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Infrasonic and seismic signals from explosions in Northwestern Europe

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Large explosions often generate both seismic and infrasound signals that can be detected over large ranges, i.e. hundreds of kilometers. Ground truth of such explosions is available from direct observations and/or seismic signals and can be used to get insight in the propagation of infrasound. Long range infrasound propagation is controlled by the state of the atmosphere. Tropospheric, stratospheric and thermospheric ducts might exist and have implications on the signal characteristics and their detectability. In this study, we will show results of studies on explosions in Northwestern Europe using both seismic and infrasound data. These observations are used to derive source characteristics like: location, origin time and yield. Furthermore, the propagation characteristics of infrasound will be addressed.