

# November 30, 2018 Anchorage, Alaska (M 7.0)

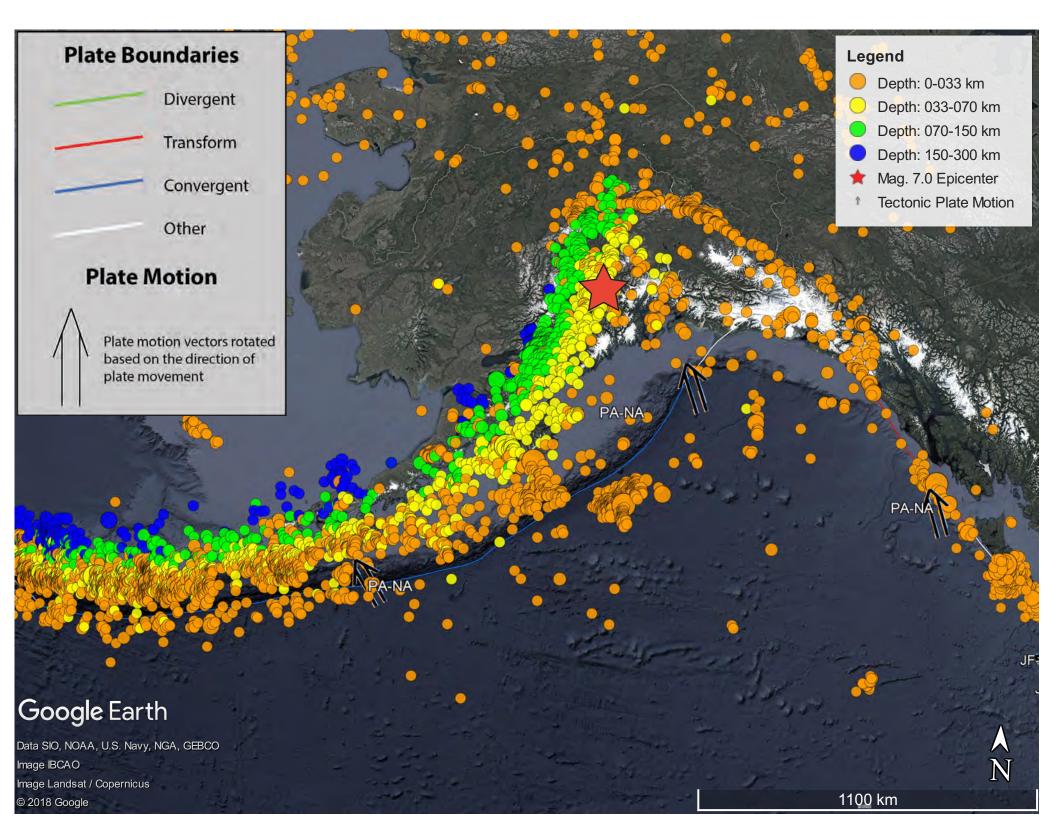
17:29:28 UTC / 08:29:28 at epicenter

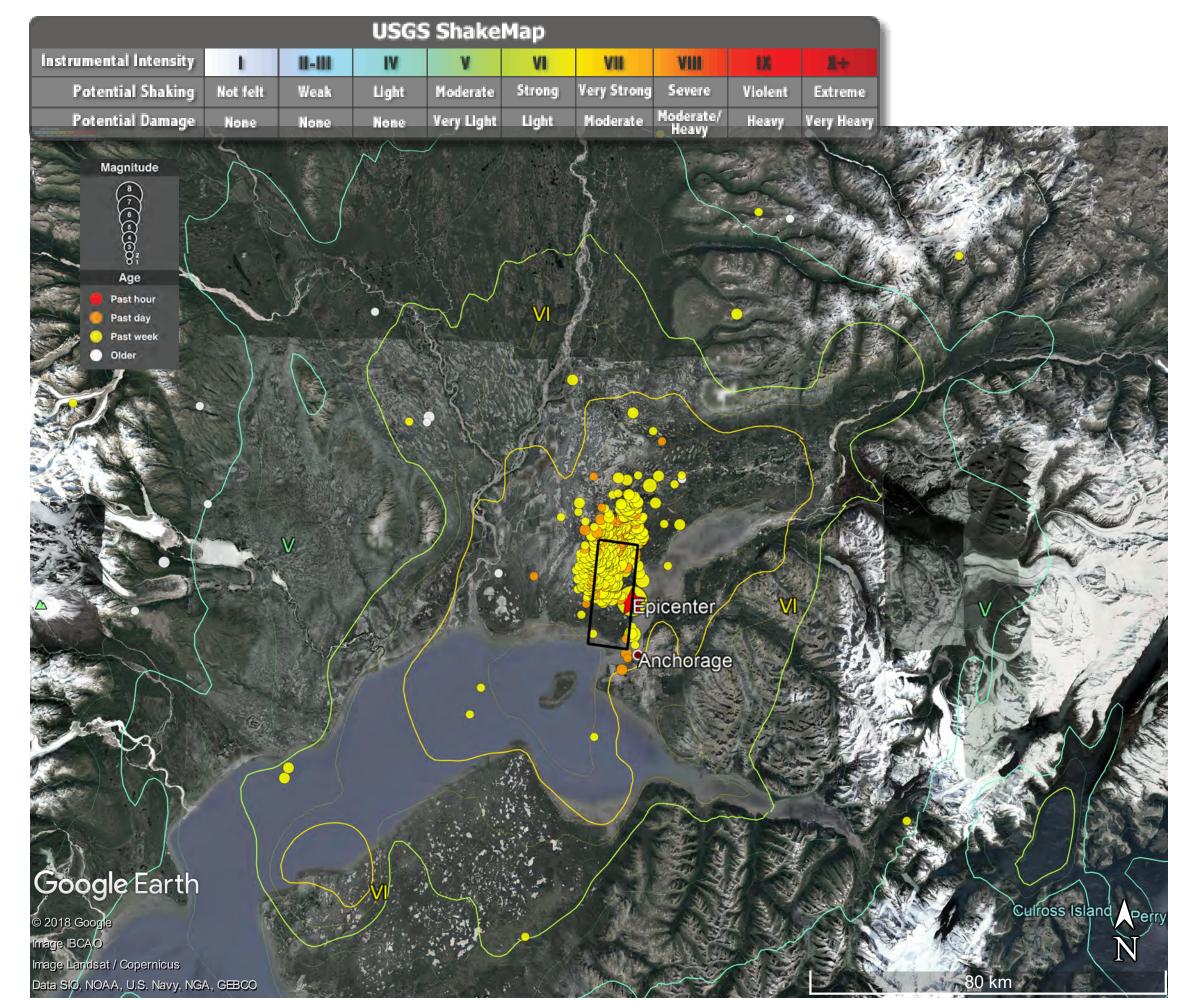
## University of Kentucky



Kentucky Seismic and Strong Motion Network

The November 30, 2018 moment magnitude 7.0 earthquake in Anchorage, Alaska, occurred near the boundary between the (overriding) North American and (subducting) Pacific tectonic plates. The source mechanism indicates that a north-south striking fault plane ruptured by extension. This and the focal depth suggest that the earthquake occurred within the subducting Pacific plate. Very strong shaking was experienced from this earthquake and due to its nearness to Anchorage and Mat-Su, it caused damage to roads and buildings and resulted in numerous reported injuries.





