Supporting Information for "Towards tsunami early-warning with Distributed Acoustic Sensing: expected seafloor strains induced by tsunamis"

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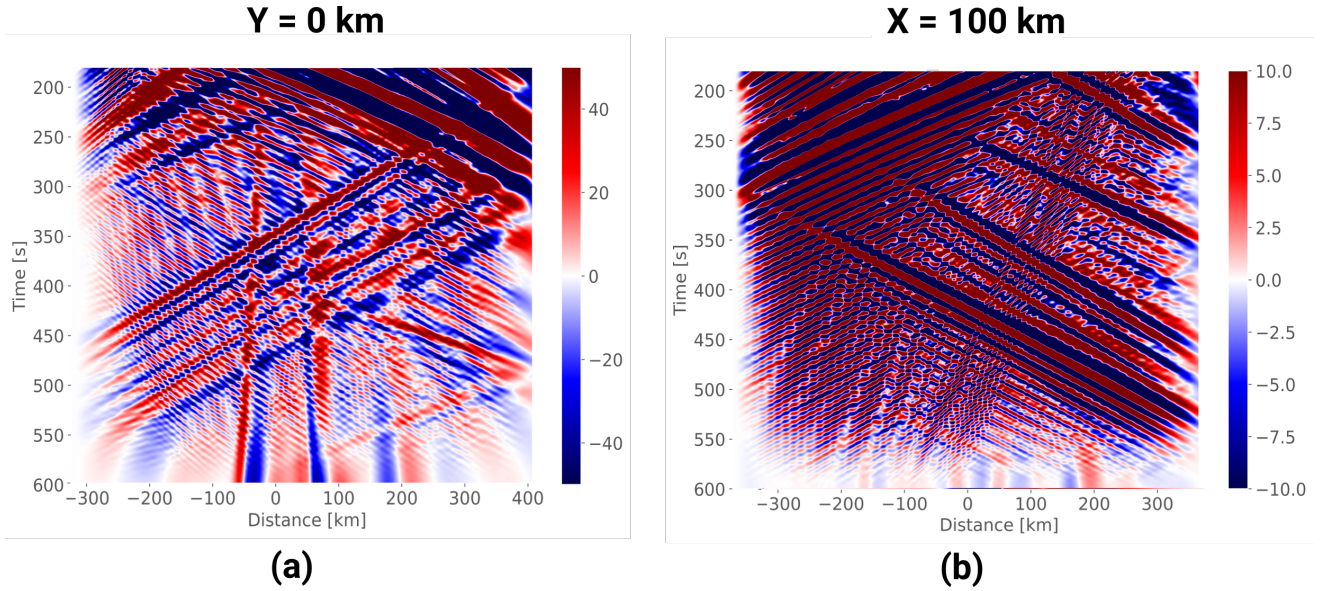
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1. Figures S1

Introduction

This supplementary contains an additional figure.

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Figure S1. In comparison with Figure 7(c, d), working with strain rate instead of strain as illustrated here, may avoid the need to subtract the mean of the final 180 secs (static seafloor deformation) from each receiver; thereby eliminating the need to wait 10 minutes before detection can occur. The same F-K filtering as described in Figure 7 is applied in generating these figures, however in this approach, the boundary reflections from the simulation remain strong which obfuscate the tsunami phase in particular for Figure (b) in which, the tsunami signal is weaker. Strain rate is expressed as a signal-to-noise ratio (SNR) relative to the mean noise floor of the DAS instrument shown in Figure 2, divided by the sampling rate (100 Hz).

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