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Near ground explosion - monitoring with a mobile infrasound array and seismic sensors

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The project ABC-MAUS is a collaboration between 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, originating from different sources, was recorded.

The Austrian NDC developed a tabletop exercise based on a hypothetical explosion. The collected waveform data was analyzed and used to locate the explosion. Once the explosion had been verified by infrasound data, forward modeling assuming a hazardous release was undertaken to understand which areas might have been affected by a resulting toxic plume (reference to contribution by Hieden et al.).

Promotional text

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