



Comparison of the January 1, 2019 DPRK aftershock with the aftershocks observed between September 2016 and April 2018

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A series of low-magnitude aftershocks which followed the September 9, 2016 (DPRK5) and September 3, 2017 (DPRK6) underground test conducted by the DPRK has been investigated in detail using various methods including waveform cross correlation (WCC). Some principal results obtained for the period between September 11, 2017 and March 2018 were presented at the 2018 EGU. Here, we extend our study with the aftershocks that occurred in April 2018 and on January 1, 2019. The latter event was the only one detected by two IMS array stations KSRS and USRK in the 8 months since the April events. . All low-magnitude events were detected using the multi-master WCC method combining information from practically co-located DPRK explosions and their aftershocks (e.g. shallow earthquakes) having different source mechanisms. This prototype method has been used in a continuous mode at the International Data Centre (IDC) of the Comprehensive Nuclear-Test-Ban Treaty Organization since December 2017. The January 1, 2019 event has the P/S spectral ratio which most likely belongs to the population of the DPRK aftershocks.