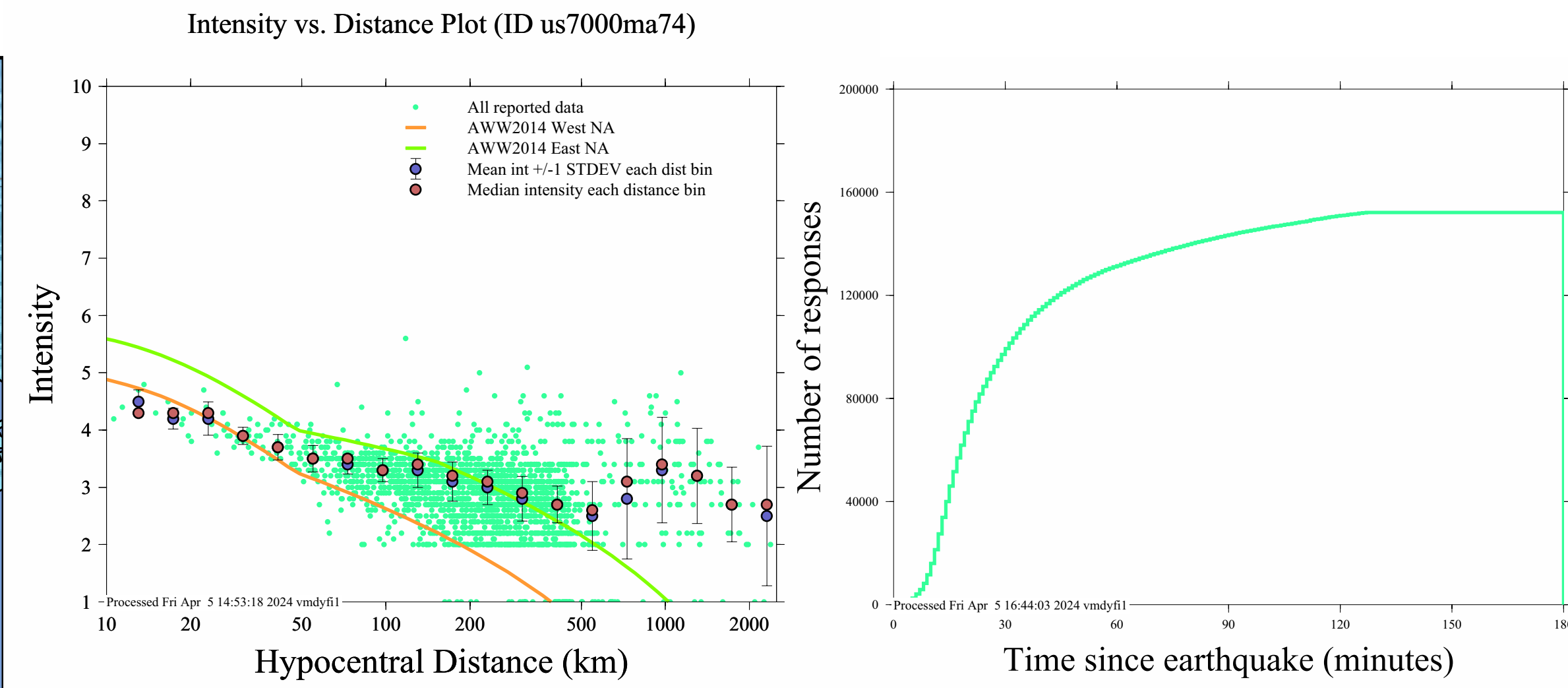
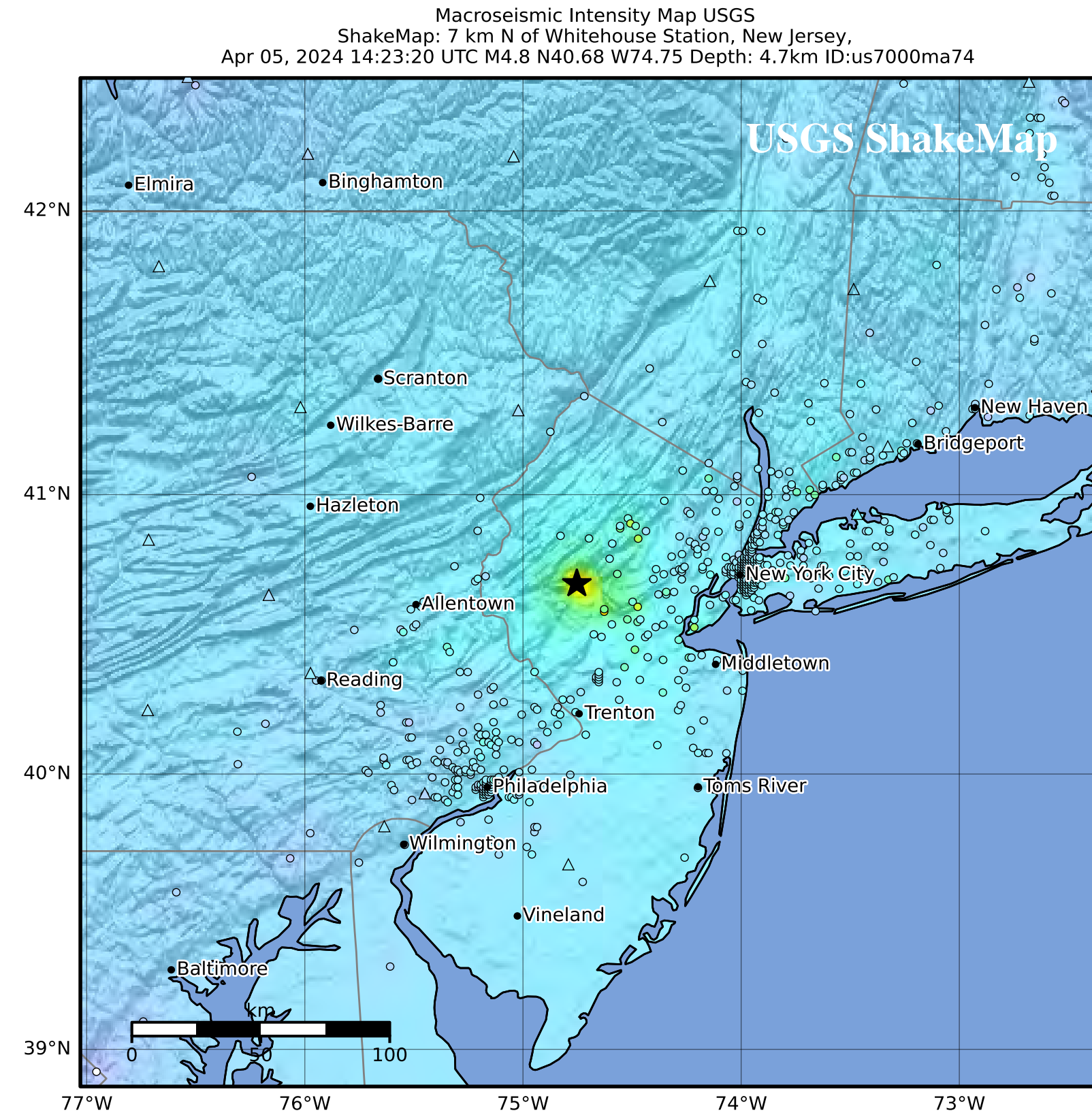
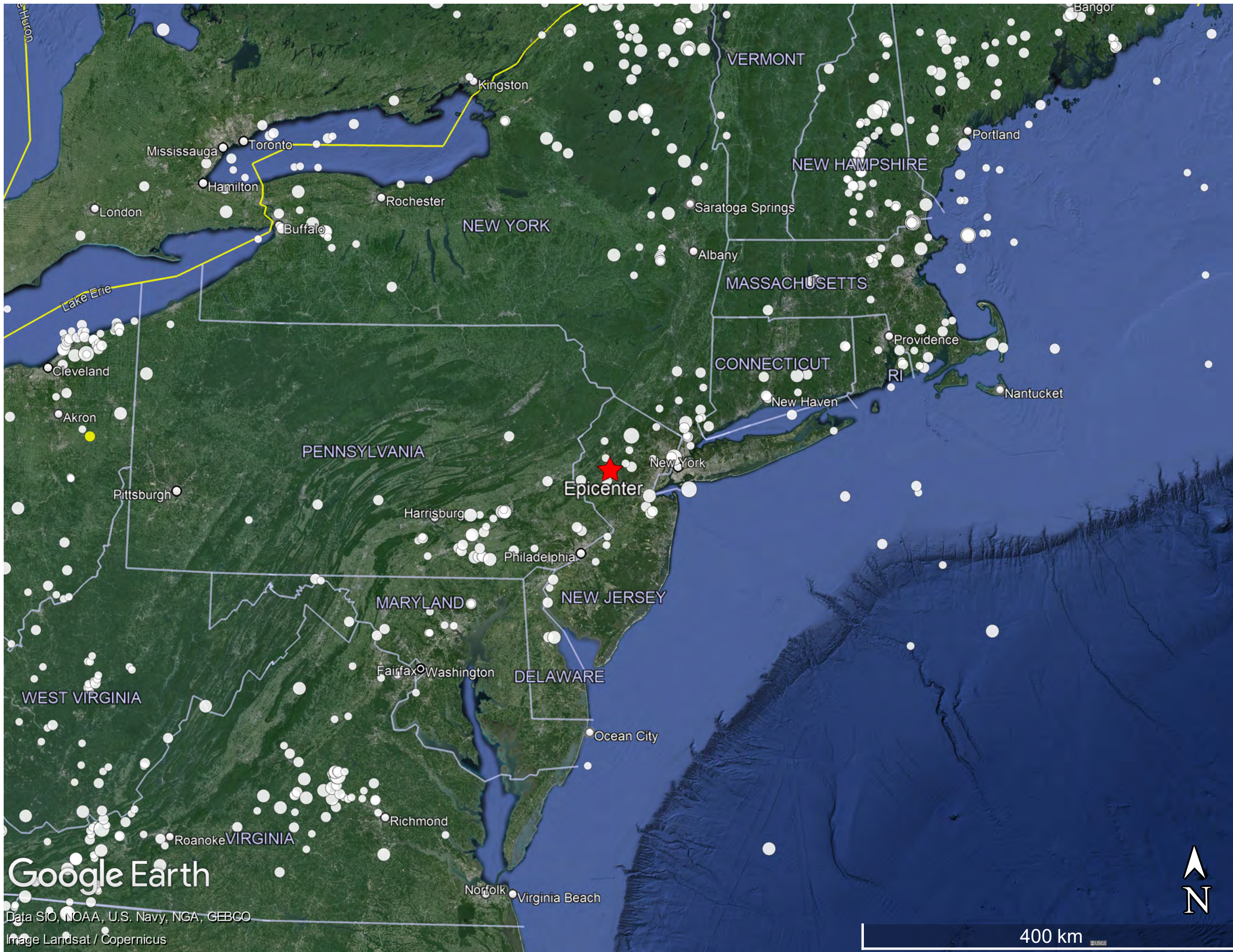
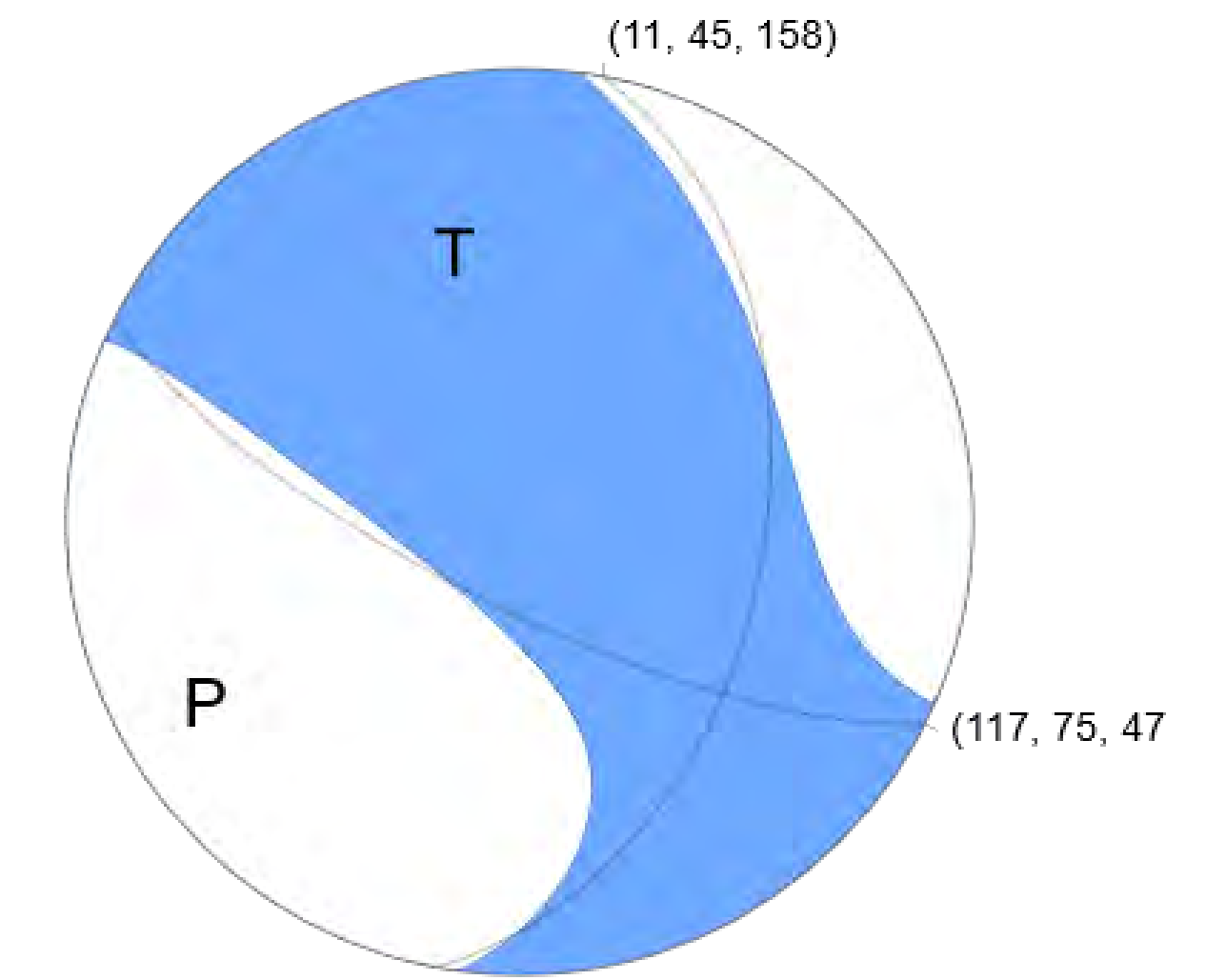
