

Comparing single-station 6C measurements and array measurements for seismic microzonation

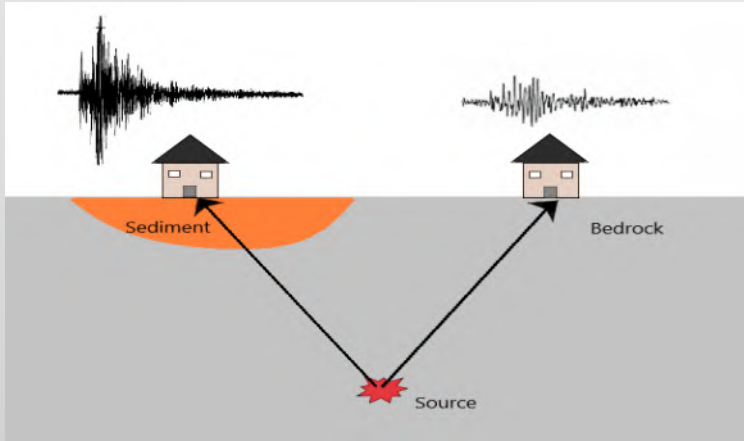
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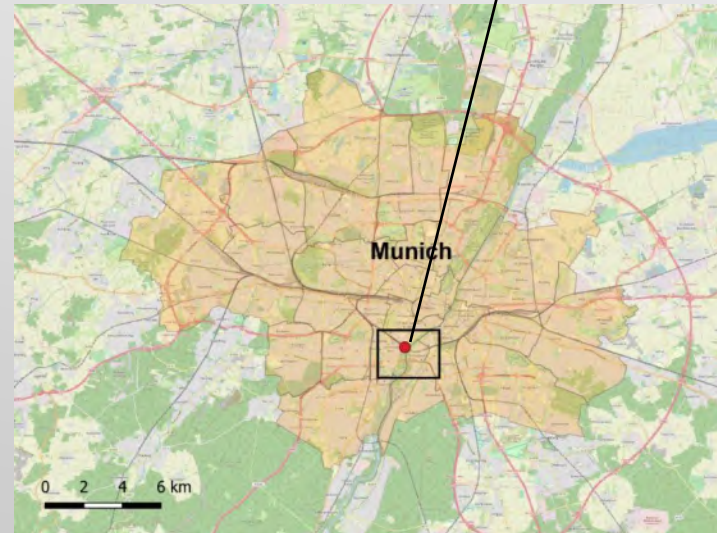
- Estimating wave velocity of the shallow subsurface (< 100 m)



