

Youngs et al. (1997) Subduction GMPE

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Basis of 1997 Model

- Limited database of strong motion recordings
- Larger database of published PGA values
- Developed a GMPE for PGA
- Developed a model spectral shape
- For intraslab earthquakes, only PGA data were used and interface spectral shape was applied

Questions on Use

- Data used is prior to 1992 when the model was developed
 - A lot more data is now available
- PGA model for intraslab was based on scale factor from interface attenuation, does not include a difference in rate of attenuation
 - More recent models typically show a difference in rate
- Issue for consideration, Youngs et al. (1997) also considered simulations for $M > 8$ which suggested near source ground motions more consistent with shallow crustal (WNA) earthquake data than the existing empirical data (e.g Chile and Mexico 1985 $M 8$)
 - In application used two models, one published empirical model and the other an envelope of empirical subduction and WNA crustal
 - This effect may be captured by more recent models
- The age and limit data used to develop the model suggests that it should be given low weight or not considered for used in the updated maps