



## **Analyzing the detection capability of infrasound arrays in Central Europe**

L. Ceranna (1), A. Le Pichon (2) and J. Vergoz (2)

(1) BGR, Hannover, Germany, (2) CEA/DASE, Paris, France

The infrasound network of the International Monitoring Network (IMS) of the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO) is currently not fully established. However, it has demonstrated its capability for detecting and locating infrasonic sources like meteorites as well as volcanic eruptions on a global scale. Unfortunately, such ground truth events are rare. Therefore, regions with dense infrasound networks have to be considered in order to test and calibrate detection and location procedures. In Central Europe, several years of continuous infrasound recordings are available for many infrasound arrays, where not all of them are part of the IMS. Since 2000, the infrasound data from Flers (France) and I26DE (Germany) are routinely processed in the [0.02 4] Hz frequency band using PMCC as a real-time detector. Furthermore, the Swedish stations in Uppsala, Lycksele, Jämtön, and Kiruna are also routinely processed in the frequency range from 0.7 to 4 Hz. In 2005, the station IGADE was deployed in Northern Germany which is now part of this network. The results of the association of multiple arrays will be presented based on seven years of all available bulletins. The network capability as well as the location results is improved by adding the IGADE bulletins. The main objective of this study is to investigate the seasonal variations in the detection capability of this network along with the prevailing stratospheric winds.