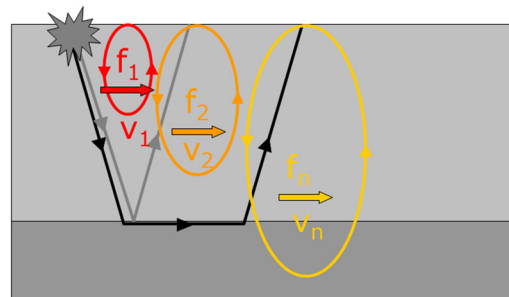


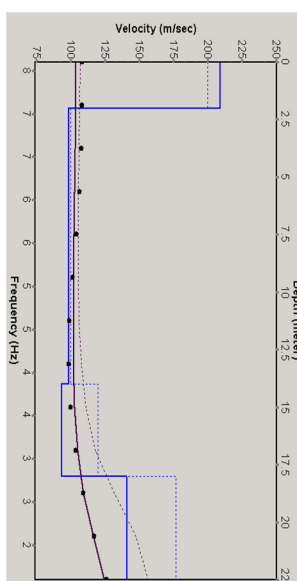
## Surface wave seismics

Surface wave seismics makes use of the most powerful seismic wave types, and gives the best resolution in the uppermost 10 m of the soil volume. The energy rich surface waves allows a sledge hammer to be used as a source for shallow (0-10 m) applications. It also allows for profiling measurements using a landstreamer with the geophones mounted on metal plates. The landstreamer could be towed by a vehicle producing long profiles with high resolution in a day. The method is based on the measurement of the velocity of the seismic surface waves generated by a source, ie a sledge hammer. The velocity is correlated to the stiffness of the material, the higher velocity the stiffer material. By producing a shot every 10 m and then moving the array in a roll along manner a detailed velocity profile is produced, and 2D or 3D pictures could be produced. In this project the MASW interpretation technique has been applied.

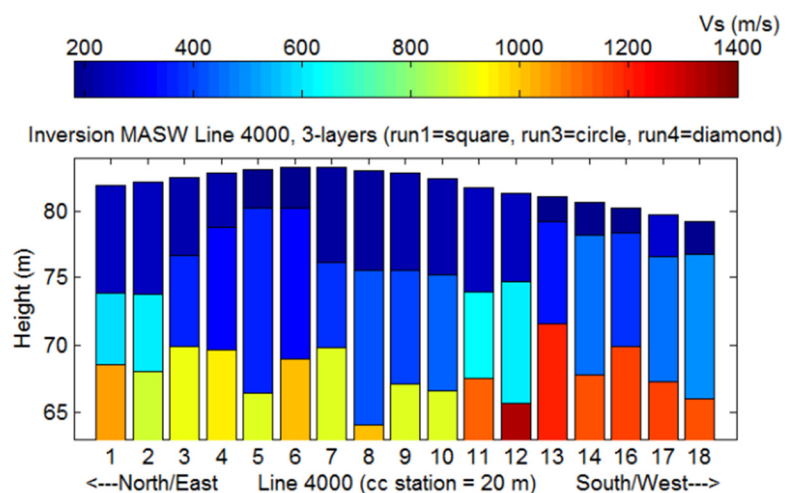


Data acquisition with a towed landstreamer.

Principle of seismic surface waves. Lower frequencies penetrate a larger volume than higher frequencies do.



Example of a single surface wave 1D profile.



A number of shots collected in a profiling manner using a landstreamer results in a 2D velocity profile.