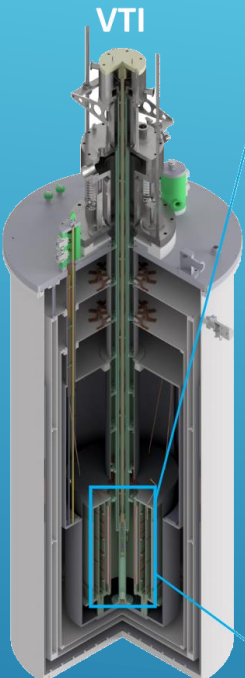


Shimming & SQUID Detection for CASPER-Gradient

Poster #28 – Julian Walter (HIM & JGU)
 juwalter@students.uni-mainz.de



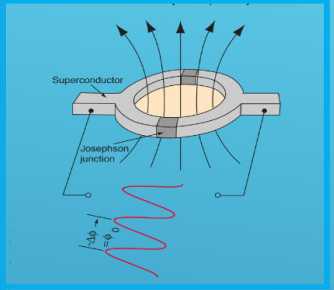
CRYOSTAT



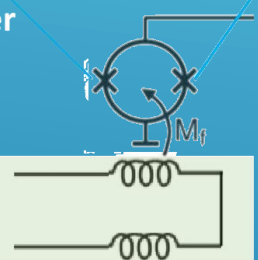
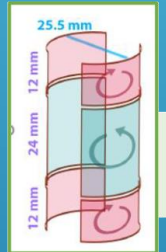
VTI



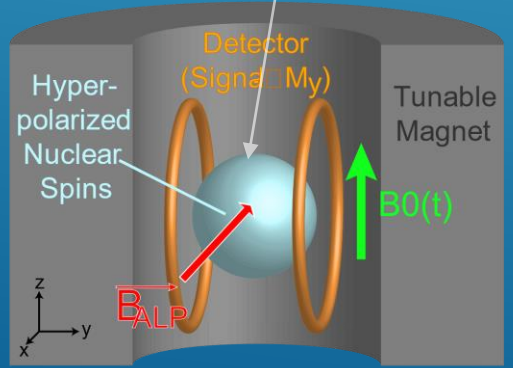
SQUID



gradiometer

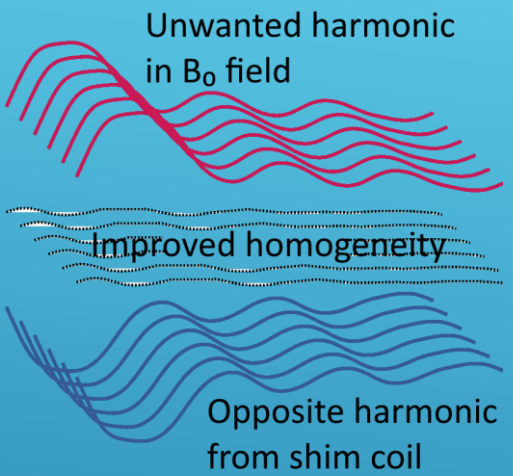


sample

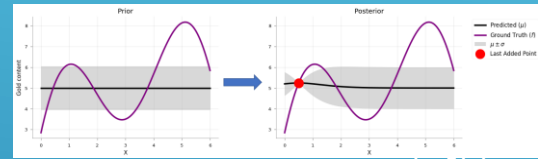


- thermally polarized liquid Methanol sample
- 0.05T leading field (SC)
- setup tested with pulsed NMR
- goal: search for ALPs

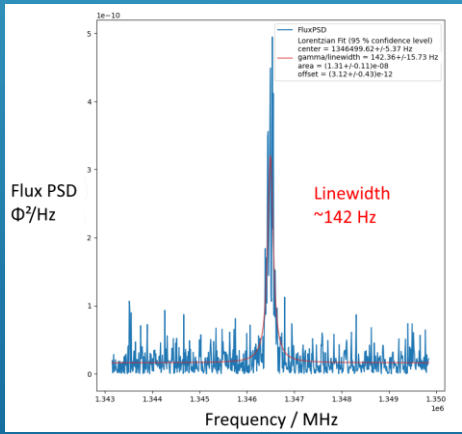
SHIMMING



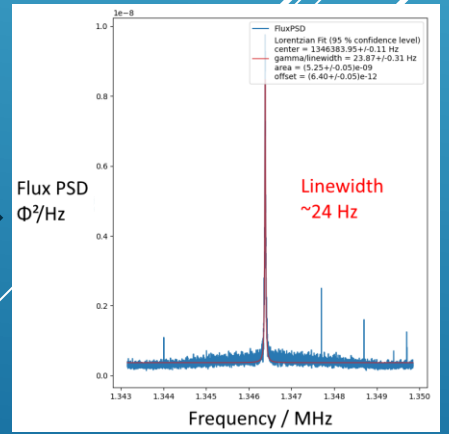
- 8 separate shim magnets
- automated field ramping
- use optimization algorithm to find best settings
- most effective for us: Bayesian method



before shimming



after shimming



Shimming improves SNR