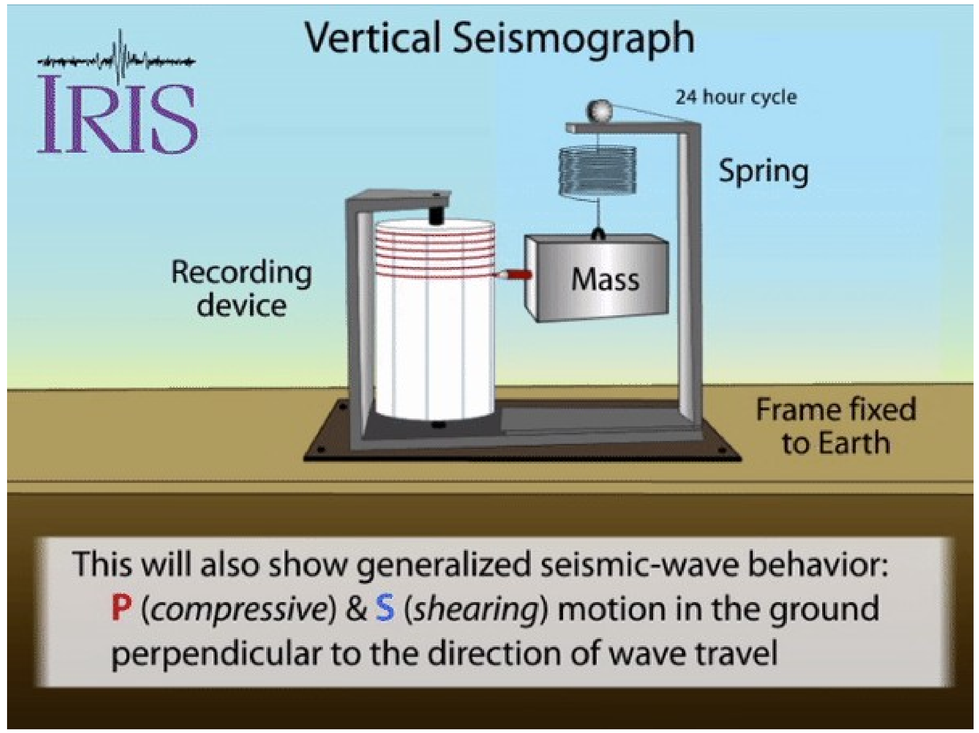


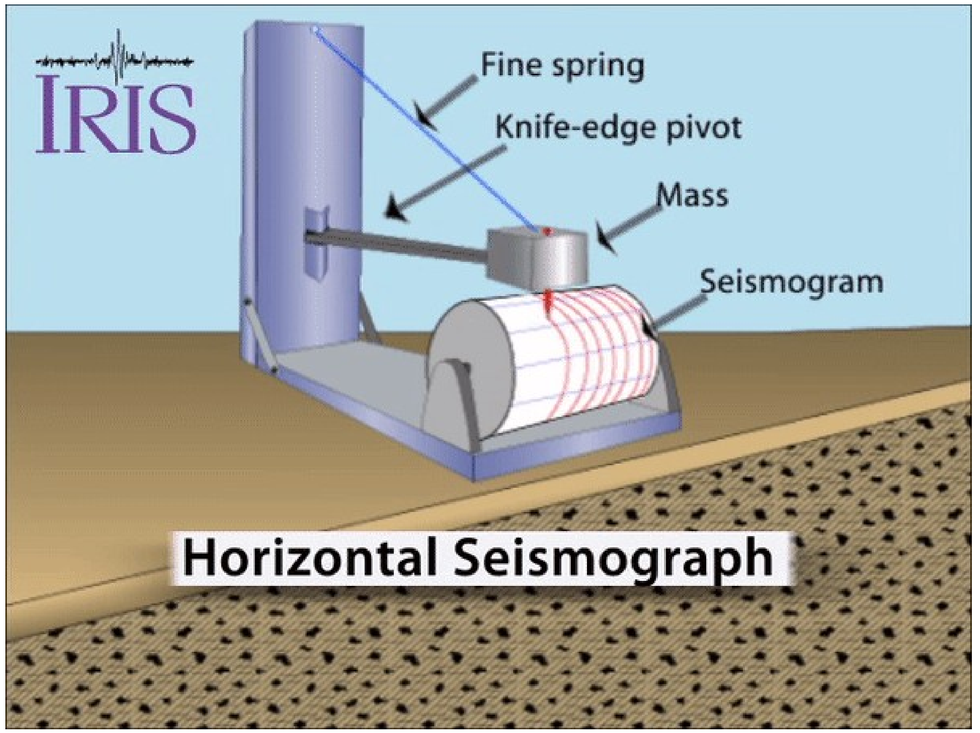
USGS

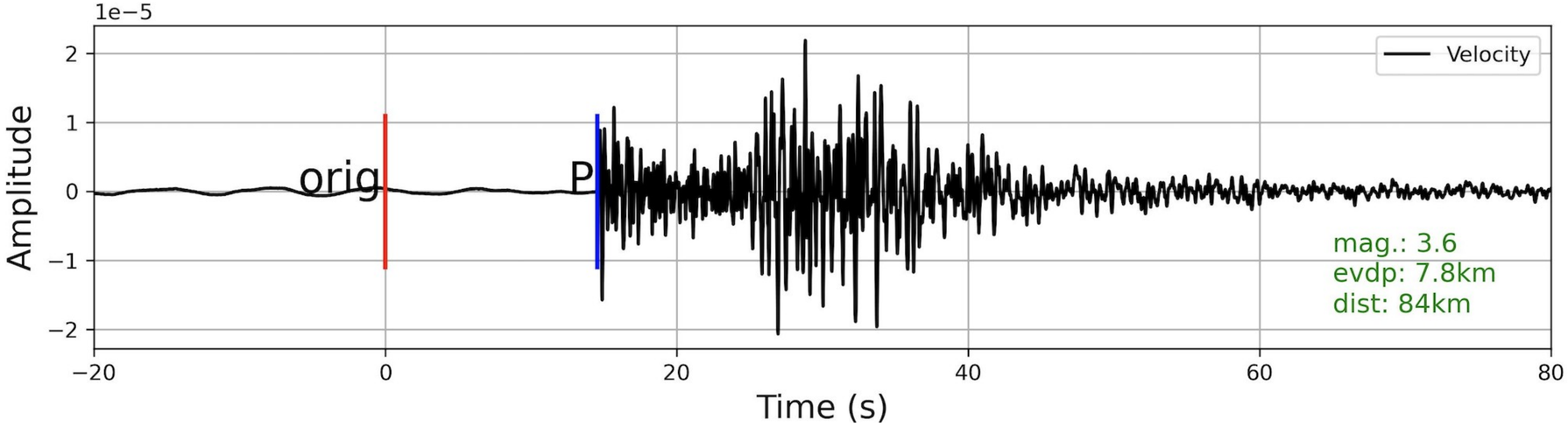
Reference 1D velocity model	*P-wave velocity contrast across Moho*
IASP91 (Kennett and Engdahl, 1991)	*~20%*
CM95 (Christensen and Mooney, 1995)	*~15%*
PREM (Dziewonski and Anderson, 1981)	*~17%*

