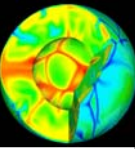




Seismometry



Principles of seismometry: a pendulum

Superposition principle

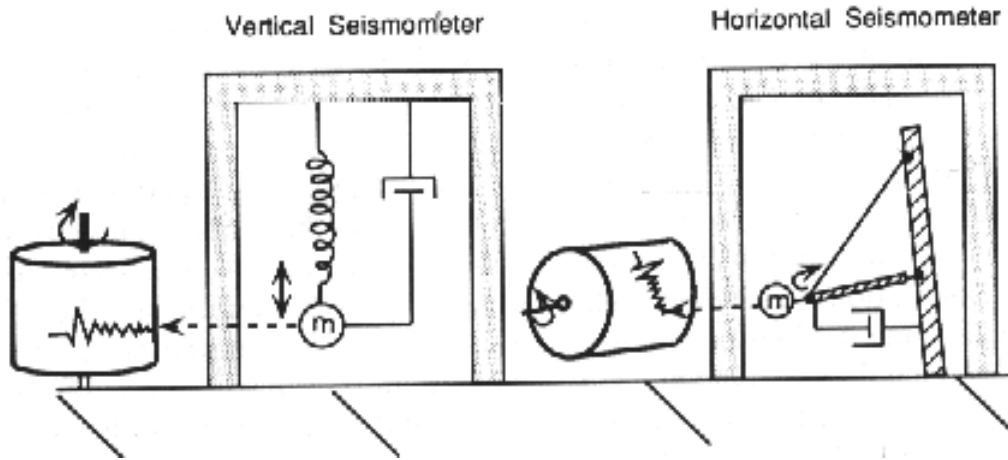
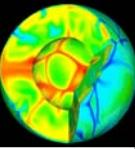
Seismic noise

World-wide networks

Filters and frequency ranges of observations



Seismometry

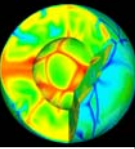


Intertial pendulum for vertical and horizontal motion.
Relative motion of the pendulum will be recorded.

What does it record?



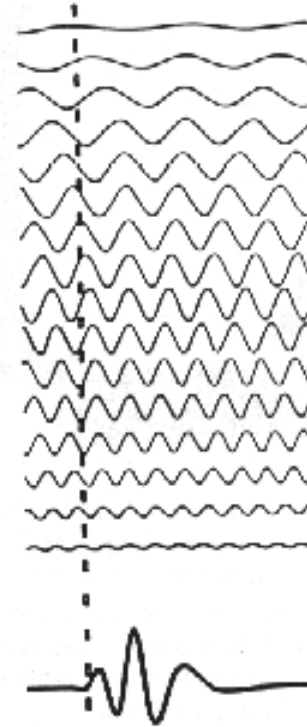
Spectral Analysis



$$\frac{1}{2\pi} \sum |A(\omega)| e^{i[\omega t + \phi(\omega)]} \Delta\omega$$

=

f(t)

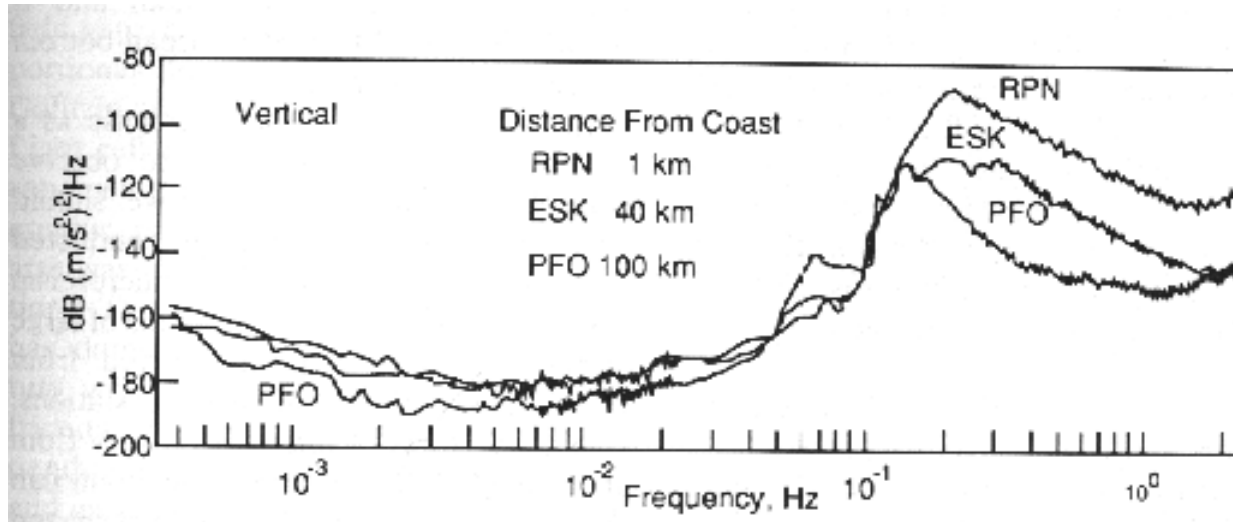
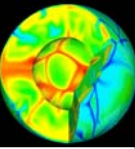


