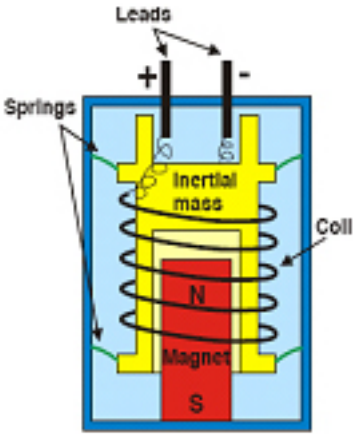
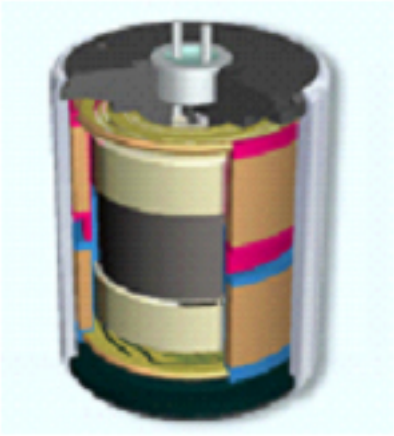
Geophones

Geophones are build on the concept of a mass suspended by a spring, and functions as a microphone, where a wire or coil surround a magnet, producing resonant frequencies commonly ranging from 5 to 50 Hz. The system does not respond to varying positions of the mass, but only to the movement rate between the positions. In simple words, the recorded data from a geophone are the velocity of the magnet relative to the coil. These data are then converted to an analog voltage. The voltage outputted form each of the 500 geophones used for this application is recorded using our data acquisition unit, allowing for recording and processing.





[1] http://vibration.desy.de/sites2009/site_ground-vibrations/content/e5/e3061/e3894/Geophones.jpg

[2] John M Reynolds (2011). *An Introduction to Applied and Environmental Geophysics-second edition*. WILEY BLACKWELL