

## Observed strong motions in the near-source region of the Chi-Chi, Taiwan earthquake and their damage impact to structures

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We first establish a set of structural models that can reproduce the observed damage ratios based on the simulated ground motions in Kobe during the Hyogo-ken Nanbu earthquake. We consider this set of models a yardstick to measure damage impact of strong motions to ordinary buildings in Japan. We input strong ground motions in the near-source region observed during the Chi-Chi, Taiwan earthquake to this set of buildings to see their impact. It turns out that the records at TCU068 with the largest peak ground velocity cannot yield heavy damage to structures but that the records at TCU084 with high PGA and PGV yield very severe damage to them because such records with dominant period around 1 second are most dangerous to ordinary buildings.