

Supporting Information for: Urban Seismic Site Characterization by Fiber-Optic Seismology

by Zack J. Spica, Mathieu Perton, Eileen R. Martin, Gregory C. Beroza and Biondo Biondi

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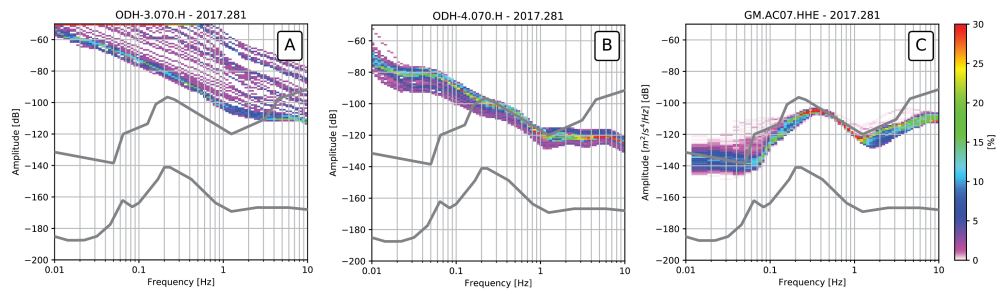


Figure S1: Power spectral density (PSD) function analysis for different recording instruments at Stanford. PSD were computed following McNamara et al., (2004) and for each instrument after conversion of their records to particle velocity. ODH-3 interrogator unit (A) shows a much more unstable pattern of records and much noisier than new generation of sensor ODH-4 (B). Due to the vicinity to the coast, the PSD of ground motion at the microseismic peak is expected to be high, as is observed using the records of the broadband seismometer AC07 (C). Gray lines are the high-noise and low-noise model of Peterson et al., (1993).

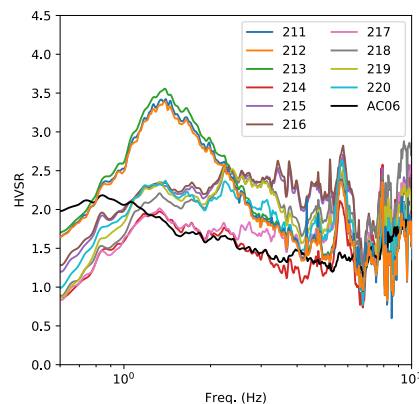


Figure S2: D-HVSR (colored) for a subset of channels on the line perpendicular to Via Ortega Drive. These D-HVSR show a flatter curve more similar to V-HVSR from station AC06 (black line) although they are not perfectly adjacent to it. This suggests a more complicated structure in this region.

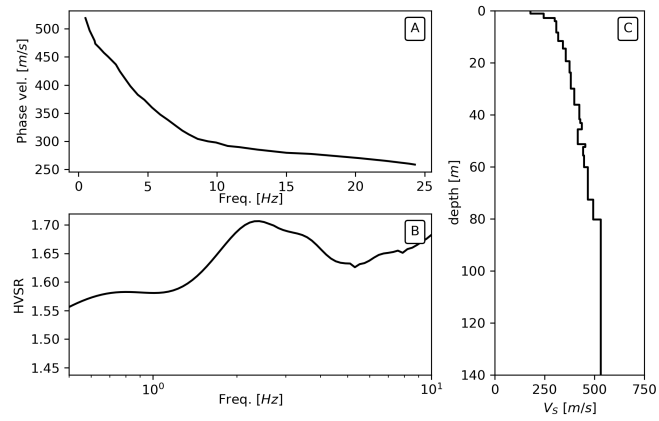


Figure S3: (A) Synthetic dispersion curve obtained for central campus. (B) Synthetic HVSR obtained from velocity model in (C). (C) Average of shear-wave velocity models obtained for central campus by Thomas et al., (2013). The half-space is extrapolated with constant velocity.