Evoked analysis

Evoked response

Measure1 =   "*signal*"   +   Noise

Evoked response

Measure1 = "*signal*" + Noise

Measure2 =

...

MeasureN =

Evoked response

Measure1 = "*signal*" + Noise

Measure2 = +

...

MeasureN = +

Average
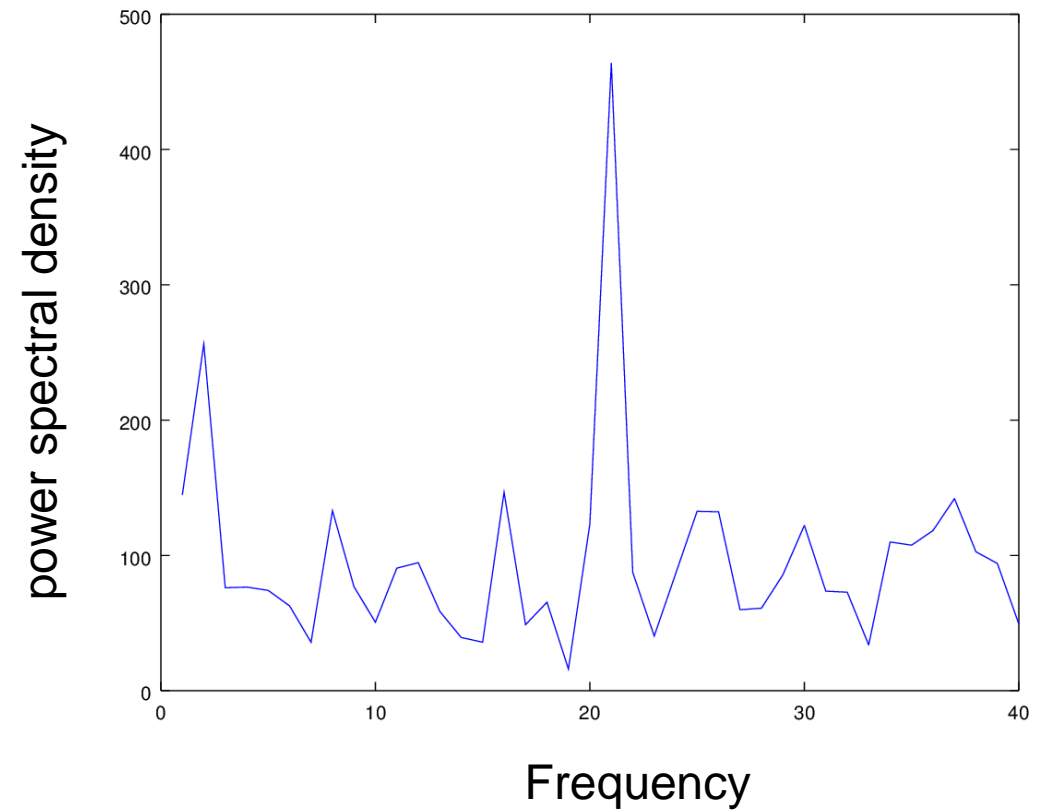($N = \infty$)
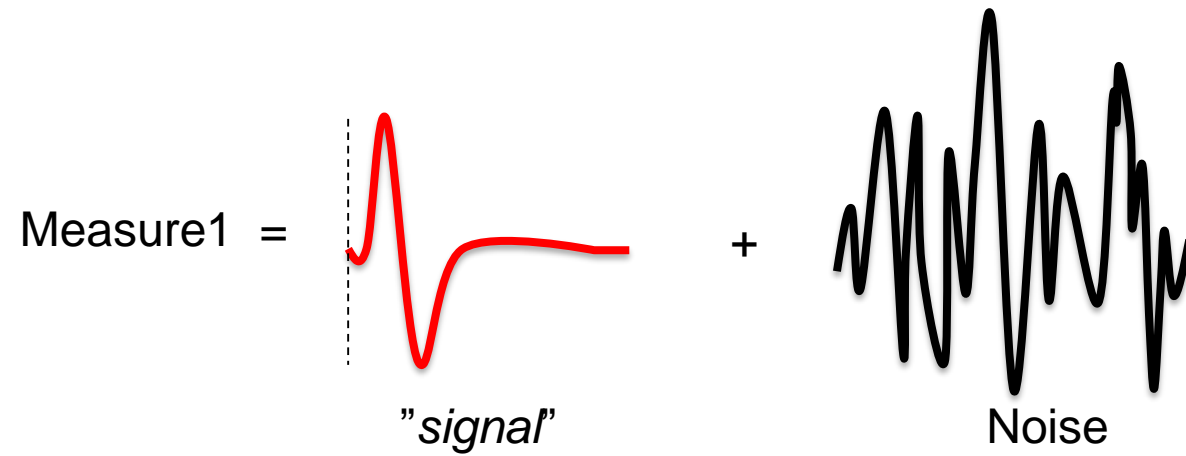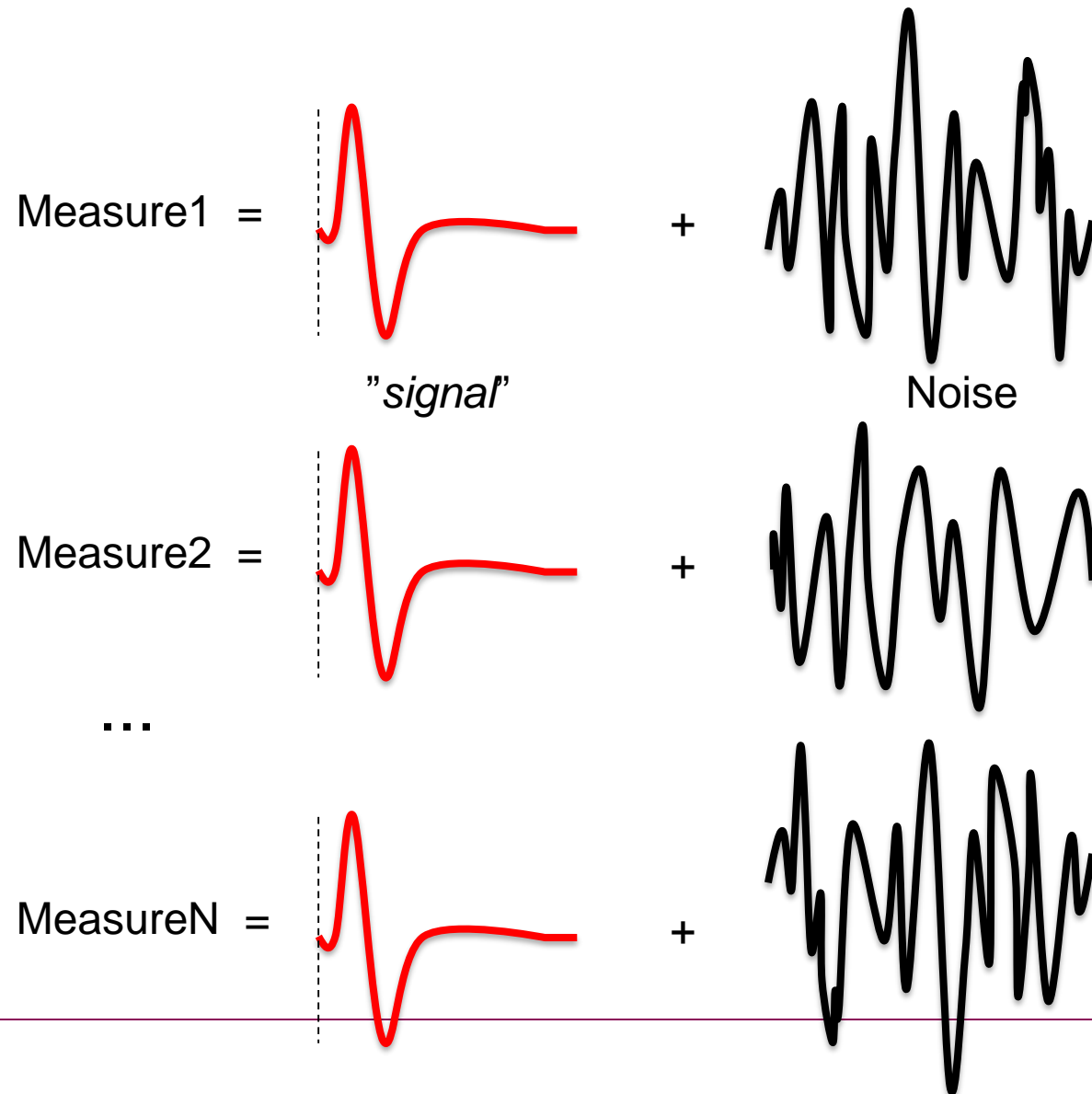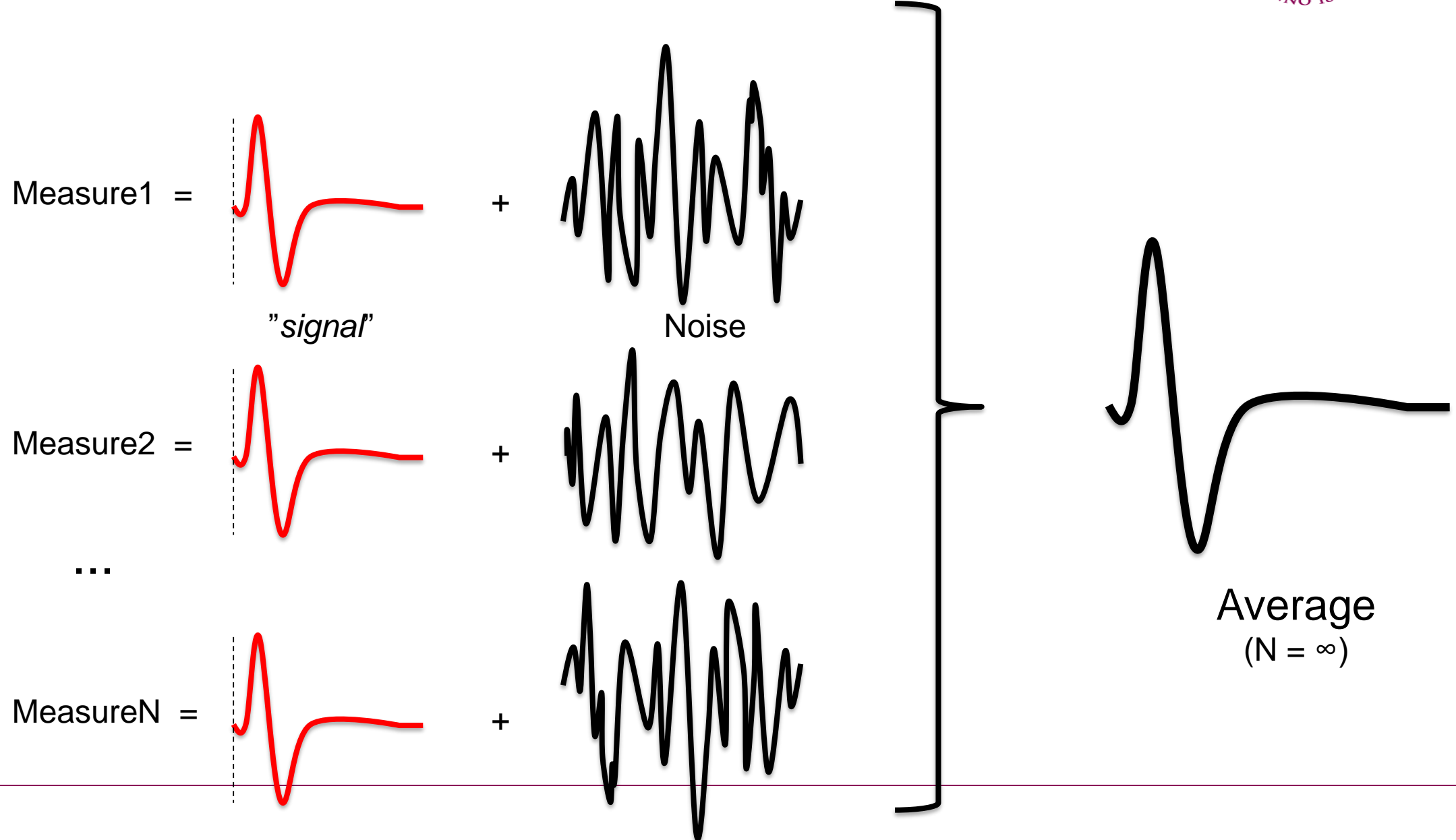
Induced responses

