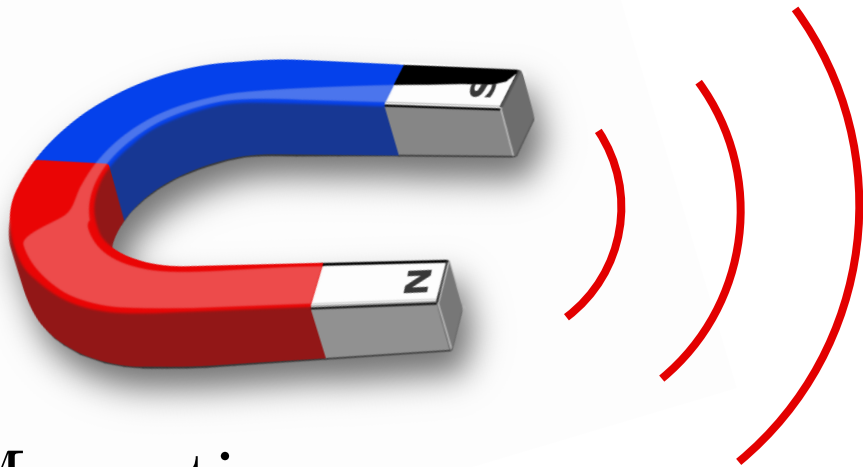
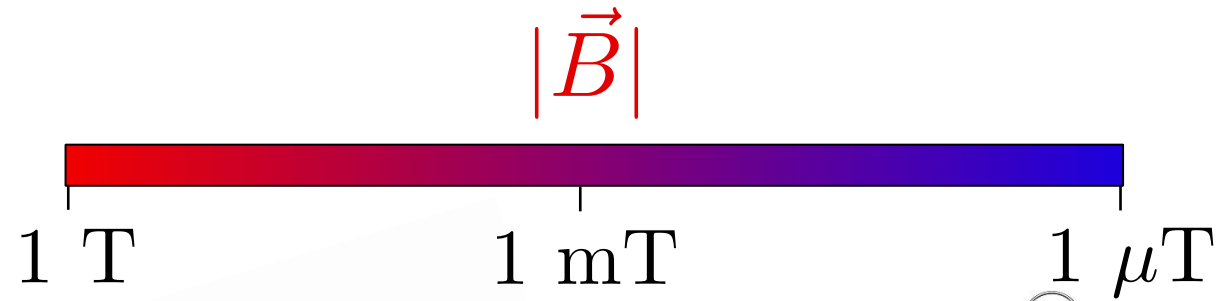


Sensitivity [ $\text{T}/\sqrt{\text{Hz}}$ ]:

Minimum magnetic field value detectable with a signal-to-noise ratio of 1 within 1 second.



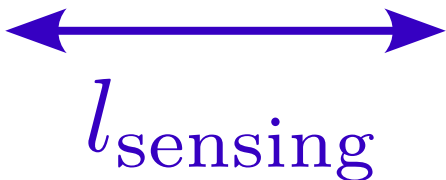
Magnetic source



$l_{\text{source}}$



Magnetometer



$l_{\text{sensing}}$

Optimum spatial resolution (imaging):

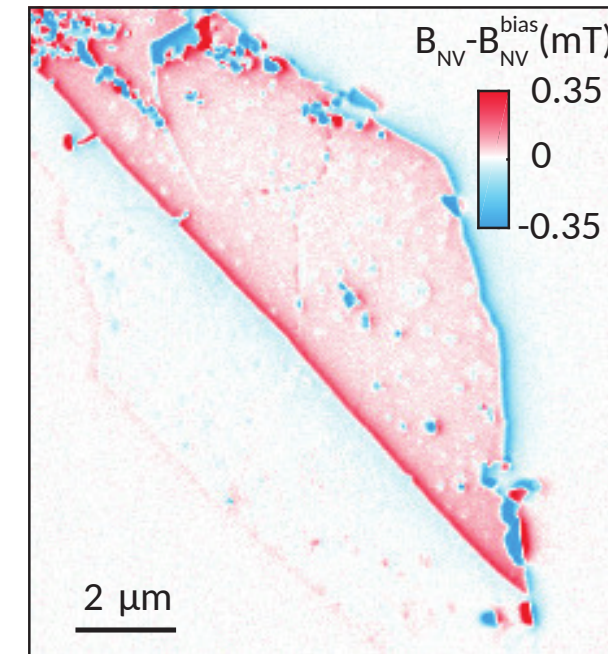
$$l_{\text{sensing}} \leq l_{\text{source}}$$

## Magnetoencephalography



$$|\vec{B}| \sim 10 \text{ fT}$$
$$l \sim 1 \text{ cm}$$

## 2D materials magnetism



$$|\vec{B}| \sim 100 \mu\text{T}$$
$$l \sim 50 \text{ nm}$$

Thiel, L. et al (2019). Science, 364(6444), 973-976.