MRI OPTIMIZATION NOTES

ρ = True Image S_i = Coil Sensitivity m_i = K-Space measurement

$$\begin{aligned}\min_{S_i,\rho} \sum_i ||\pi_{PE}(FT(S_i P_i)) - m_i||^2 \\ + \lambda_1(||\delta_x \rho||_{L1} + ||\delta_y \rho||_{L1}) \\ + \lambda_2(||\delta_x S_i||_{L2} + ||\delta_y S_i||_{L2})\end{aligned}$$

Would replace S_i with B_i

$$\lambda_3||\nabla \cdot B_i||^2 + \lambda_4||\nabla \times B_i||^2$$

Helps for 3D

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