Time-frequency responses

Time domain
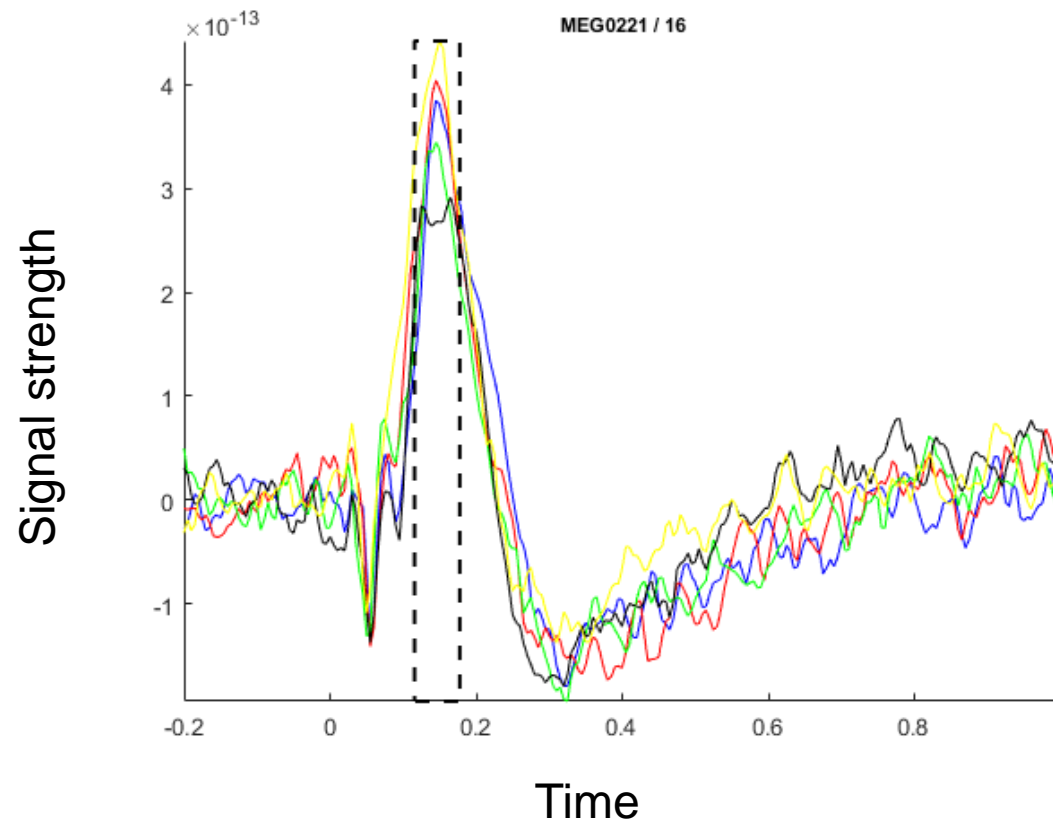
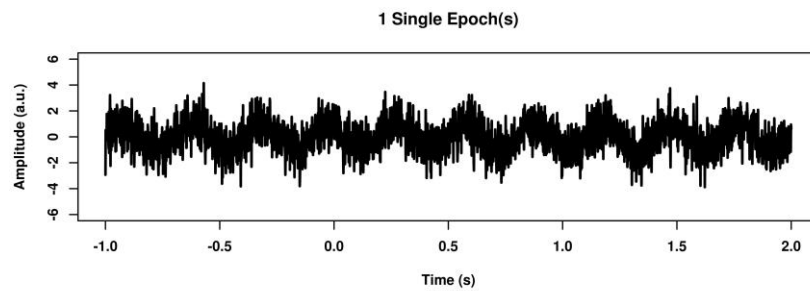# Frequency domain