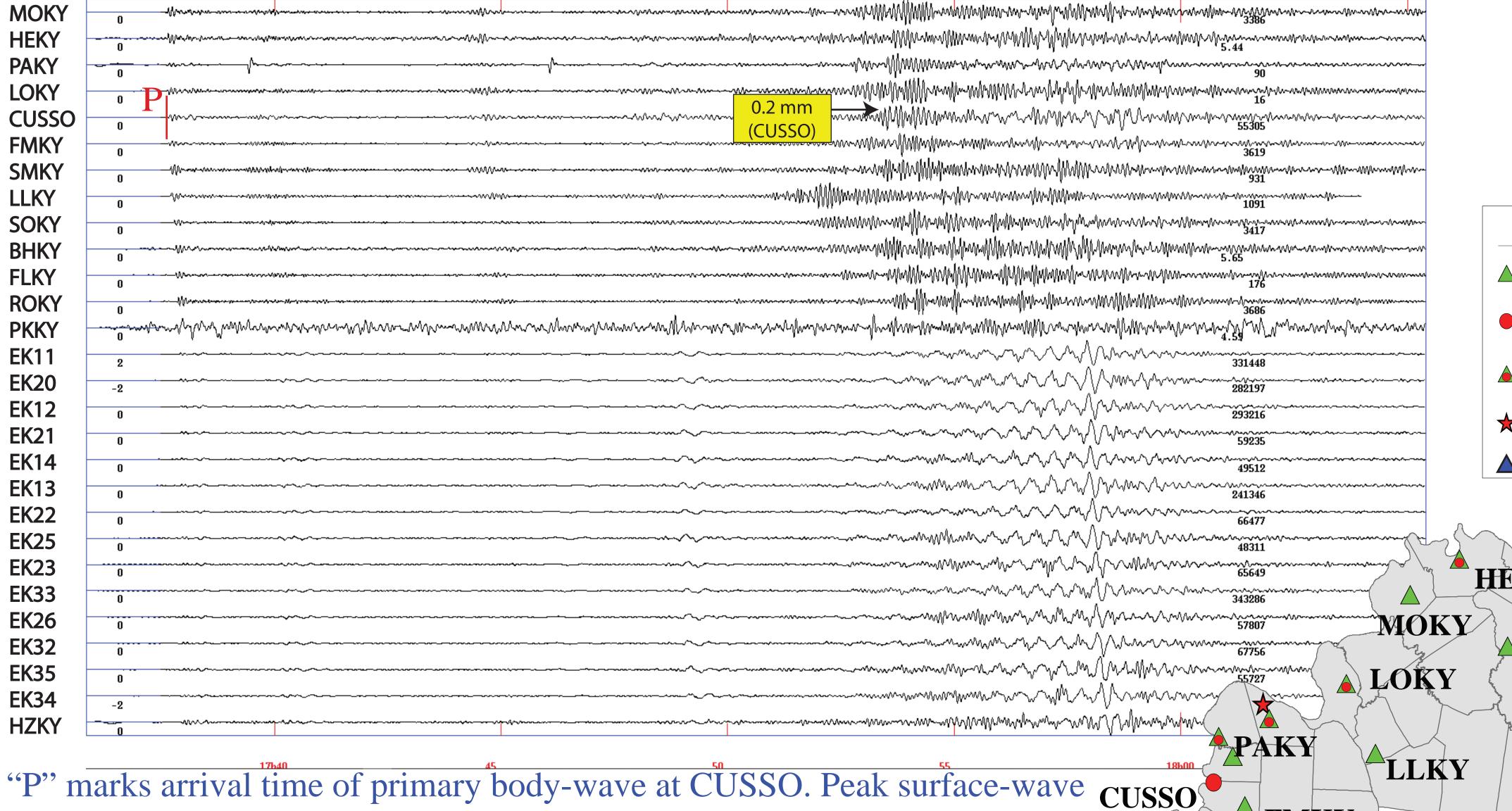
**FMKY** 

Above: Most recent 20 years of magnitude 4.0 and greater earthquakes, colored by focal depth, and tectonic plate boundaries colored by type. The

epicenter of the November 30 earthquake is shown as a red star.

Right: USGS fault model (black box) derived from seismograms, predicted intensity contours for that model constrained by local recordings, and the most recent three days of aftershocks, including thousands of events.

#### KSSMN Seismograms $(\sim 5,100 \text{ km away})$



displacement recorded at CUSSO is labeled. Some differences in waveform

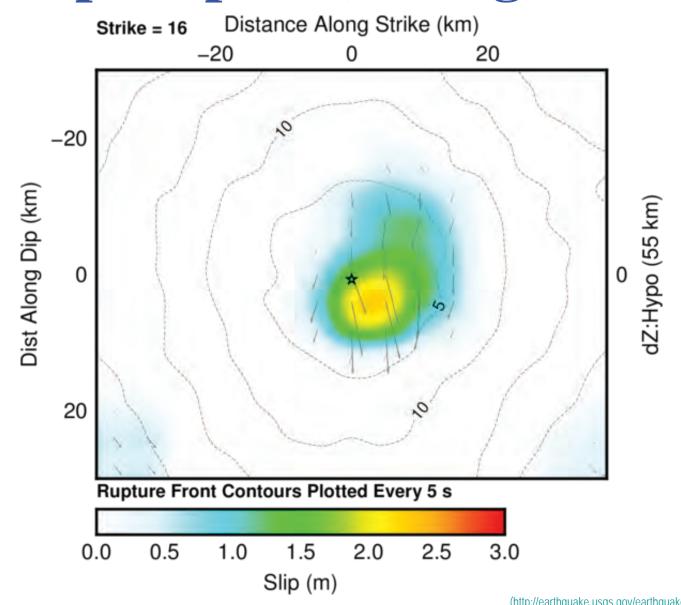
appearances are due to the different types of instruments operated by the

KSSMN.

