$\Delta B_0 = 35\mu\text{T}$

Shot noise limited for $f_{\text{mod}} > 500$ Hz

Low pass filter $\tau = 3$ ms $\quad \sqrt{\langle \delta B^2 \rangle} \approx 1.2 \ \mu\text{T}$

$\rightarrow$ sensitivity $\eta = \sqrt{2\tau\langle \delta B^2 \rangle} \approx 116$ nT$/\sqrt{\text{Hz}}$