Oscillations: In/Out of phase
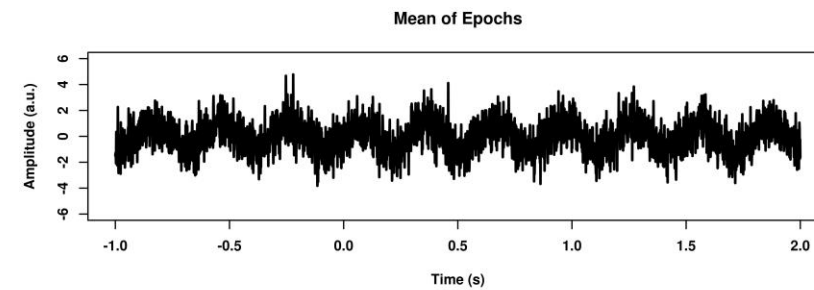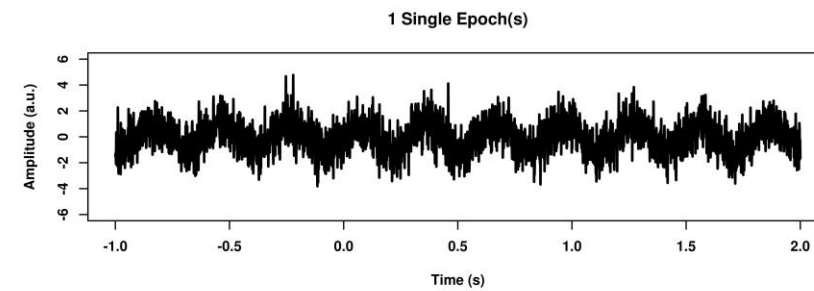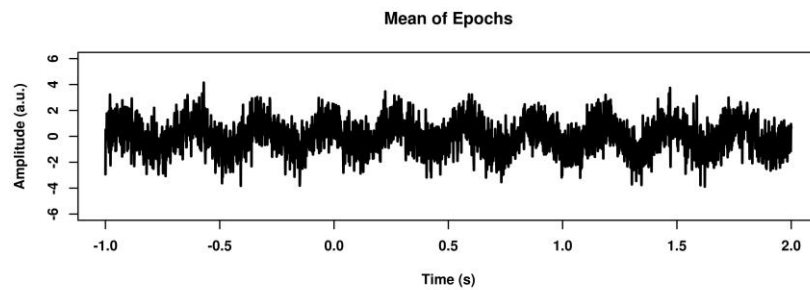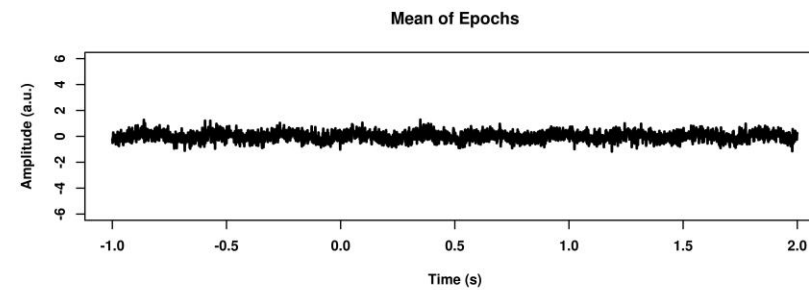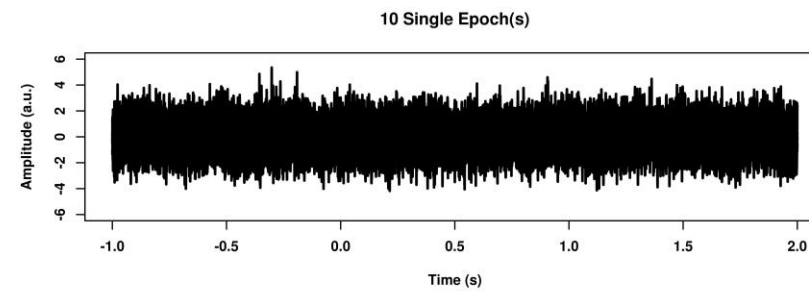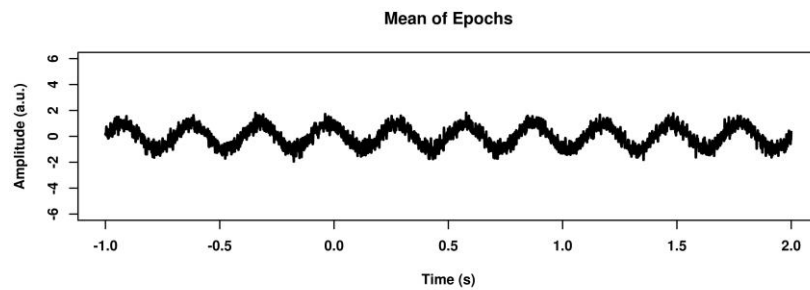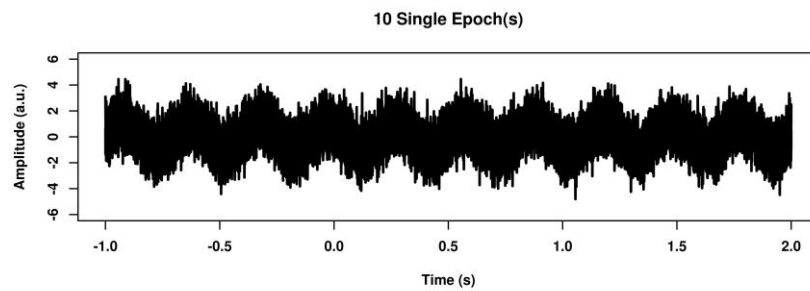
Oscillations: In/Out of phase

