Cybershake v20p4

"Scientific" Improvements

	Functionality	To be included in this version	Might be included	Not this version
Velocity Model				
	Basin Modeling			Add high priority basins
	VM	DEM extent increase + off-shore basin		
	VM	VM Size decreased based on depth of rupture - sim duration changed to account for surface arrival times		
Tectonics				
	Subduction	VMs with 3 cm/s PGV threshold.		
Simulation Method				
	SRFgen improvements for shallow crustal earthquakes from validation	Prelim validation needs to be done		
LF				
	200m simulation realisations	For all faults		
HF				
	Using Target dx/dy (stoch file more aligned with srf)	for single segment ruptures		
	HF Scaling	HF DT decrease – using 0.01 for HF-DT, 0.005 for BB-DT		Scale stoch dx/dy down with area of fault. (when reach X number of subfaults double the dx/dy value)
	Sim methodology improvements	Using gmsim_v20.4.1		
Stations				
	New Non-uniform Grid	Update in Christchurch / Wellington Region Finer Grid Real station update Only land stations in all versions of the grid (ref: Notes on lat,lon <-> x,y conversion) Similar number of stations Non Uniform Grid 20.3		
Vs30				
	vs30 improvements	Using geology only. Modified coastal areas with a distance to coast factor.		
Realisations				
	Additional Realisation Parameters (e.g. Magnitude)	Mw - Stress drop perturbation based on Leonard sigma and correlated together slip/rake/rise time perturbations come from the seed we pass to genslip Shypo / Dhypo unchanged from last version		
	Change SRF slip seed generation	Randomised rather than same sequence		
Fault Sources				
	ERF			Create custom ERF for cybershake run
	Fault size rounding	Nearest 0.5k / 0.1k		