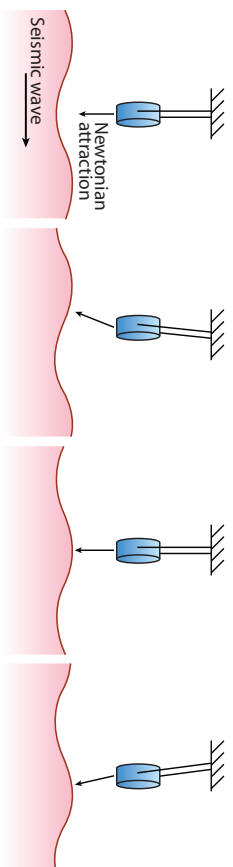
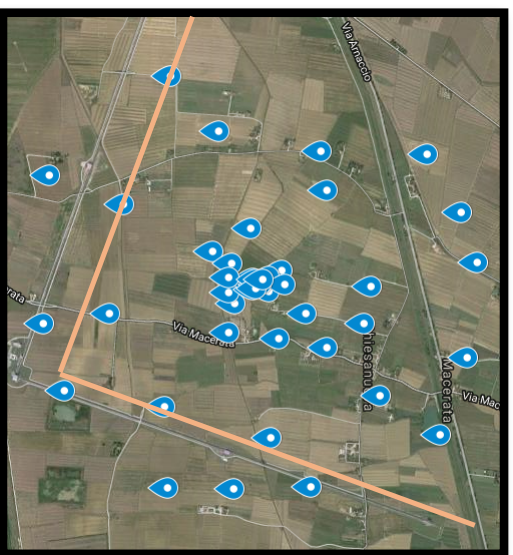


Newtonian noise modeling



Step 1: Understanding of soil structure in depth

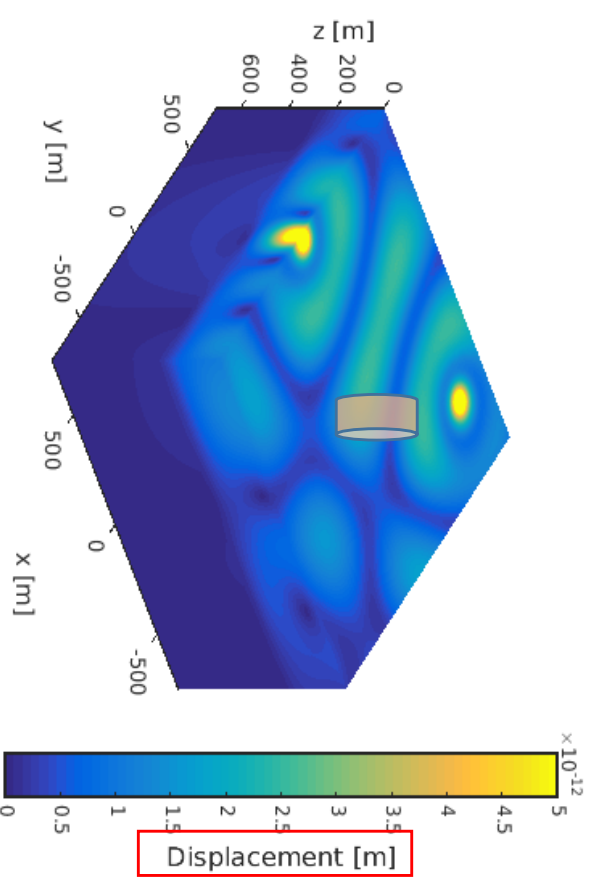
Seismic study Virgo site



- Parameters
- ✓ Beamforming
 - ✓ Ground layer depth
 - ✓ Wave velocities
 - ✓ Density models
 - Damping factors

Step 2: Seismic ground model

- Model each soil layer with measured parameters
- Receivers underground
- Excite: Point sources



Step 3: Calculate NN

$$\delta a_{NN} = G \sum_i \mathbf{M}(\zeta, r) \rho_i V_i$$

Status:

- Virgo site & Limburg area simulation planned
- In contact with TU Delft & Shell for missing parameters
- Meantime: Toymodel, Compare to Mark's results