Oscillations: In/Out of phase

Oscillations: In/Out of phase
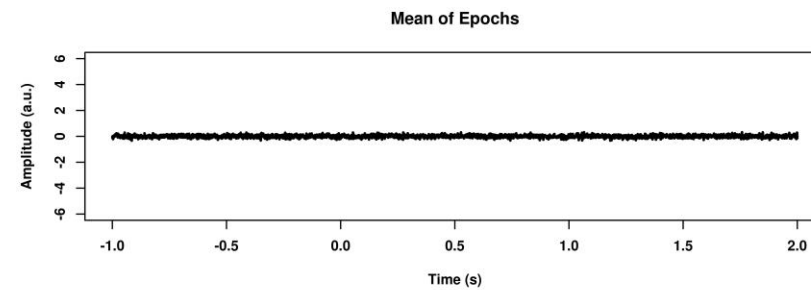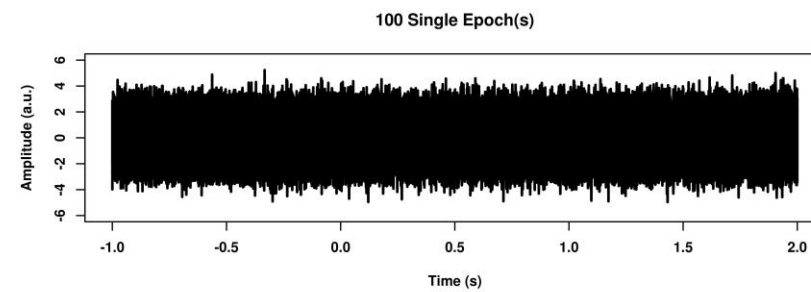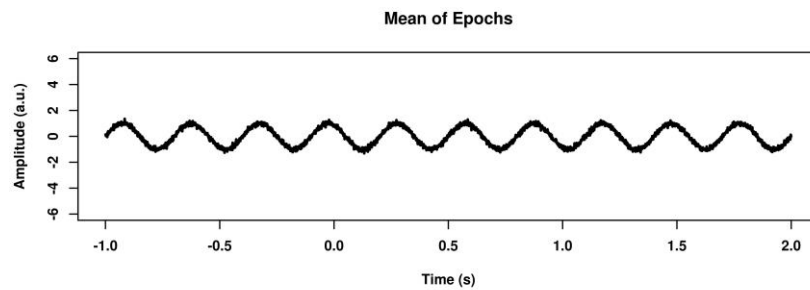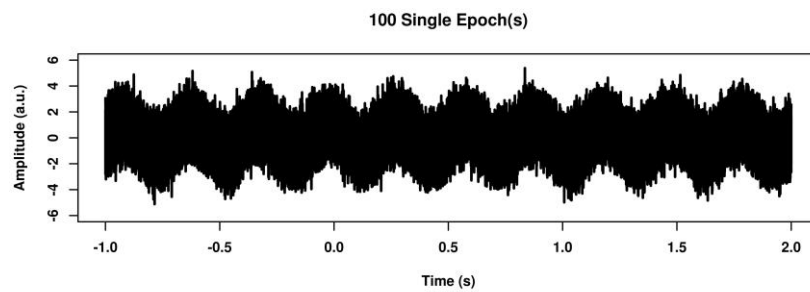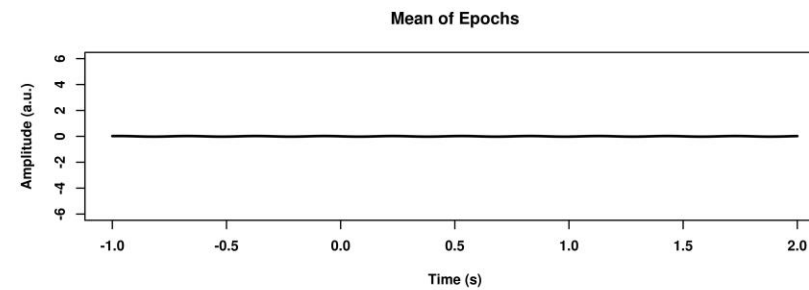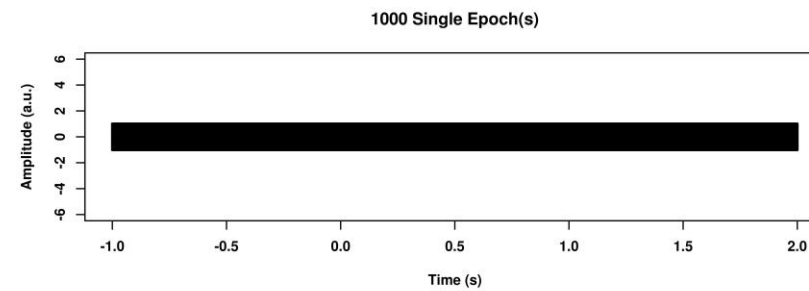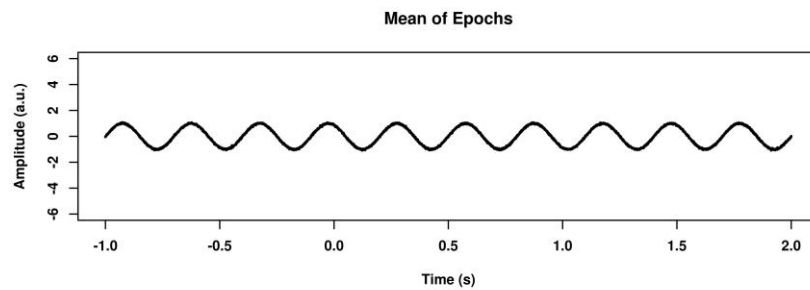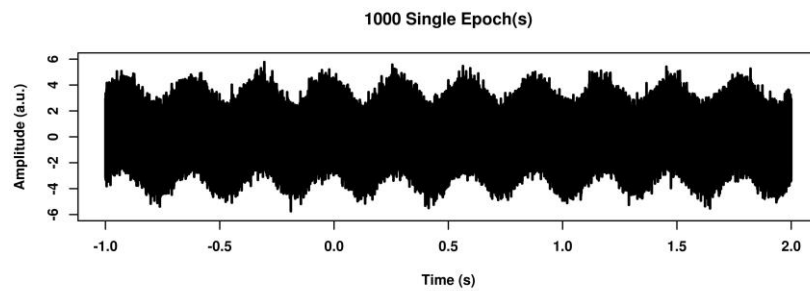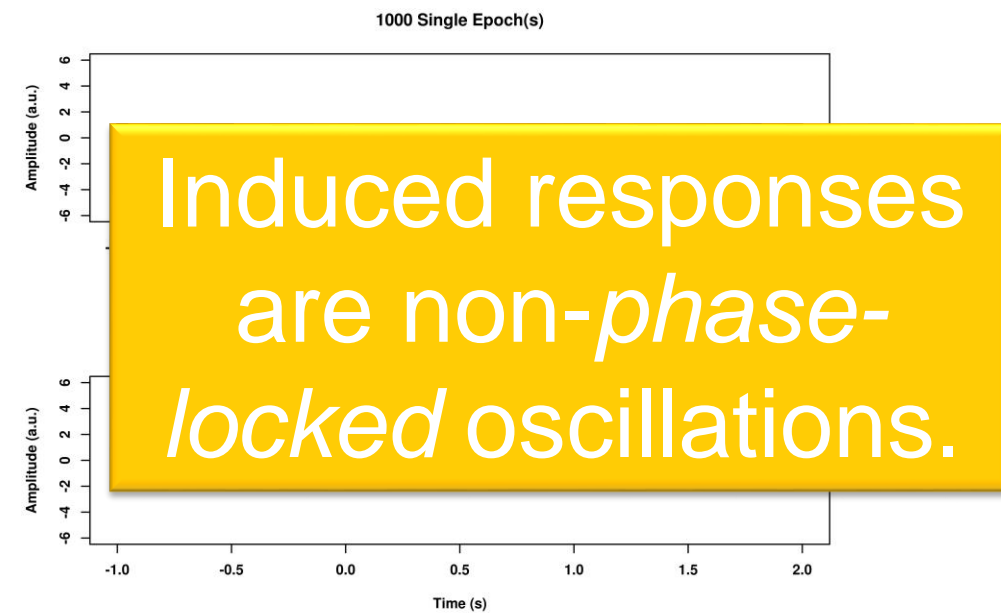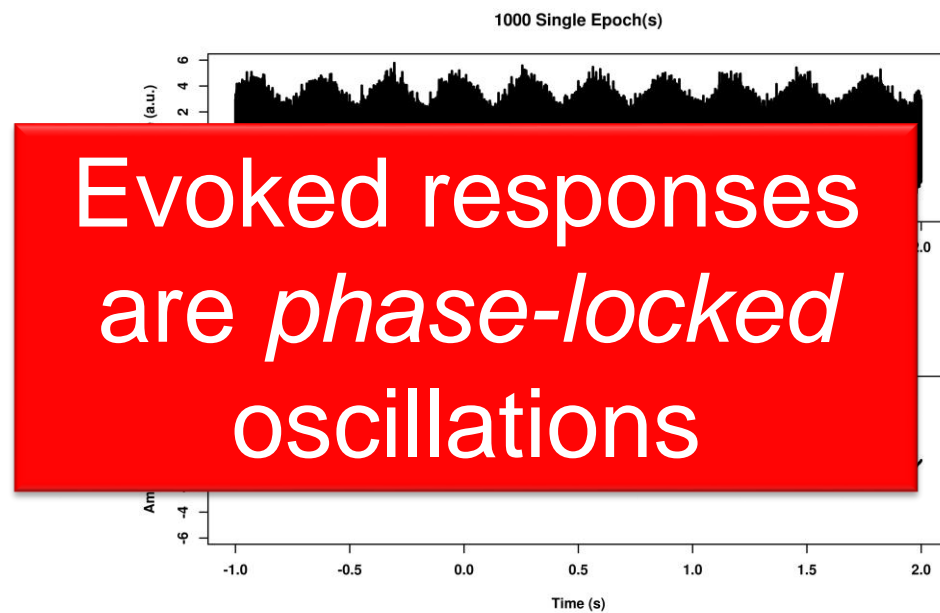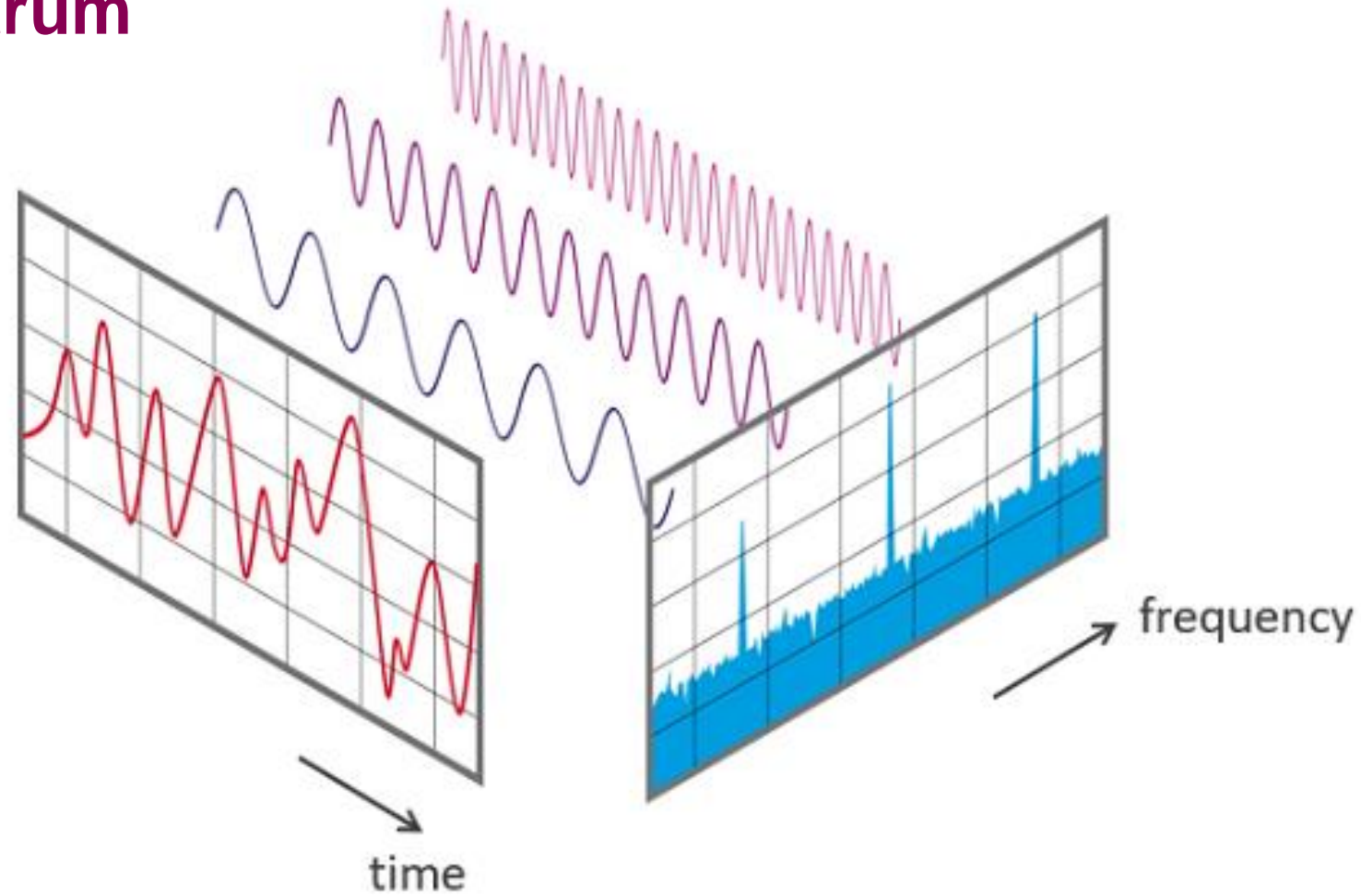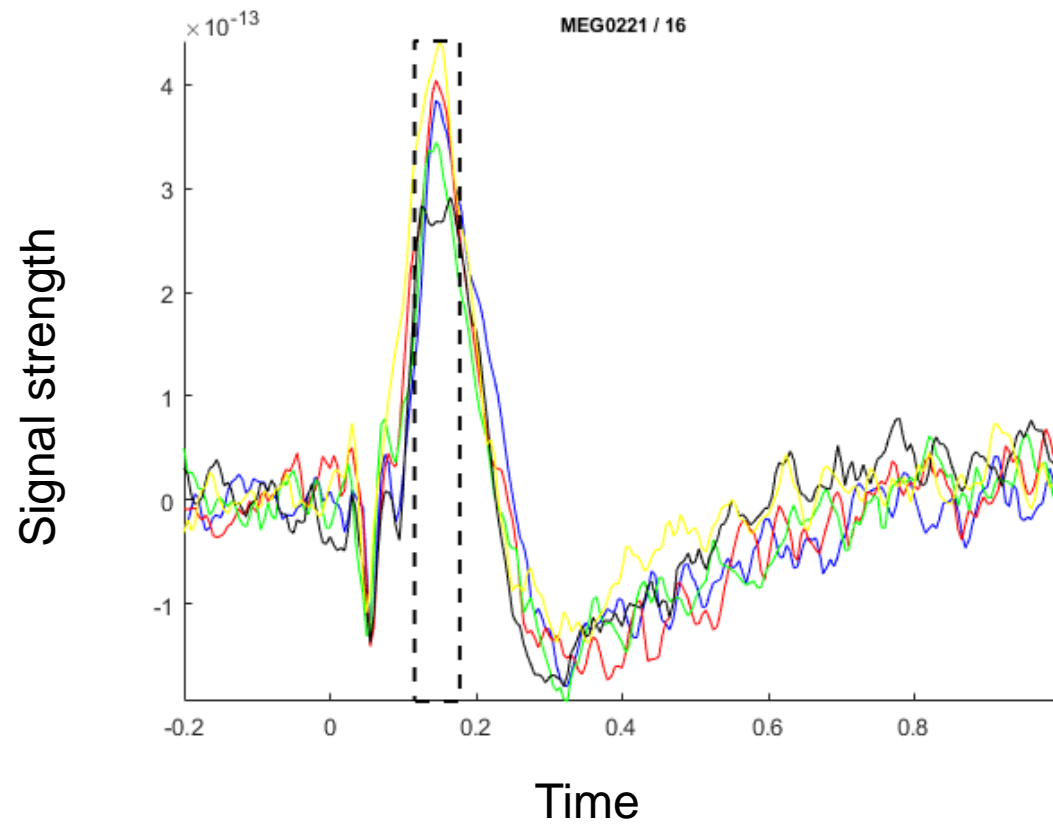
Oscillations: In/Out of phase

