

## Discrimination of Decoupled Explosions from Microearthquakes

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### Abstract

There are always some difficulties to discriminate artificial explosions from micro-earthquakes, furthermore more difficulties to indentify and determine decoupled explosions and/or multiple explosions from micro-earthquakes.

In this study we use the synthetic seismogram of the inhomogeneous models between the source and the observation station in order to find the source effect of the geological environment. We have found some source characteristics of the air-filled and/or water-filled cavity that we can hardly see P- and S-waves arrivals and that the high frequency coda waves are well observed compared to the coupled explosions or earthquakes.