ID: Type: **Oral**

from the 2009 and 2017 DPRK rocket launches

Supersonic rockets generate low-frequency acoustic waves, i.e., infrasound, during the launch and re-entry. Infrasound is routinely observed at infrasound arrays from the International Mon- itoring System, in place for the verification of the Comprehensive Nuclear-Test-Ban Treaty. Association and source identification are key elements of the verification system. The moving nature of a rocket is a defining criterion, in order to distinguish it from an isolated explosion. Here, it is shown how infrasound recordings can be associated, which leads to identification of the rocket. Propagation modeling is included to further constrain the source identification. Four rocket launches by the Democratic People's Republic of Korea in 2009 and 2017 are analyzed, in which multiple arrays detected the infrasound. Source identification in this region is impor- tant for verification purposes. It is concluded that with a passive monitoring technique such as infrasound, characteristics can be remotely obtained on sources of interest, i.e., infrasonic intelligence, over 4500+ km.

Primary author: EVERS, Läslo (KNMI - Royal Netherlands Meteorological Institute)

Presenter: EVERS, Läslo (KNMI - Royal Netherlands Meteorological Institute)

Track Classification: Analysis of Sources and Scientific Applications