Evoked responses are *phase-locked* oscillations
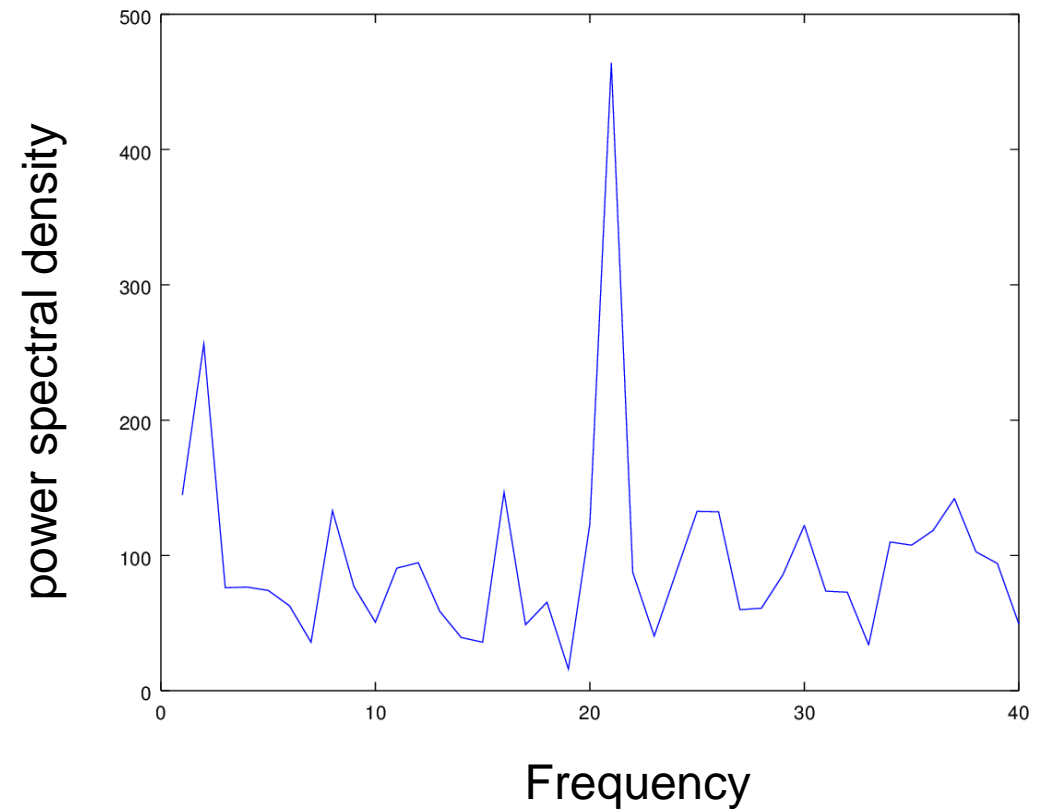
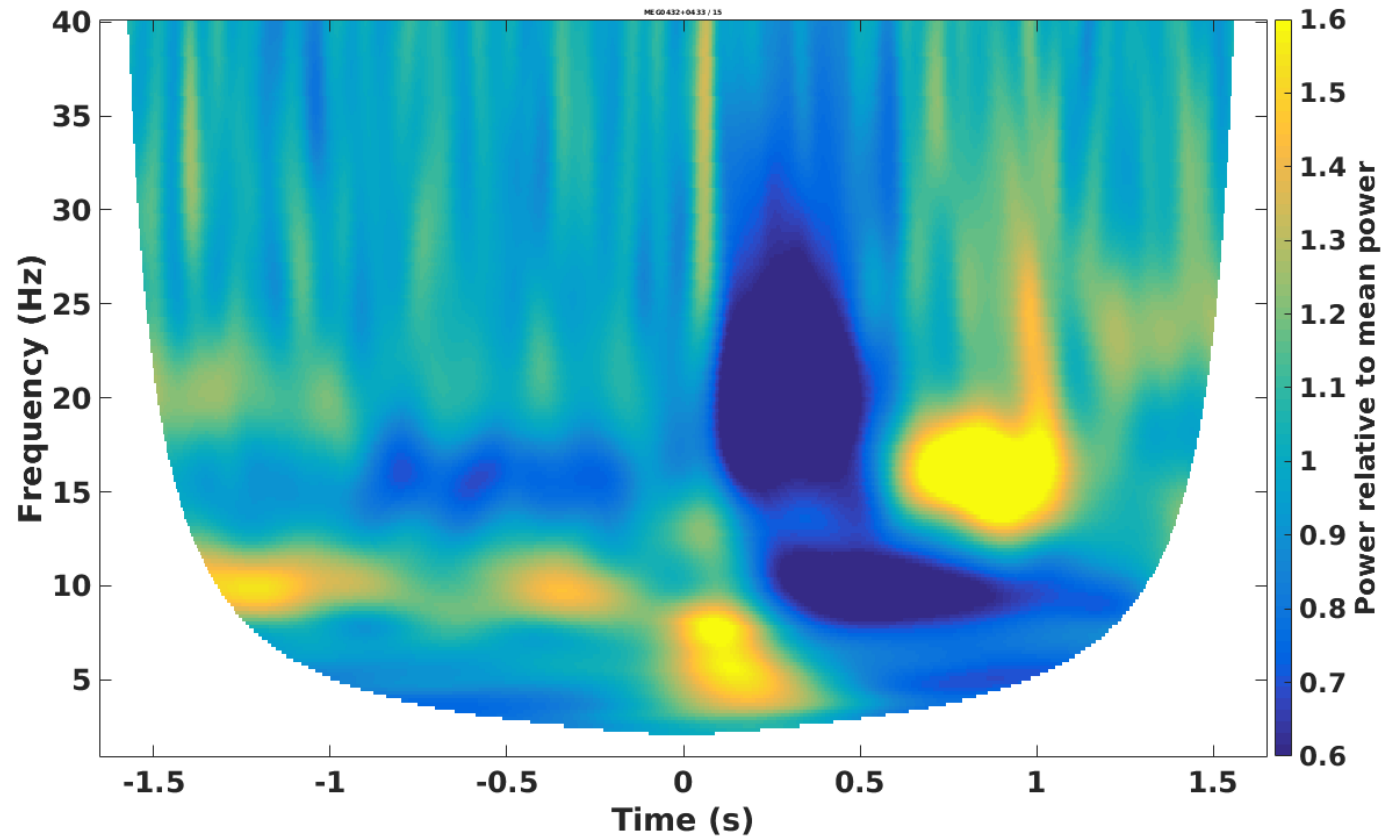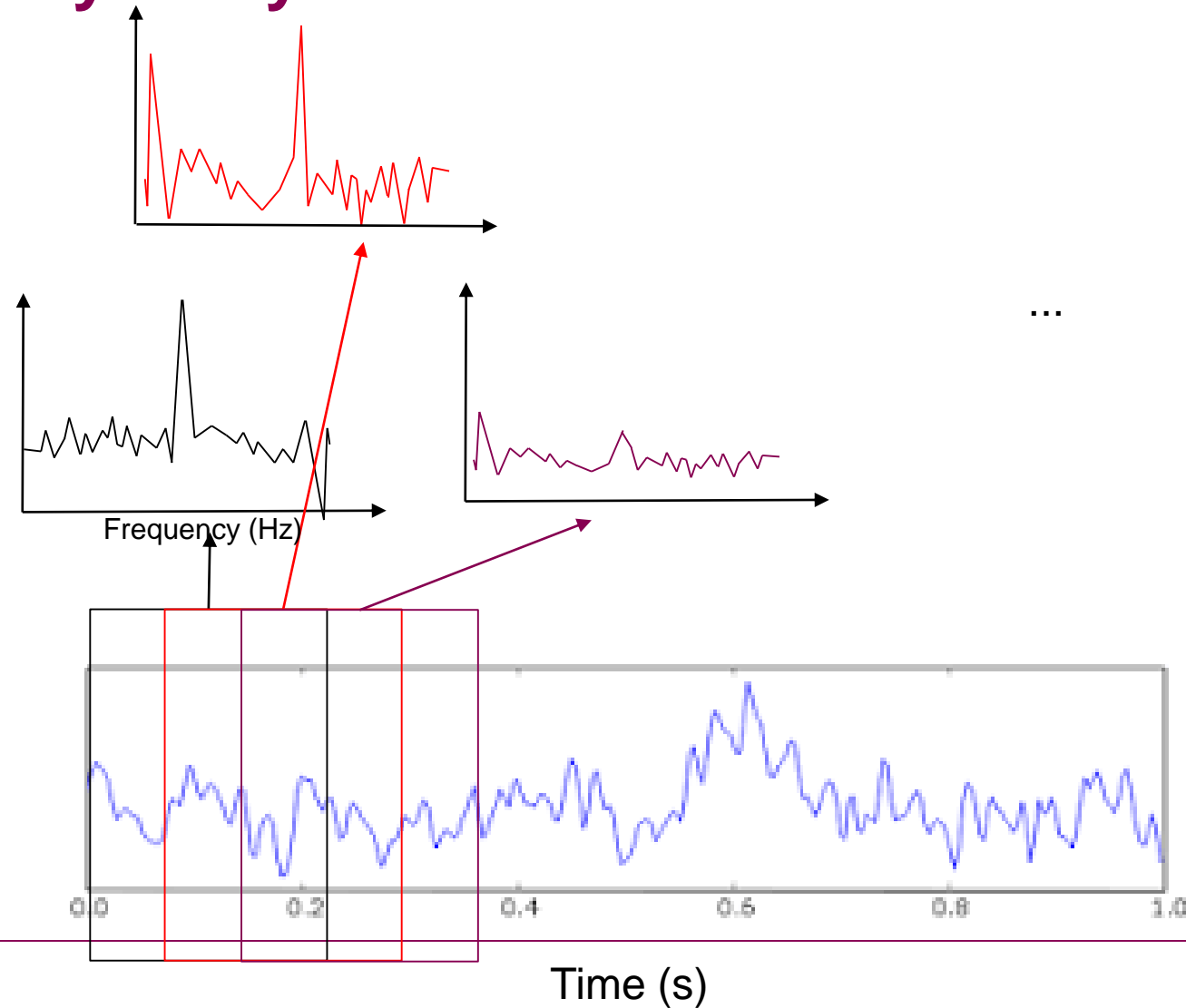Induced responses are non-*phase-locked* oscillations.

