

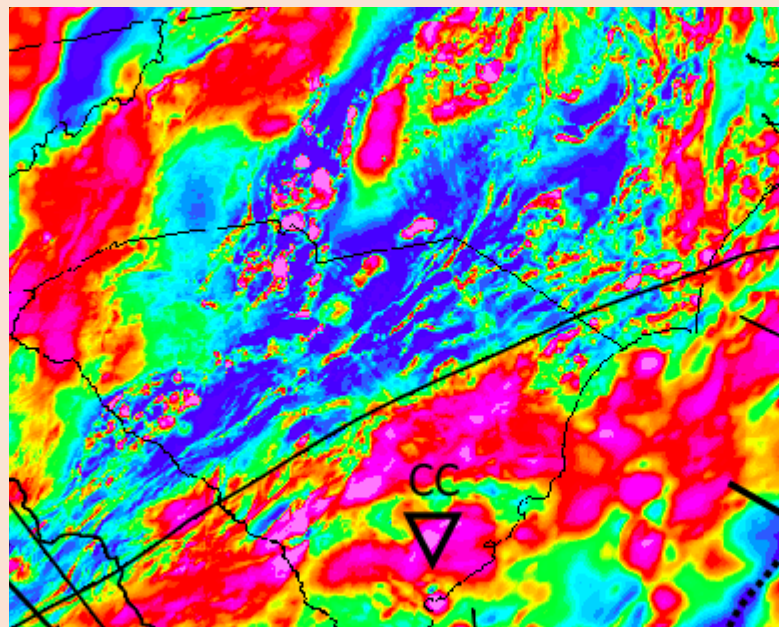
# Magnetoencephalography



$$|\vec{B}| \sim 10 \text{ fT}$$

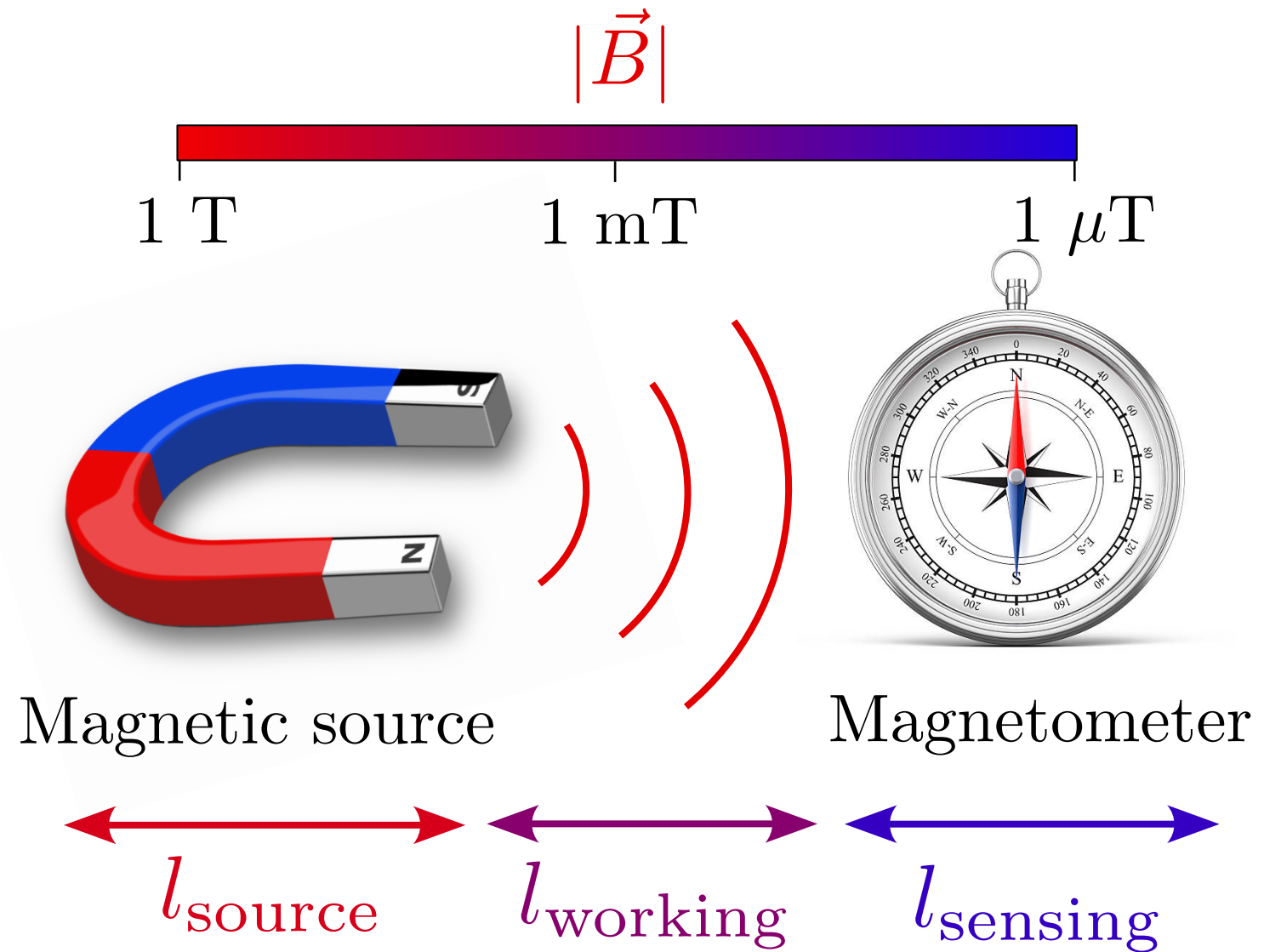
$$l \sim 1 \text{ cm}$$

# Earth's magnetic field anomaly



$$|\vec{B}| \sim 10 \text{ nT}$$

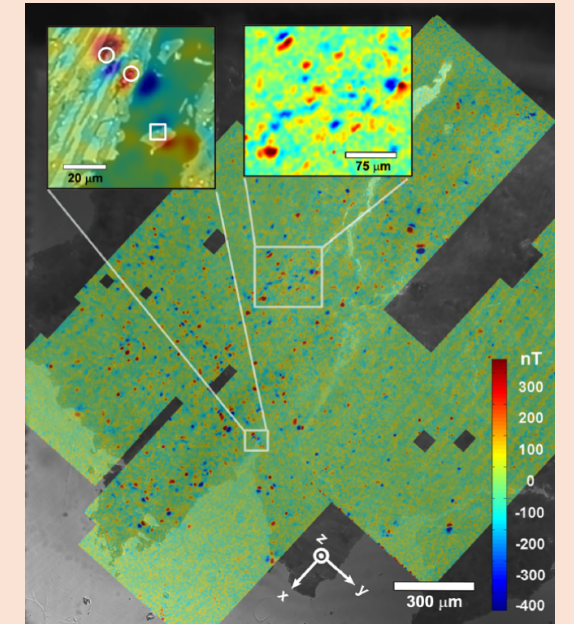
$$l \geq 1 \text{ km}$$