Rabbel et al., 2013

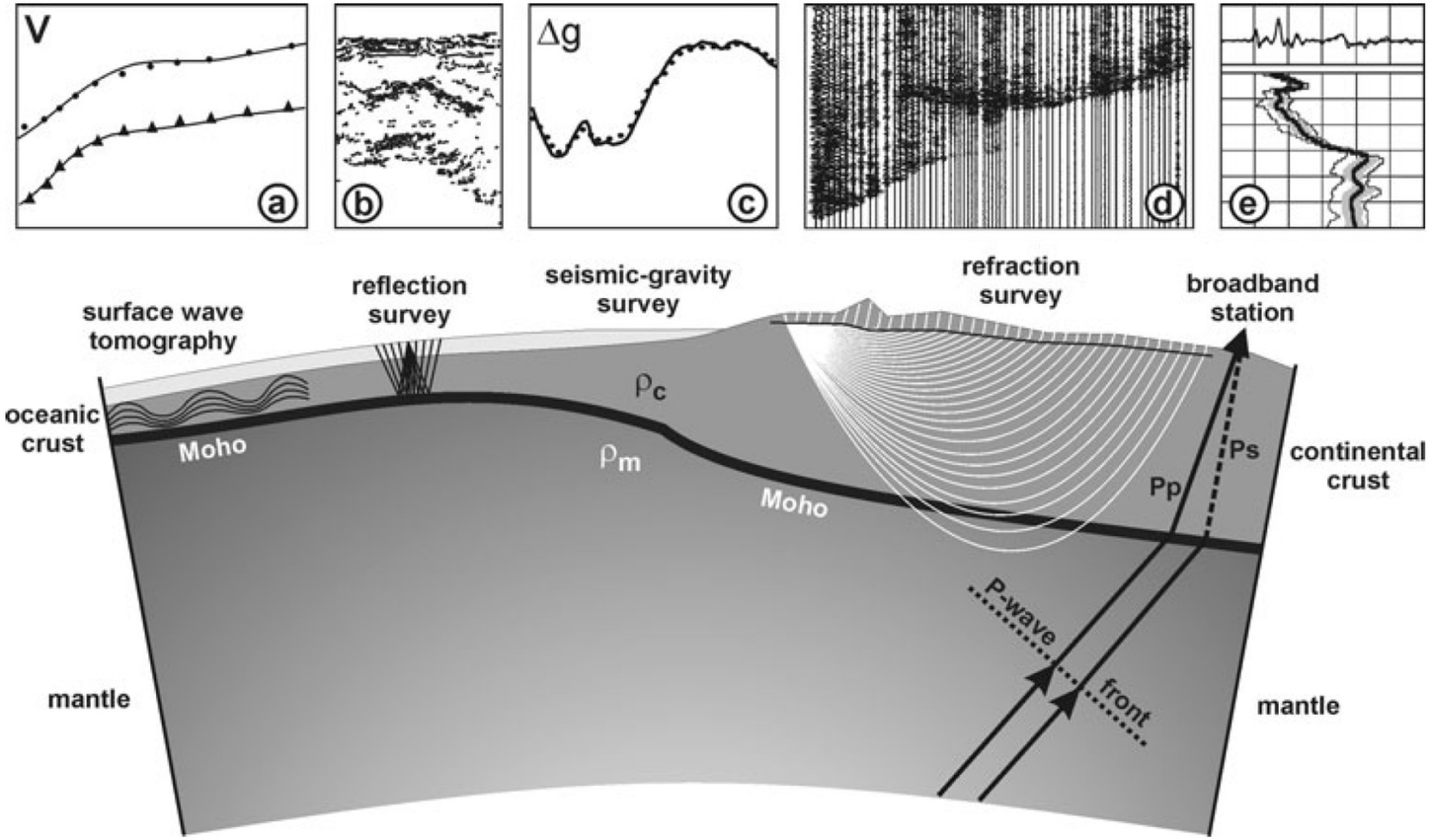
Observation: Seismogram (ground shaking)







Available seismic signals to image crustal structures



Grad et al., 2009

Surface waves:

, Rayleigh wave

, Love wave

Ambient Noise Source: 5 ~ 40s
Earthquake Source: 20 ~ 80s

Body waves:

Near-field case:

Active Source: Reflection (20Hz)
Refraction (10Hz)

Passive Source: Pg, Pn, PmP (5Hz)

Teleseismic case: Ps (1s)
SsPmp (2s)