

1 Normal modes of a medieval tower excited by ambient
2 vibrations in an urban environment —
3 Supplementary material

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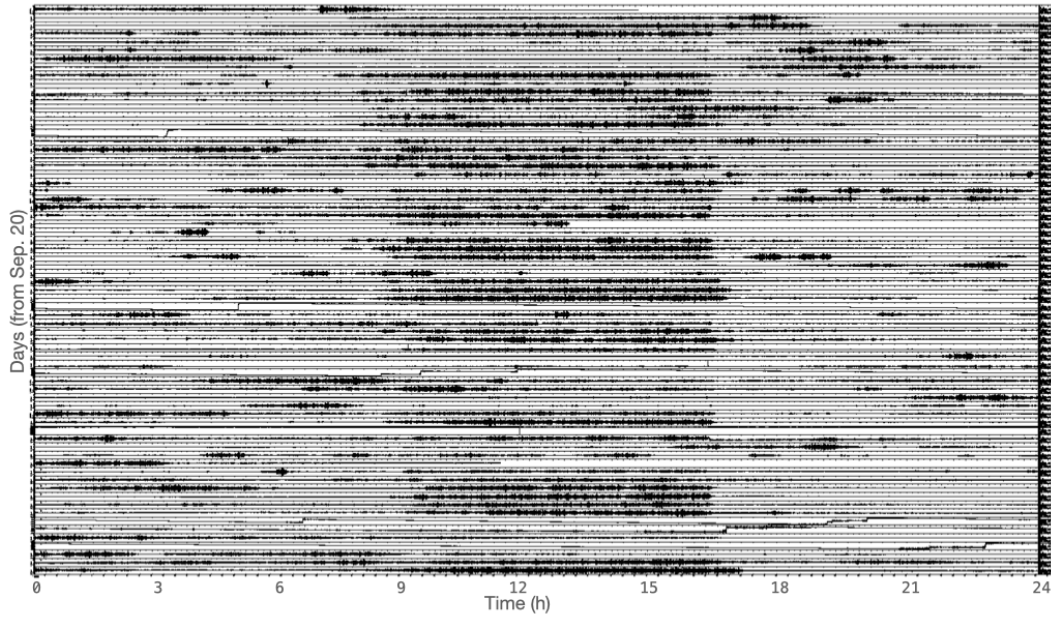


Figure S1: Unfiltered velocity record for 100 days of the North component of station AS97, located at the top of the tower. Each of the 100 traces (normalised to $\pm 2 \cdot 10^{-3} \text{ m s}^{-1}$) refers to one full day, from 0:00 to 24:00, and then continuing from the top to the bottom trace. Highest noise level is recorded in the center hours, approximately from 9 a.m. to 5 p.m., coherently with its connection with traffic.

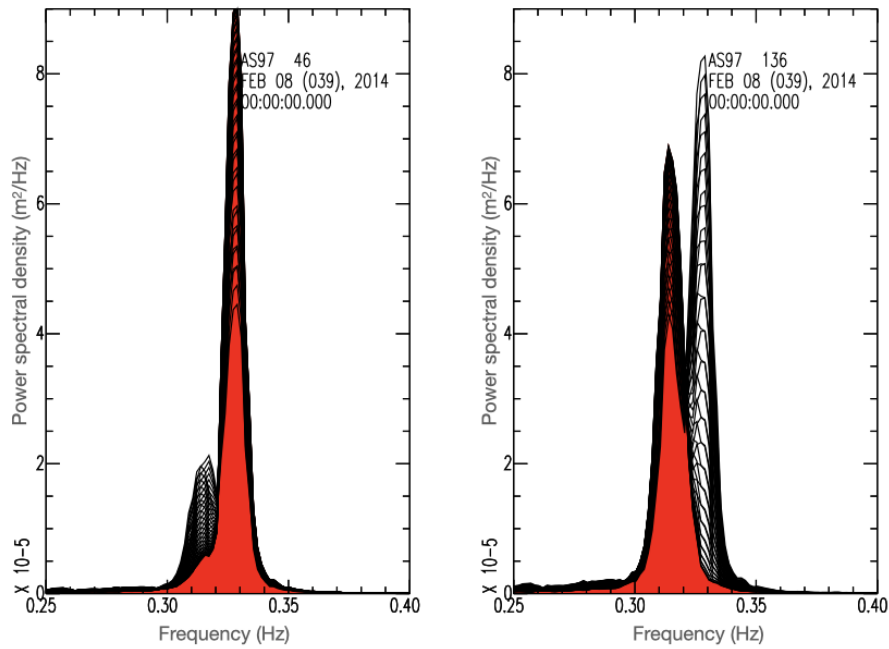


Figure S2: Spectral peaks for the gravest mode of natural vibration along two mutually orthogonal directions. This is power spectral density from multitaper analysis. Spectra plotted with black lines have been calculated for directions rotated by 2° degree increments to isolate single peaks referring to the two principal directions $46^\circ - 136^\circ$ (filled in red color). See text for explanation.