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Analysis of DPRK Nuclear Test of February 12, 2013 by Belbasi Nuclear Tests Monitoring Center - KOERI

On 12 February 2013, The Democratic People's Republic of Korea (DPRK) announced the conduct of a nuclear test. Corresponding seismic event was recorded by IMS, upon which IDC released first automatic estimation (SEL1) of time (02:57:51 GMT), location (41.3386°N and 129.0711°E) and the magnitude (4.9 mb) of the event in less than two hours time. During the preliminary analysis of the 2013 DPRK event by the Turkish NDC, a very clear P arrival at 03:08:55 (GMT) at BRTR (Keskin SP array) has been observed, which was not associated to SEL3. The result of our analysis confirmed that the arrival belongs to the DPRK event. In this study, we would like to present the technical and scientific aspects of the 12 February 2013 DPRK from a multidisciplinary perspective such as seismic discrimination analysis (event depth, magnitude, mb:Ms ratio, moment tensor inversion, focal mechanism solution, spectral analysis) employed in a NDC. The analysis has also employed Infrasound and Radionuclide technologies.

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