

## COMPARISON OF OBSERVED AND SIMULATED GROUND MOTIONS IN THE LOS ANGELES BASIN

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The deep sedimentary basin surrounding Los Angeles is a region of ongoing scientific interest and study, due to its overlying dense infrastructure and tendency to amplify 3-10s period seismic waves. In this study, we evaluate the accuracy of the latest seismic velocity models – CVM-S4.26.M01 and CVM-H 15.1.0 – by comparing observed seismograms from several recent moderate magnitude earthquakes to their synthetic counterparts. These synthetic seismograms are computed via the spectral-element simulation software Salvus. In the Los Angeles basin, we see significant differences between observations and predictions, even at long period (above 3 seconds). These differences are quantified using the Anderson 2004 goodness-of-fit metrics, as well as via direct waveform comparison. Our results suggest that earthquake hazard estimation in the Los Angeles basin will benefit from specific, focused improvements of the velocity models in this region.