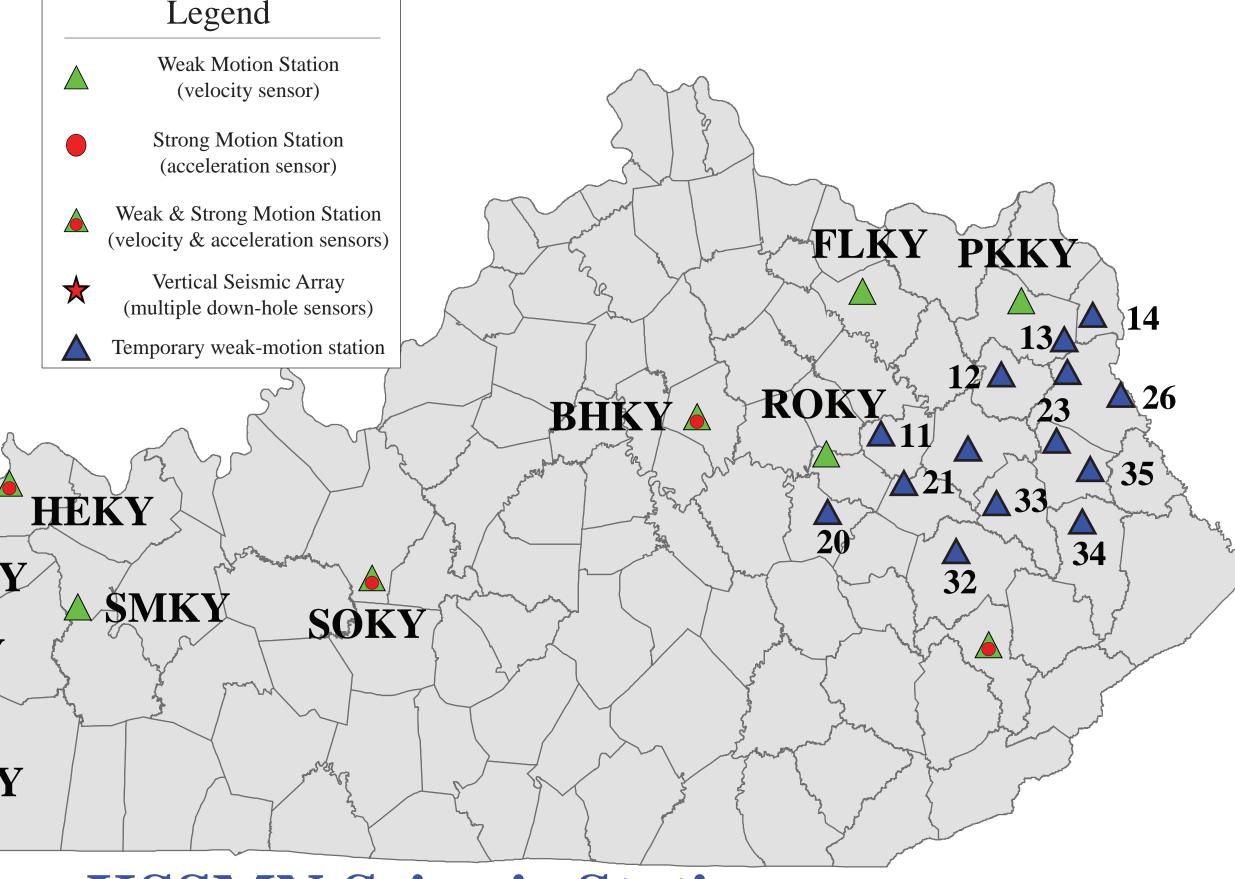
**USGS Source Mechanism** 

This mechanism indicates extensional, or normal-slip faulting. The aftershock distribution suggests rupture of an east-dipping fault plane.

### Slip (rupture) along Fault



Fault rupture occurred for more than 10s and slip (i.e. displacement) of up to 3 m may have occurred, at a location ~20 m down the fault plane.



**KSSMN Seismic Stations** Stations with seismograms are labeled by name.