

NMR

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$$\frac{dM_z}{dt} = \frac{M_0 - M_Z}{T_1} \quad (1)$$

$$M_Z = M_0 - K e^{\frac{-t}{T_1}} \quad (2)$$

With initial conditions $t = 0, M_z = -M_0$ this becomes:

$$M_Z = M_0(1 - 2e^{\frac{-t}{T_1}}) \quad (3)$$

3.1 Uncertainty Budget

Source	Quantity	Error in Quantity	Propagated Error
Temperature Sensor	stuff	stuff	Negligible
Current Measurement	I	2 ma	35%

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