SnT 2025 CTBT: SCIENCE AND TECHNOLOGY CONFERENCE
8 SEPTEMBER ONLINE DAY
9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE

Neutralization of a WWII Aerial Bomb in the Port of Rijeka: Seismological Data Analysis

LIGHTNING TALK

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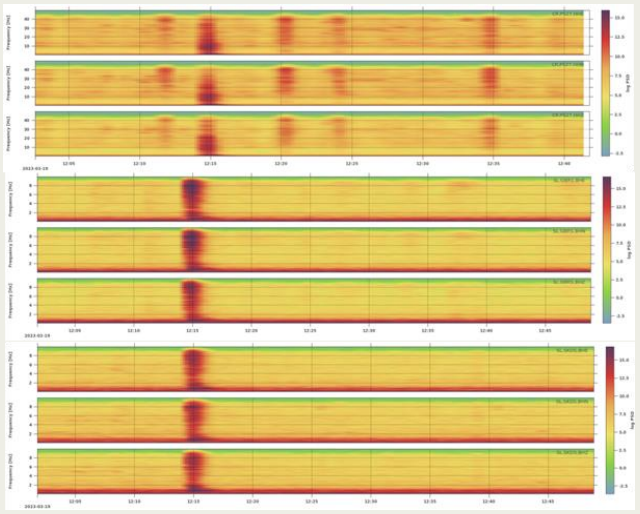
P2.2-150

Map of the location of the controlled detonation of an aerial bomb in the Bay of Rijeka



Spectrogram of the detonation showing a dominant frequency range between 2 Hz and 5–6 Hz, with peaks around 3 Hz and 4.5 Hz, recorded at stations PS27, GBRS, and SKDS

- This poster is about analysing seismological data from the Croatian and Slovenian network (24 stations – 18 permanent and 6 temporary) to enable precise determination of the explosion's location and the energy released.
- The results shows that the explosion occurred on March 19, 2023, at 12:14 UTC, at coordinates 45°14'32.6" N and 14°23'56.0" E, 8.3 km offshore from the nearest land.
- Spectrogram analysis shows that the dominant frequency range at most stations is between 2 Hz and 5–6 Hz. The strongest components fall between 3 and 4.5 Hz, which is consistent with the frequency profile of underwater explosions, known for producing significant low-frequency energy.
- All three components (HNZ, HNE, HNN) exhibit a rapid rise in amplitude, a fast decay, and weak trailing oscillations. The vertical component (HNZ) shows the highest amplitude, highlighting the strong compressional nature of the P-wave.
- If you are interested in more information about data, methodology and results, please feel free to speak with us on **11 Sept 2025, 12:00, place: Zeremoniensaal at Board: 3**!

CROATIAN SEISMOLOGICAL SURVEY