Power spectrum

Time domain

Frequency domain

Time-frequency

Time-frequency analysis

Frequency (Hz)

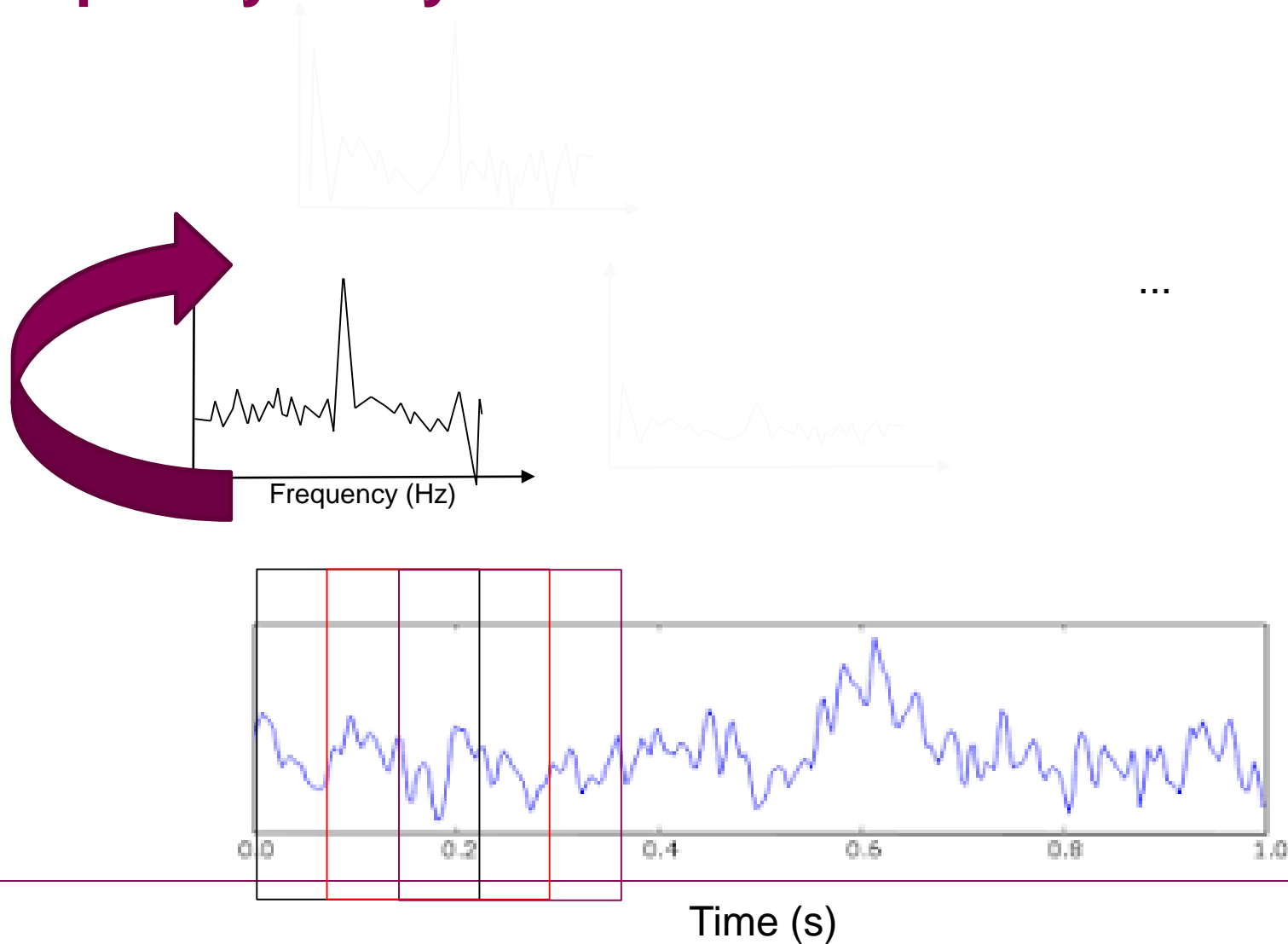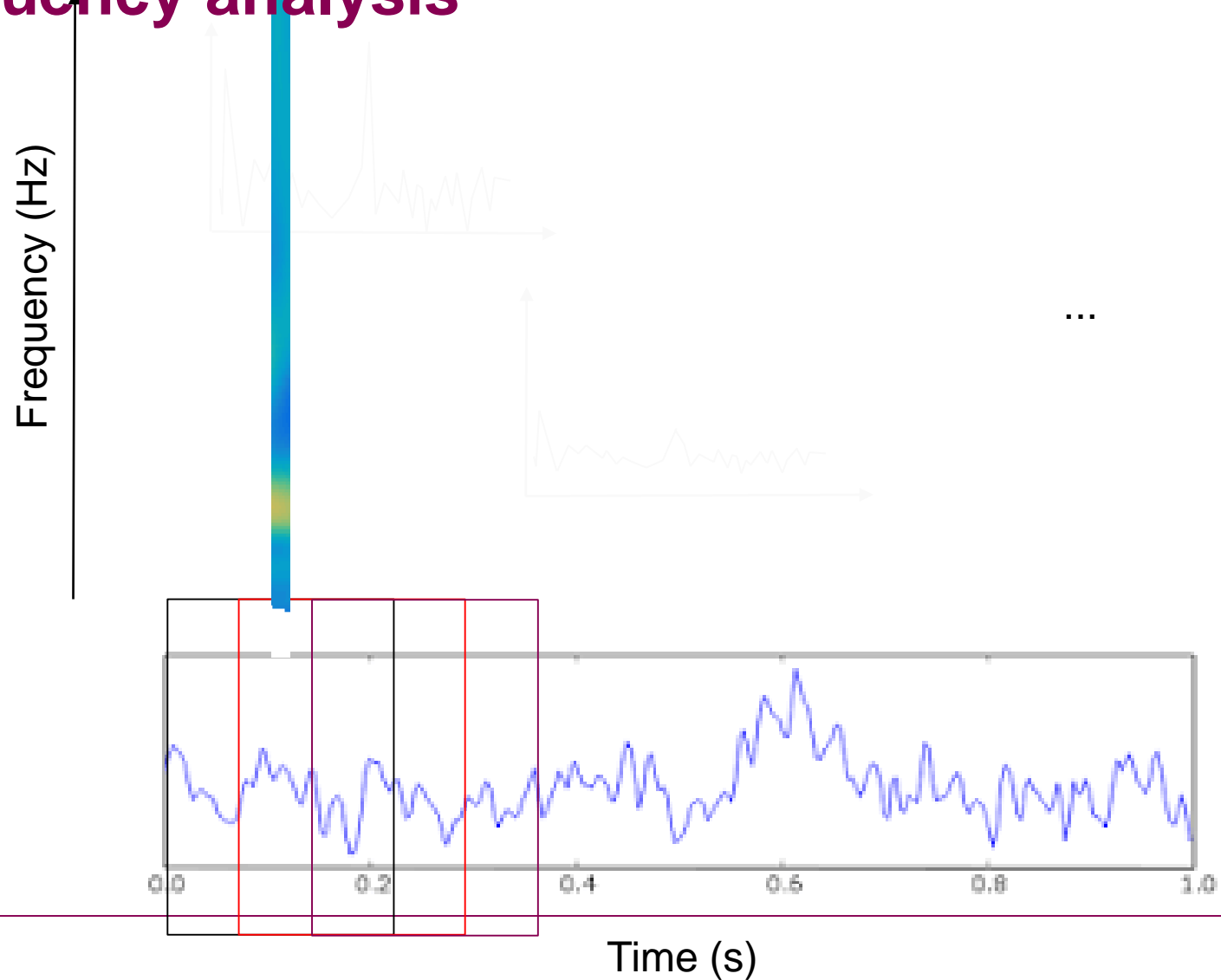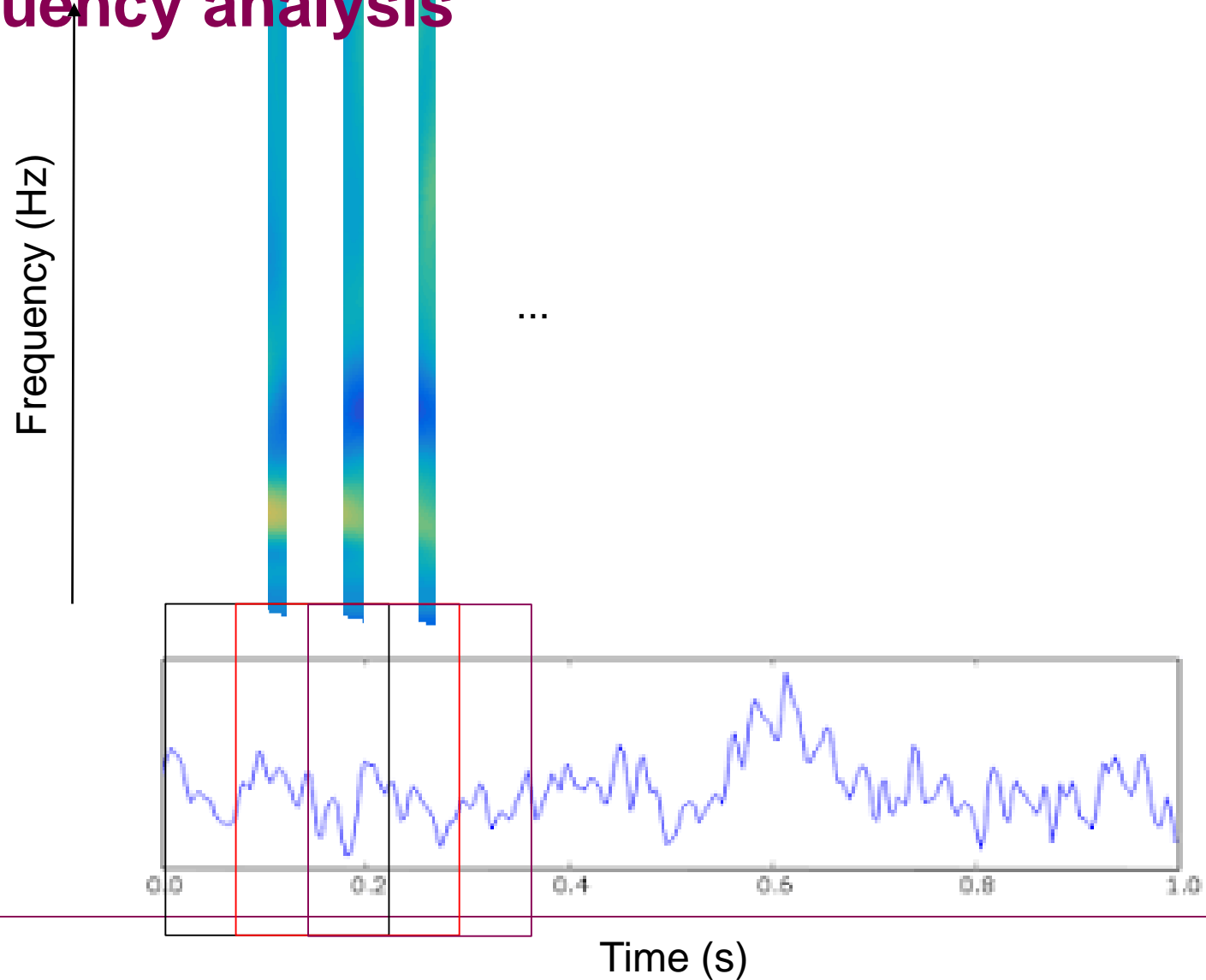Time (s)

