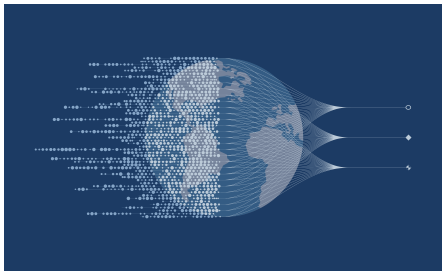

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source position by using an over-wavelength sensor array

To study impulse sound of shell explosion position in a far field over 5km even for nuclear explosion's position. One new way was designed to perform clear spot image of source position with accurate result, that is a reverse beam-forming of burst pulse sound, Meanwhile, time-delay variance is used to estimate source's coordinates and sound's average velocity suggested the sound's propagation is unchanging in its path. Simulation was made to check algorithm's stability in a 6km area with random distributed 66-sensor array with spacing over 100m, A low side lobe result was obtained. After that, a 30-sensor infrasound array with over 10kPa detection range was created in a 5km shooting field with spacing over 20m to detect explosion impulse sound, position result is quite good with error less than 5m.

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