

# Regional difference in long period surface wave phase velocity by an explosive phenomenon generated in North Korea on September 3, 2017

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An explosive phenomenon to assume the Democratic People's Republic of Korea cause at past 12:30 of September 3, 2017 was observed in each place. The position of the seismic center is considered to be 41.3 degrees N, 129.1 degrees E, 0 kilometers in depth by Japan Meteorological Agency and almost assumes surface of the earth neighborhood cause. Because it is an explosive phenomenon generated in an earth surface, Rayleigh wave is observed other than P wave, and can considered the observed wave motion to be an observation record of huge size surface wave exploration.

The observed Rayleigh wave shows strong dispersibility at around 0.03-0.1Hz. After performing MASW (Multichannel Analysis of Surface Wave) for the Kinki districts where P-wave velocity structure is estimated using data of the large blast observation, the provided phase velocity almost matching with the one dimension S-wave velocity structure that I set in reference to Hirose& Ito (2006). Yamada(2018) thought that the observed phase velocity depend on velocity structure to the Moho.

Because after doing MASW at a suitable angle based on the direction from the seismic center about each domestic area, a local difference was seen in provided phase velocity, I report it.

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Keywords: Explosive phenomenon generated in North Korea, Long period surface wave, Homo, Multichannel Analysis of Surface Wave