Visualisation of the superposition of harmonic waves, the most fundamental concept for describing spectral characteristic of physical phenomena?

What's it called?



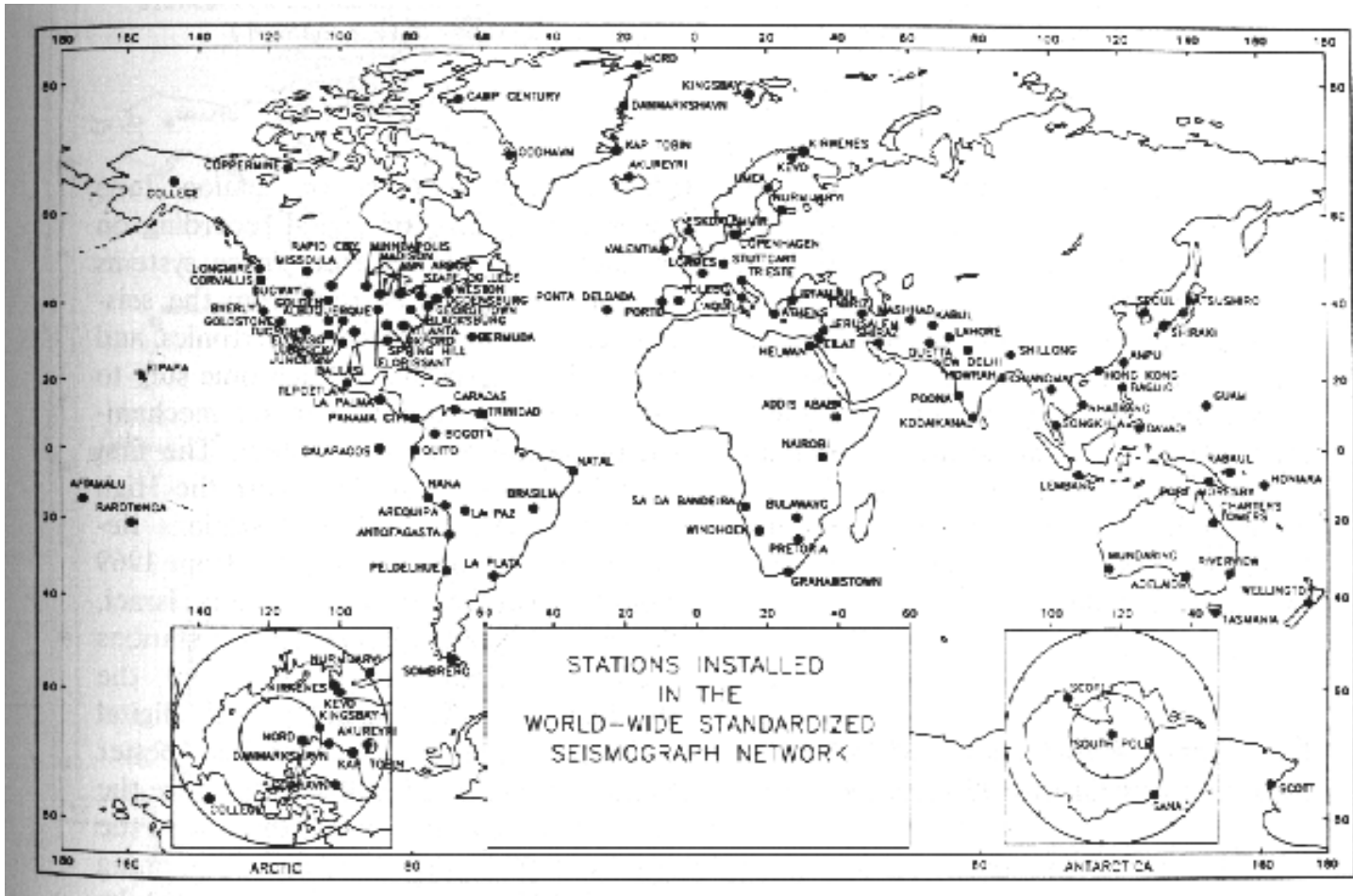
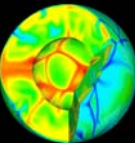
Seismic Noise