Time-frequency analysis
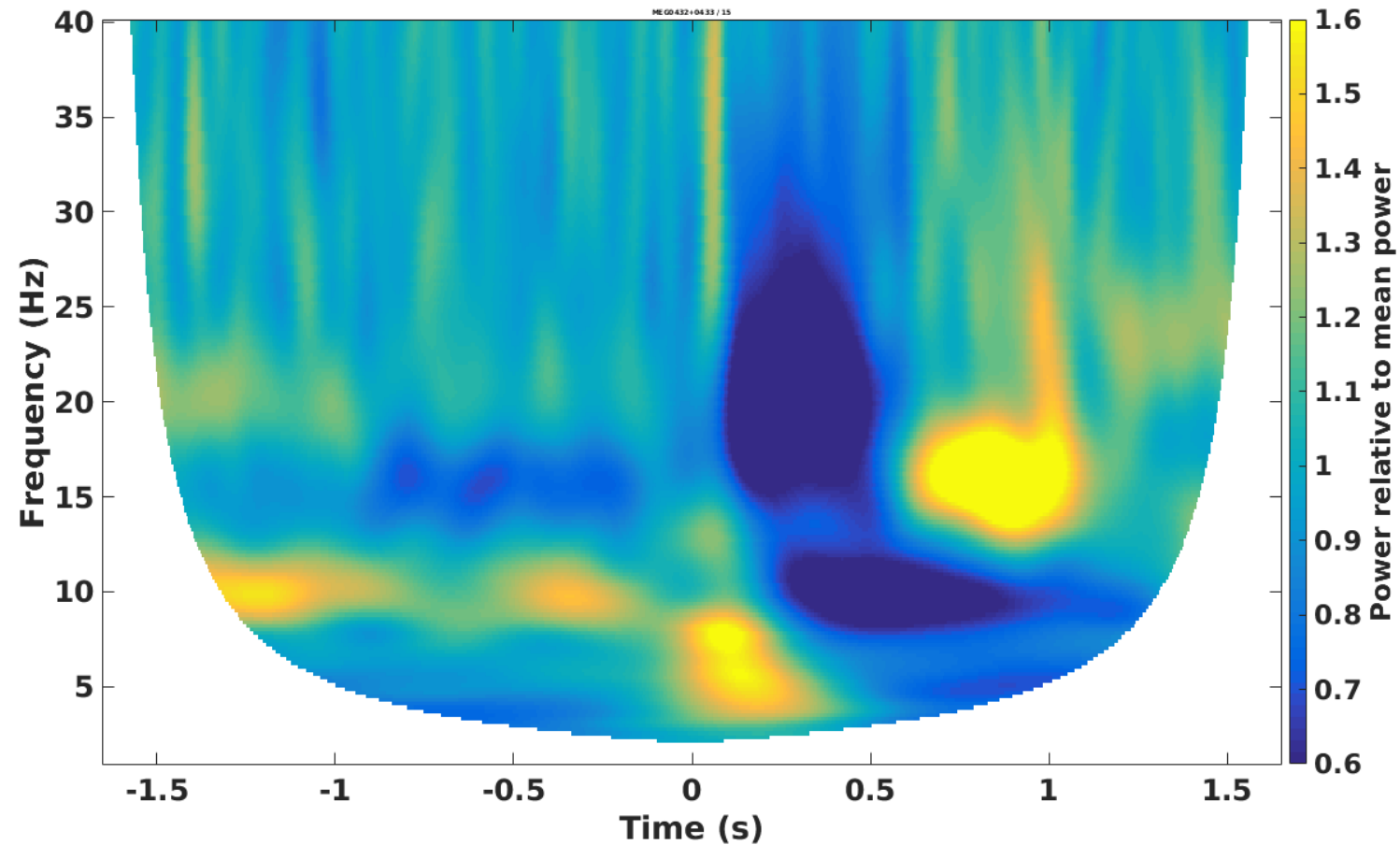

Frequency (Hz)

...

Time (s)

