Demodulated
PL scan

ΔB

Demodulated PL (AU)

magnetic field (mT)

Measured magnetic field (μT)

ΔB

time (s)

Histogram (counts)

2σ

$\Delta B \approx 35\ \mu T$

Measured magnetic field (μT)

$$\text{Sensitivity} = \sigma\sqrt{\tau_{\text{meas}}}$$
$$\approx 100\ \text{nT}/\sqrt{\text{Hz}}$$