

Using Social Media to Aid in the Refinement and Understanding of Seismic and Acoustic Ground Truth Information

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Anthropogenic events of interest to the nuclear treaty monitoring community are typically observed seismically and in some instances acoustically. The number of these events seem to be ever increasing as additional sensors continue to be installed and existing stations are tuned to improve detection capability. The use of non-traditional data sources, such as social media, can corroborate geophysical detection network data. For example, the U.S. Geological Survey's use of Twitter to track earthquakes in populated areas as an alternative data source can aid in situational awareness of ground shaking intensity. The USGS can use social media such as Twitter to alert them before the earthquake is detected by their sensors. These types of alerts help aid the timeliness of first responders to the scene. We incorporate social media into the analysis of events to better characterize sources observed in waveform data sets. This could potentially assist in identifying previously unknown sources and may enhance the scientific community's ground truth data collections.

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