Observed seismic noise as a function of frequency (power spectrum). Note the peak at 0.2 Hz and decrease as a distant from coast.



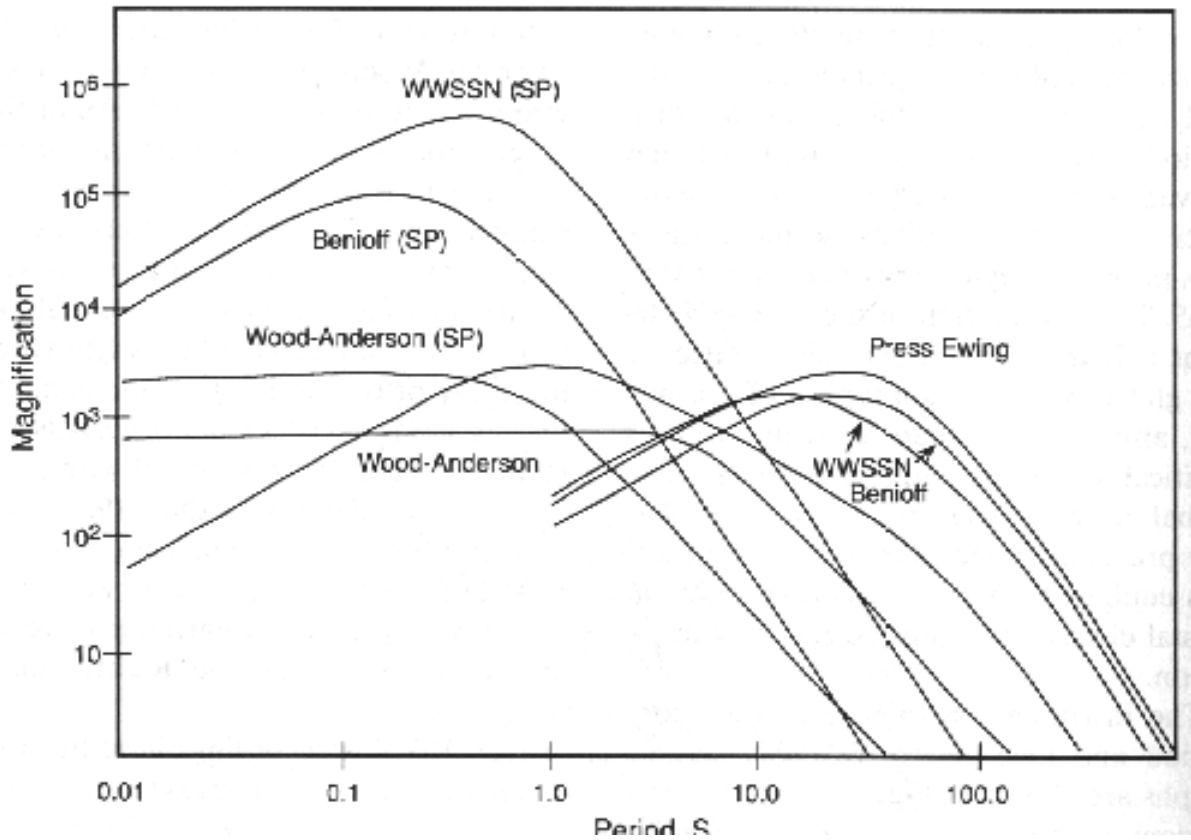
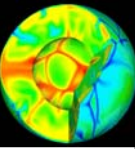
WWSSN



World Wide Standardized Seismic Network



Instrument Filters





Time Scales in Seismology

