gmsim_v18.5.3

This is a modification of gmsim_v16.1.1 based on the work of Robin Lee in 2017/2018. This version implements both modifications made in gmsim_v18.5.1 and gmsim_v18.5.2:

1. Removing the long period site amplification (or reducing to a 1-2s taper as opposed to the previous 2-5s taper?)

This change to reduce the long period site amplification was as a result of the CB14 site amplification over-amplifying long periods since it double counts for velocity features which are already explicitly modelled in the LF simulations (due to the high resolution 3DVM).

2. Changing the HF path duration from $D_p = 0.07R$ to the Boore and Thomson (2014) path duration developed using the NGA-West2 databas

This change to increase the HF path duration was a result of the duration being identified as too short when compared to observed ground motions.

Background and computational implementation of the two changes are provided on the pages for the versions corresponding to the individual changes:

1. Path duration model: gmsim_v18.5.1

2. Long period site amplification: gmsim_v18.5.2

Computational Implementation

Includes changes to hf version and path_dur associated with gmsim_v18.5.1 and changes to bb fmin, fmidbot and no-lf-amp associated with gmsim_v18.5.2.

With the binary and yaml workflow, the root_defaults.yaml script should be the following for a 100m grid run:

```yaml
hf:
  version: 5.4.5.1
  dt: 0.005
  rvfac: 0.8
  sdrop: 50
  path_dur: 11
  kappa: 0.045
bb:
  version: 3.0.4
  site_specific: false
  fmin: 0.5
  fmidbot: 1.0
  no-lf-amp: True
emod3d:
    emod3d_version: 3.0.4
flo: 1.0
dt: 0.005
```