Optimum:

$$l_{\text{sensing}} \approx \max\{l_{\text{source}}, l_{\text{working}}\}$$

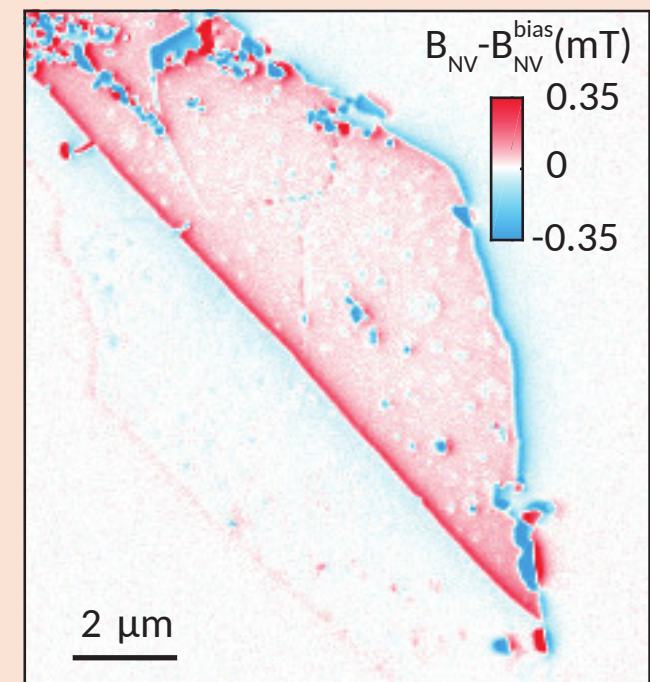
# Paleomagnetism



$$|\vec{B}| \sim 100 \text{ nT}$$

$$l \sim 10 \mu\text{m}$$

# Surface magnetism



$$|\vec{B}| \sim 100 \mu\text{T}$$

$$l \sim 50 \text{ nm}$$