→ Soft sediments amplify ground motion



Geothermal power plant





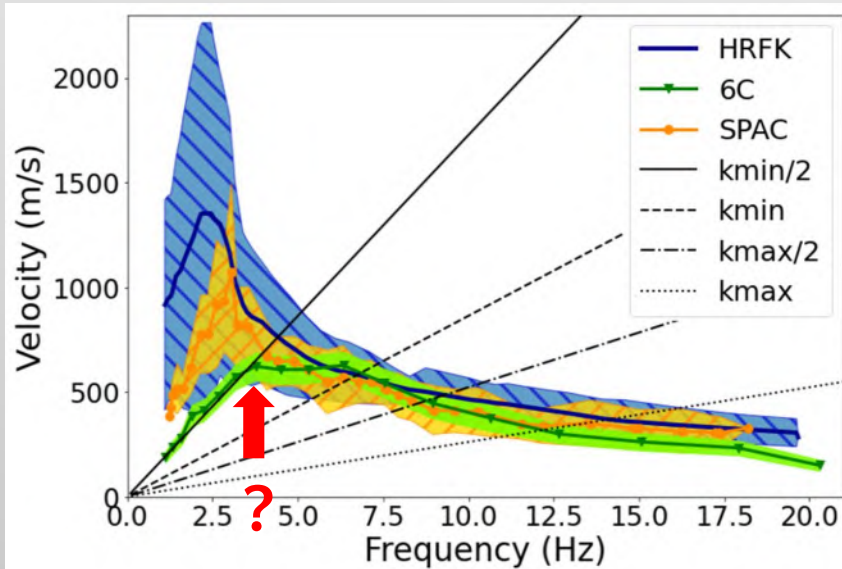
Array
vs.
6C



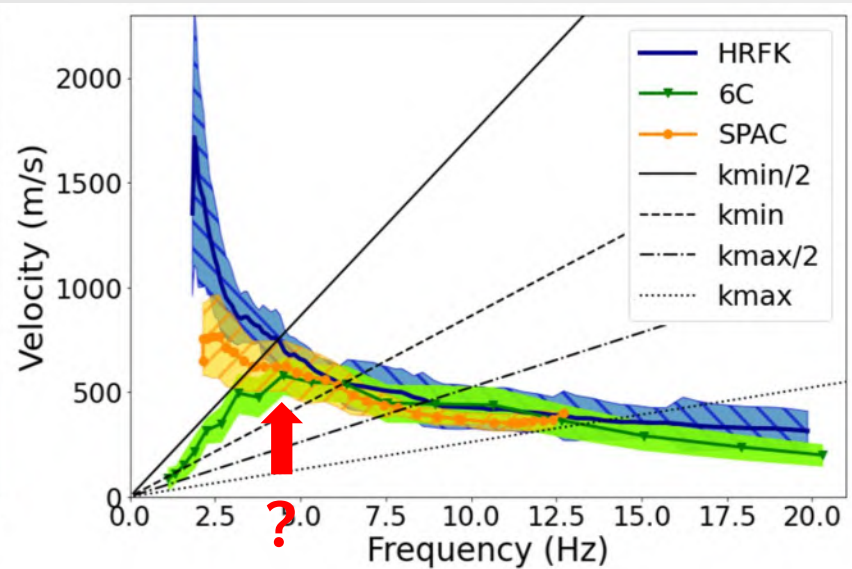
$$-\frac{1}{2} \frac{a_T}{\dot{\omega}_Z} = c_L(f)$$

Dispersion curves:

Rayleigh

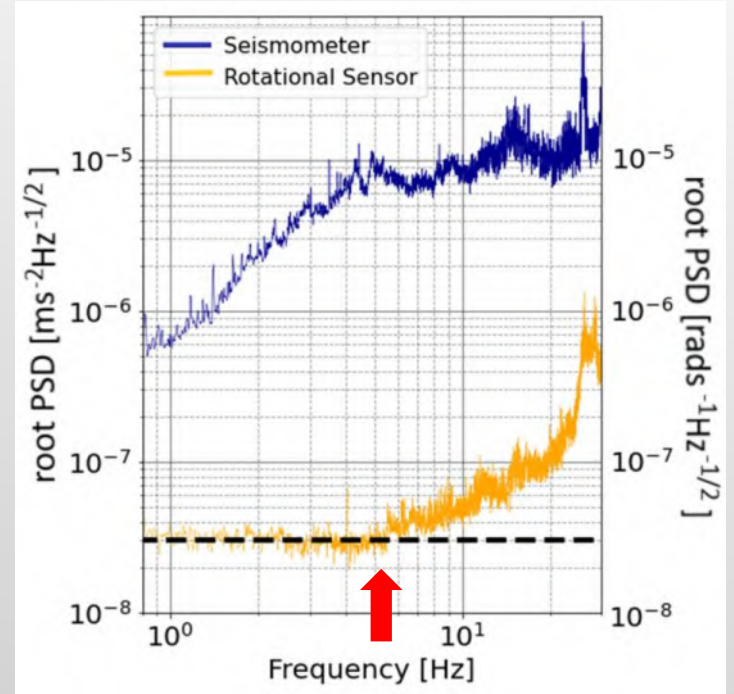
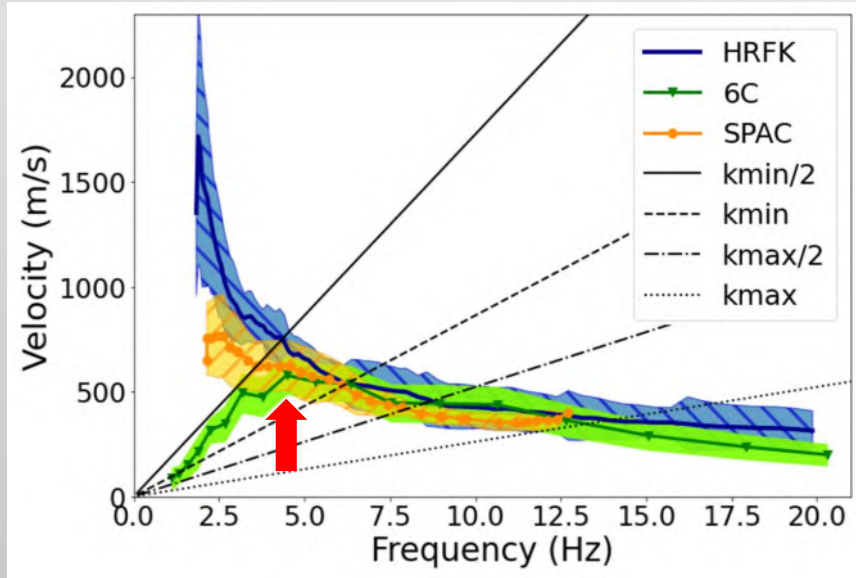


