

2.2-P23. research of the main characteristics for three explosion events based on explosion waves

Three explosion events recorded by stations MDJ and BJT on October 9, 2006, May 25, 2009 and February 12, 2013 were analyzed and researched, respectively. Both stations belong to Global Seismic Network (GSN). The mean ratios of the maximum amplitudes and the power spectrum densities are about 2.3 and 2.7 respectively for the 2013 event and the 2009 event. The ratios for 2013 event and 2006 are about 10.1 and 13.5, which indicates that the energy released by the 2013 event is about 11.8 times as much as that released by the 2006 event and 2.5 times as much as that released by the 2009 event. The maximum cross correlations were 0.9 and 0.99 for 2013-2006 events and 2013-2009 events in 2-4 Hz, which mean that the 2013 event is highly correlated to the 2006 and 2009 events in the frequency band which the main energy concentrated, that mean the relative distances of three events are not long. Comparison of phases had been done to determine the relative location of these explosion events. The results told us that 2013 event lies to the Southeast of 2009 events.

Primary author: ZHENG, Zhong (Institute of Geophysics, China Seismology Bureau)

Presenter: ZHENG, Zhong (Institute of Geophysics, China Seismology Bureau)

Track Classification: 2. Events and their characterization