Time-frequency analysis

Time-frequency analysis

Time-frequency analysis

Time-frequency representation
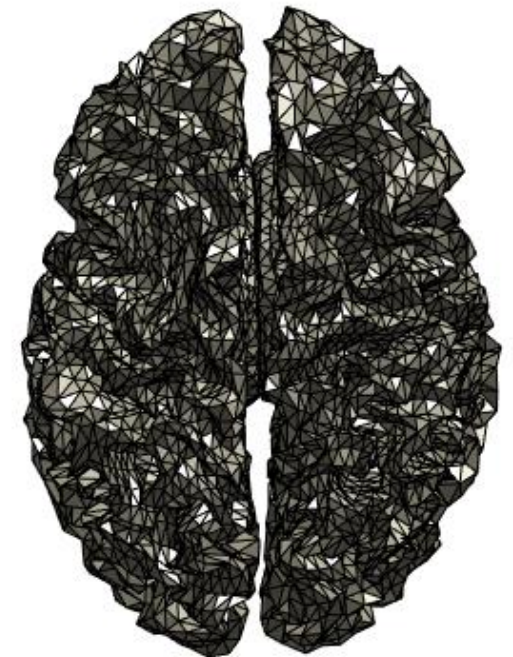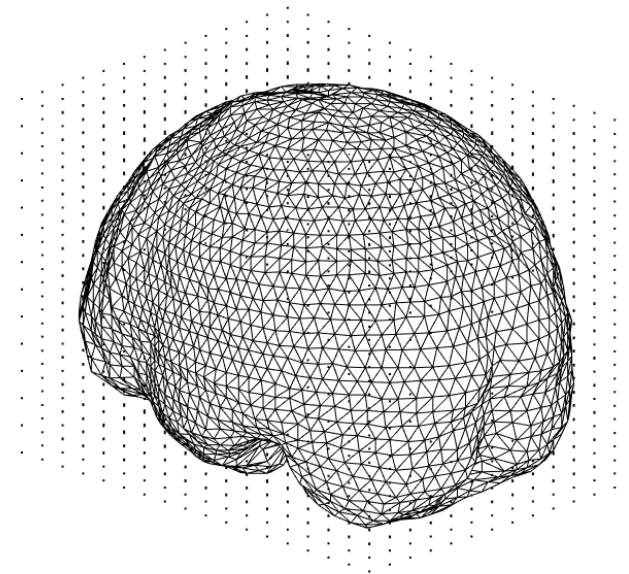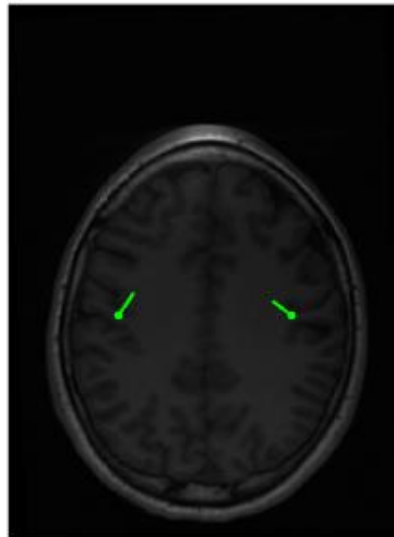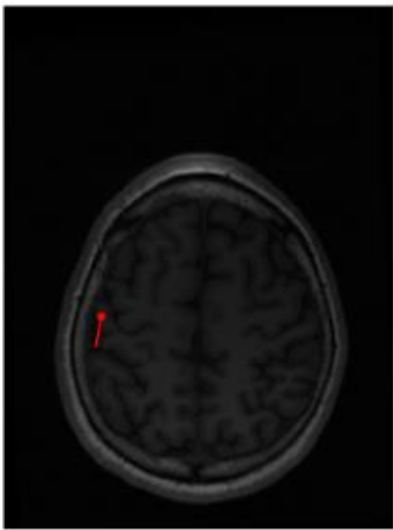
Source analysis (beamformer)

Quick terminology

- **Sensor space**
- **Source space**
- **Source model**
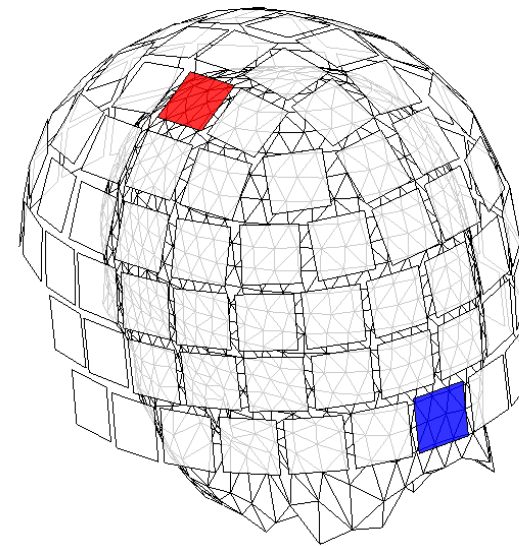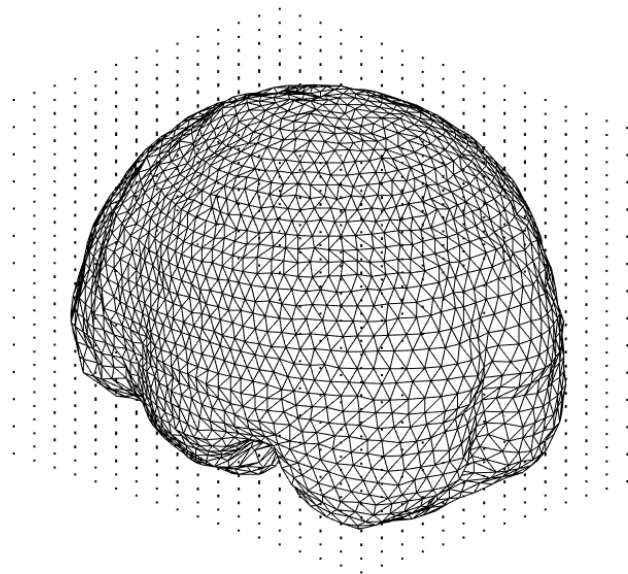- **Leadfield/Forward model**
- **Head model/volume conductor**
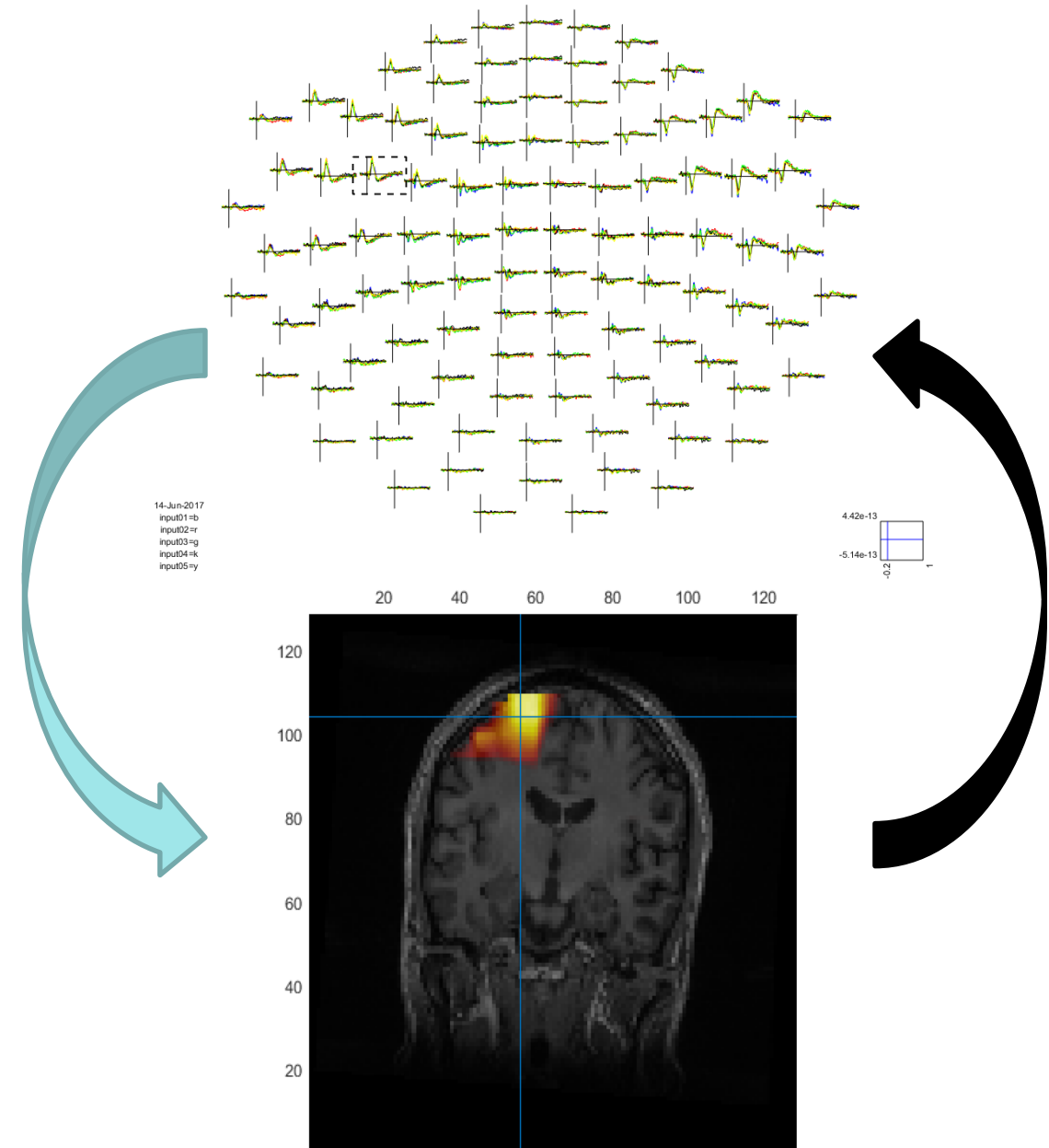
Source models

- A single (or few) point(s)
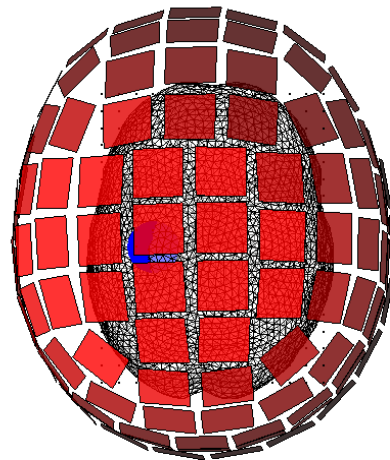- Evenly distributed
- Distributed according to anatomy

HEAD MODEL: How the electric currents are conducted in the head

LEADFIELD: How a sensor sees a source *if it was* active?

"Tactile source"   "Occipital" source