Love

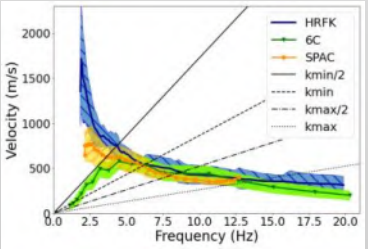
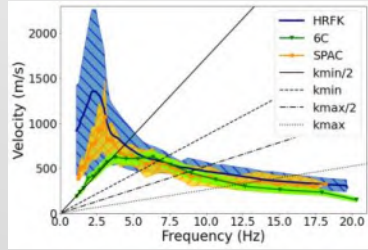


→ Overlap between array and 6C derived dispersion curves

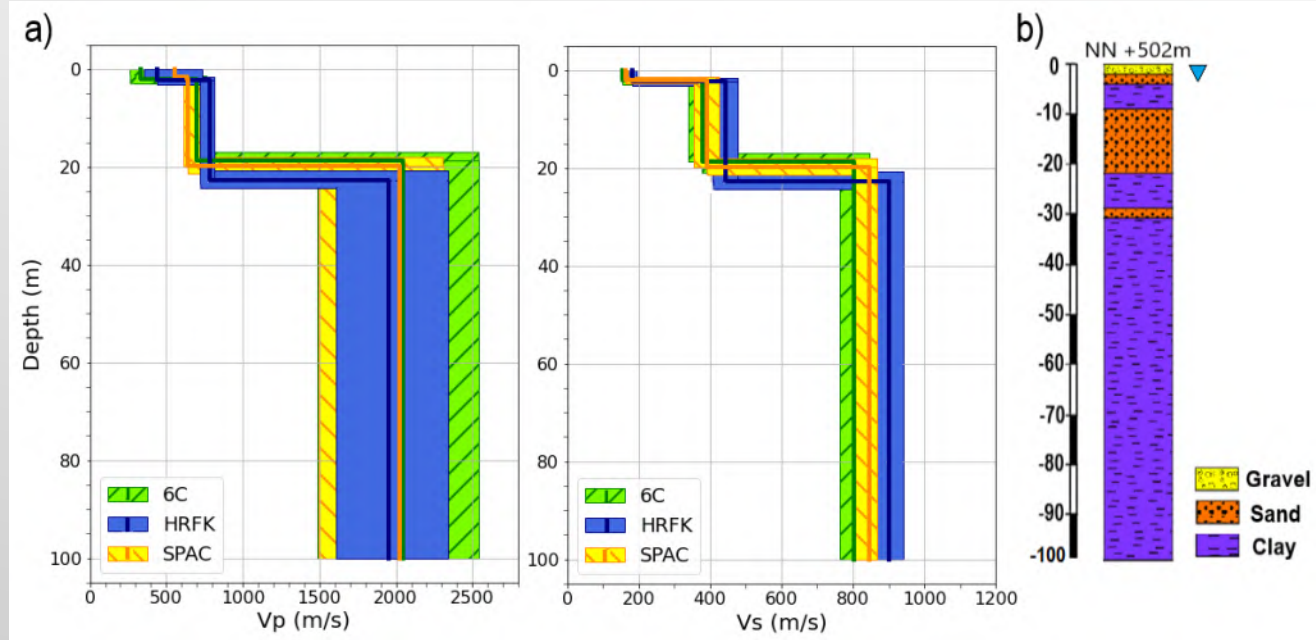
Dispersion curves:



-- self-noise rotational sensor



Inversion



→ Inversion of array and 6C derived dispersion curves results in similar velocity profiles



**6C measurements give
comparable results to array
measurements and yield
logistical advantages**