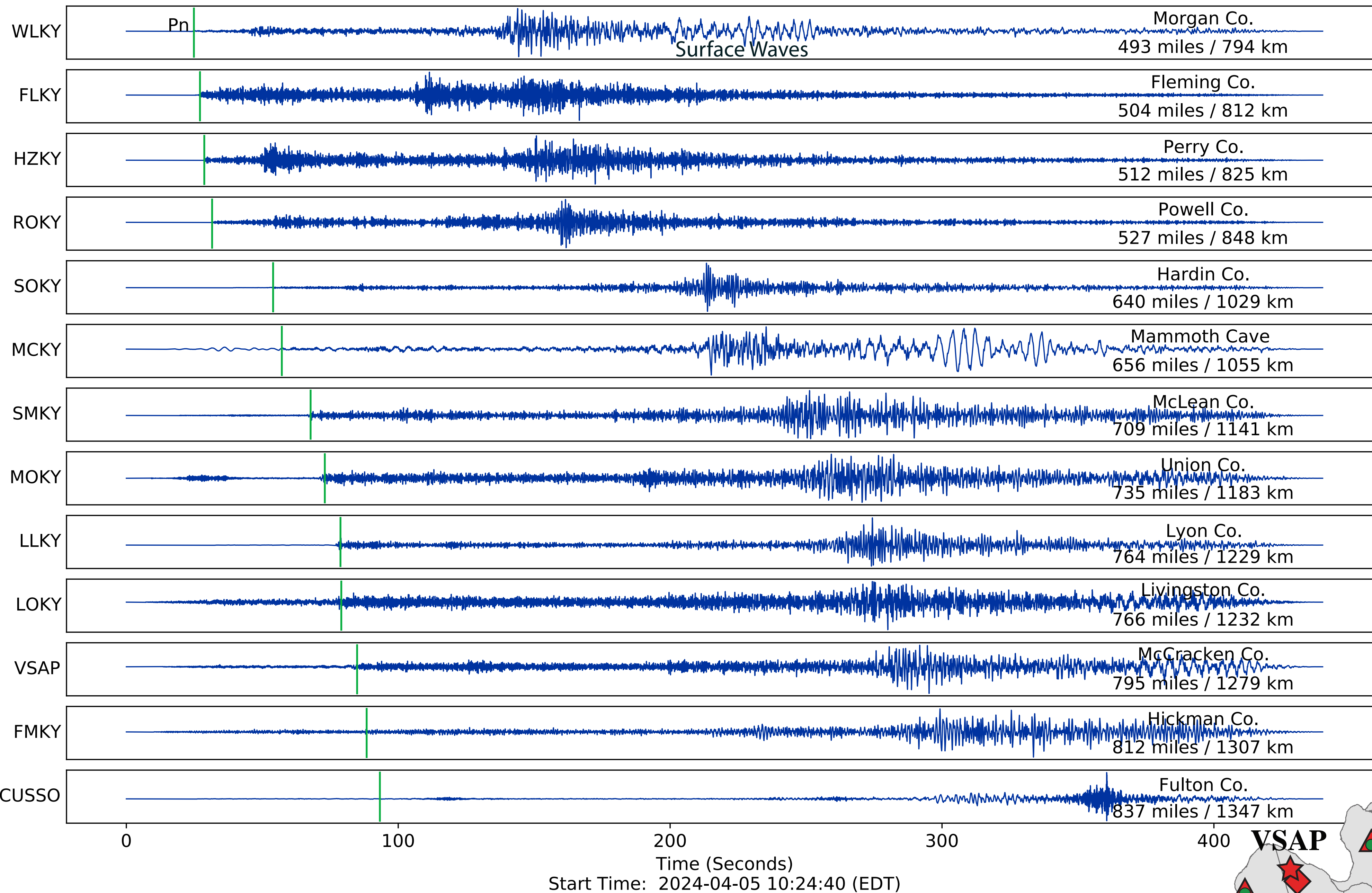


The April 5, 2024, magnitude (M) 4.8 earthquake near Whitehouse Station, New Jersey, resulted from slip on a shallow fault. The oblique-reverse focal mechanism is consistent with a horizontal-compressive stress regime, resulting from forces exerted through the crust from the Mid-Atlantic Ridge. Moderate earthquakes are rare in the region, with only four $M \geq 4.0$ earthquakes reported in New Jersey in the USGS catalog (since 1700), and only five $M \geq 4.0$ earthquakes reported within 100 km of today's earthquake. Due to low attenuation in the eastern North American crust, this earthquake was felt broadly across the NE U.S.

