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Performance of a mobile infrasound station in the framework of CEEIN

Ulrike Mitterbauer and Daniela Ghica

ZAMG, Geophysics, Wien, Austria (u.mitterbauer@zamg.ac.at)

The project ABC-MAUS is undertaken by a collaboration of the Austrian Ministry of Defense, Joanneum Research, the Austrian national weather and geophysical service Zentralanstalt für Meteorologie und Geodynamik (ZAMG), including the Austrian National Data Center (NDC), as well as the private company GIHMM. The aim is to develop a strategy of protection for chemical, biological, radiological and nuclear threats (CBRN) for the Austrian armed forces.

In the frame of the project, a mobile infrasound array was deployed together with seismic sensors to monitor the military training ground Allentsteig in Lower Austria. During one week a series of controlled explosions was recorded. Infrasound data was processed and analyzed by using a duo of infrasound detection-oriented software (DTK-GPMCC and DTK-DIVA, packaged into NDC-in-a-Box). The dataset contained not only local and regional data, but revealed as well long term sources and – after comparing the data with data from stations of the CEEIN (Central Eastern European Infrasound Network) – some global events. Those events were localized using data of the temporary deployed array and by observations collected by other stations of the CEEIN.