

Title: Infrasound from ground-motion sources recorded by airborne microbarometers

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Authors: D. C. Bowman, S. Krishnamoorthy, L. Martire, Y. Chaigneau, R. Garcia, A. Komjathy, D. Mimoun, J. A. Cutts

Ground motion from buried explosions and earthquakes generates acoustic waves in the atmosphere. These pressure signals contain information on the characteristics of motion directly above the event and the properties of the seismic wavefield as it spreads from the epicenter. However, since the dimension of the ground motion radiator is typically large compared to the acoustic wavelength, much of the signal is directed upwards and thus lost to ground-based microbarometers. Here, we report recent results from several experiments that captured ground motion generated acoustic waves using microbarometers arrays floating in the atmosphere. We show that the acoustic signals are faithful representations of coupling between ground motion and the atmosphere. Finally, we discuss the relevance of these recordings for monitoring underground explosions on Earth as well as potential seismic activity on Venus.