Misalignment

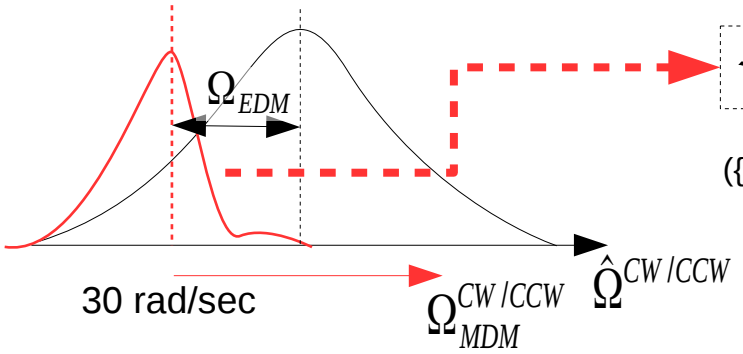
Deuteron ring: *either* stable orbit, *or* no MDM precession

Irreducible MDM **precession**

Frequency measurement

CW/CCW comparison

$$\hat{\Omega}_{EDM} = \frac{\hat{\Omega}^{CW} + \hat{\Omega}^{CCW}}{2} + \frac{\Omega^{CW}_{MDM} - \Omega^{CCW}_{MDM}}{2}$$



$\gamma^{CW}_{eff} \approx \gamma^{CCW}_{eff}$

Sextupoles ($\{S_X\}$, $\{S_Y\}$, $\{S_D\}$)

solenoid

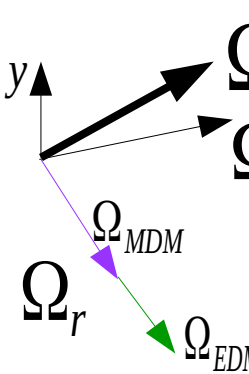
$\Omega_y \approx 0$

Calibration in the **rs** plane

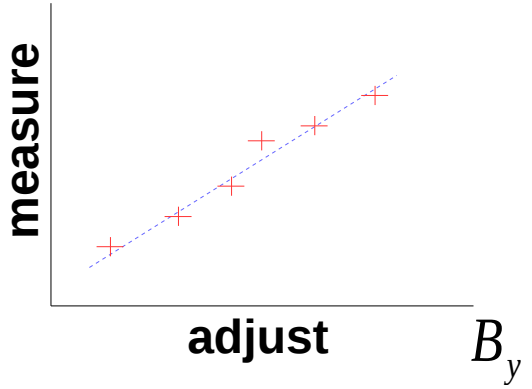
fading effect

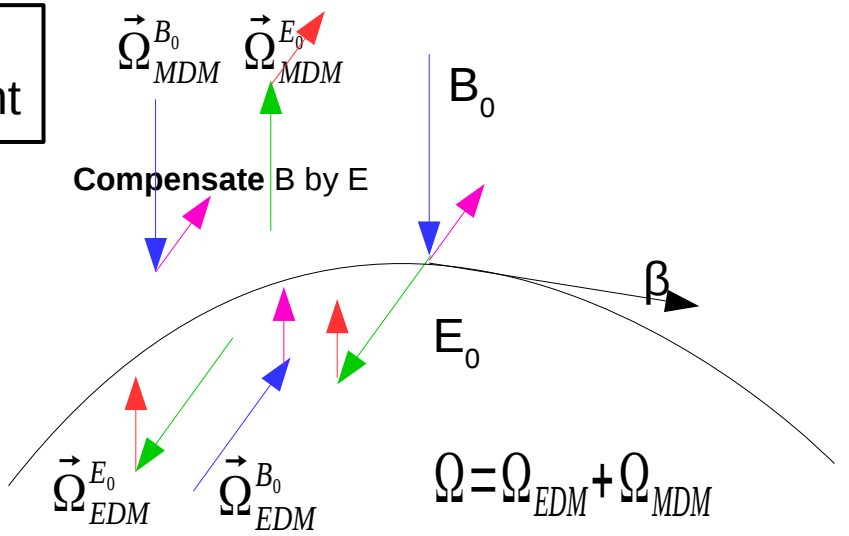
Confounding

$$\Omega = \sqrt{\Omega_r^2 + \Omega_y^2 + \Omega_s^2}$$



$\Omega_{rs}(\gamma_{eff})$

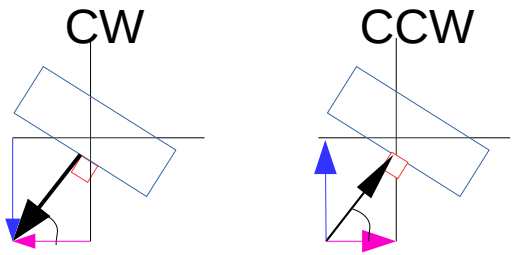




$$\Omega = \Omega_{EDM} + \Omega_{MDM}$$

$$\vec{\Omega}_{MDM} = \underbrace{a_0(\gamma G)\vec{B}}_{\vec{\Omega}^{B}_{MDM}} - \underbrace{a_1(\gamma G)\vec{\beta}\times\vec{E}}_{\vec{\Omega}^{E}_{MDM}}$$

$$\vec{\Omega}_{EDM} = \underbrace{b_0\vec{\beta}\times\vec{B}}_{\vec{\Omega}^{B}_{EDM}} + \underbrace{b_1\vec{E}}_{\vec{\Omega}^{E}_{EDM}}$$



Geometry fixes $B_y : B_r$

reproduce error by reproducing **signal**