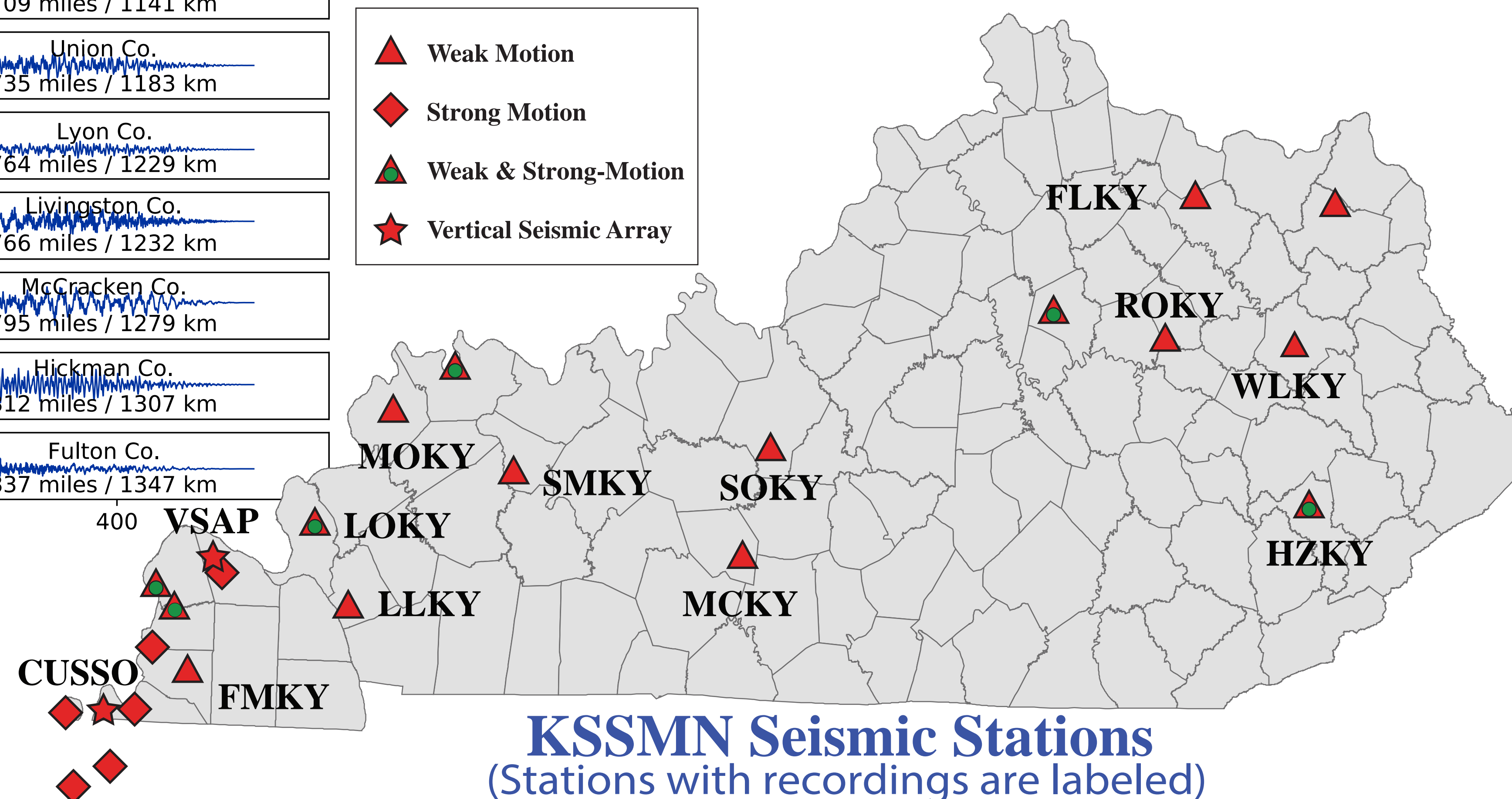


Left: Epicenters of the Mw 4.8 earthquake (red star) and historical earthquakes (gray circles). Middle: USGS ShakeMap showing felt (circles) and instrumental (intensities). Above: Intensities reported to the USGS versus distance and predictive models developed for the region (left), and (right) the number of felt reports with time. More than 150,000 experiences were reported to the UGSS, with nearly 90,000 within 30 minutes. Below: The USGS focal mechanism indicating oblique-reverse faulting.

KSSMN Seismograms



- Weak Motion
- Strong Motion
- Weak & Strong-Motion
- Vertical Seismic Array



KSSMN Seismic Stations (Stations with recordings are labeled)

KSSMN seismograms from the New Jersey earthquake. The green vertical lines mark first-arrival "Pn" seismic waves. The later-arriving "Surface Waves" can be seen on several stations.