mperial Earthquake Acceleration Difference to Second-Order Central Differer 0.04 -From Central Diff. Velocity Profile (central diff.) From Forward Diff. Velocity Profile (backward diff.) 0.02 Acceleration (m/s2) 0.00 -0.02-0.040.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 Time [s]