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**Comparing time domain Green's functions with simulated noise
and ambient noise data cross-correlation for a horizontal array**

Stephanie Fried^a, Karim Sabra^b, Philippe Roux^c and William Kuperman^a

^aScripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093-0225, USA

^bGeorgia Institute of Technology, School of Mechanical Engineering, 771 Ferst Drive, NW, Atlanta, GA
30332-0405, USA

^cLGIT - CNRS - Université Joseph Fourier, Maison des Géosciences, 1381 rue de la Piscine, BP 53, 38041
Grenoble, France

Previous work has shown that an approximation of the Green's function can be extracted from ambient noise data through cross-correlating the received signals along an array. The resulting Green's function approximation gives accurate time-of-arrivals for the multipaths between hydrophones but can only approximate the magnitude of the arrivals in the time domain Green's function. Nevertheless, some useful information can be obtained from the relative amplitudes of the correlated returns assembled. Further, a Monte Carlo noise model simulation for a similar environment for which noise data was collected reproduces the same cross-correlation arrival structure for the processed ambient noise data and the theoretical time domain Green's function arrival structure. [Research supported by ONR].