**los\_3d.f**

**arguments** (3)

1: satellite number

2: station name (4 char.)

3: time epoch (time after earthquake in minutes)

**necessary files**

“input/sitnames”, where XYZ coordinates of GNSS stations are stored

“input/ray\_sim.ipt”, a 5 line file in which you need to give

line 1 filename storing station positions (“input/sitnames” in this case)

line 2 filename storing xyz positions of satellites (output file of “rdeph”, “rdeph3”, “rdeph3\_glns” etc.)

line 3 ray tracing file (this file is not used in this program)

line 4 longitude/latitude of epicenter (or crustal uplift center)

line 5 time of earthquake occurrence in UT hour

**example**

bin/los\_3d 02 0319. 10.0 > (output file)

To get east-north-up coordinate values, for line-of-sight connecting satellite #02 and station 0319, at 10 min. after earthquake.

It is recommended to make these files every 15-30 seconds (every 0.25-0.50 minutes) for smooth-looking simulated TEC data (as shown in the script file “los\_3dprep”). In my experience, satellite movement is slow and every 30 seconds would be fine (rather than every 15 seconds). You need to make these files to cover the time range you employed for ray\_block3d.f.

**How to view the output file**

there is no viewing program for this