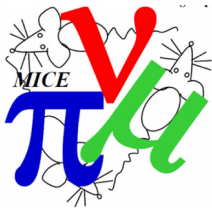


Dipole model

Paolo Franchini

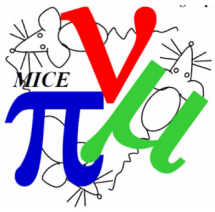
MICE CM51
June, 27 2018



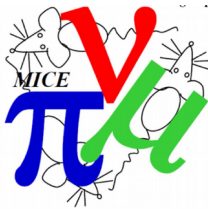
Measurements

- Nikhef 3-axis probe (calibrated)
- Hirst 1-axis probes (1 calibrated, 1 re-calibrated)
- First measurements: D2 in the DSA
- Second survey: D1 in the synch
- *Thanks to all the people that made this happen (Henry, Craig B., Tom, ...)*

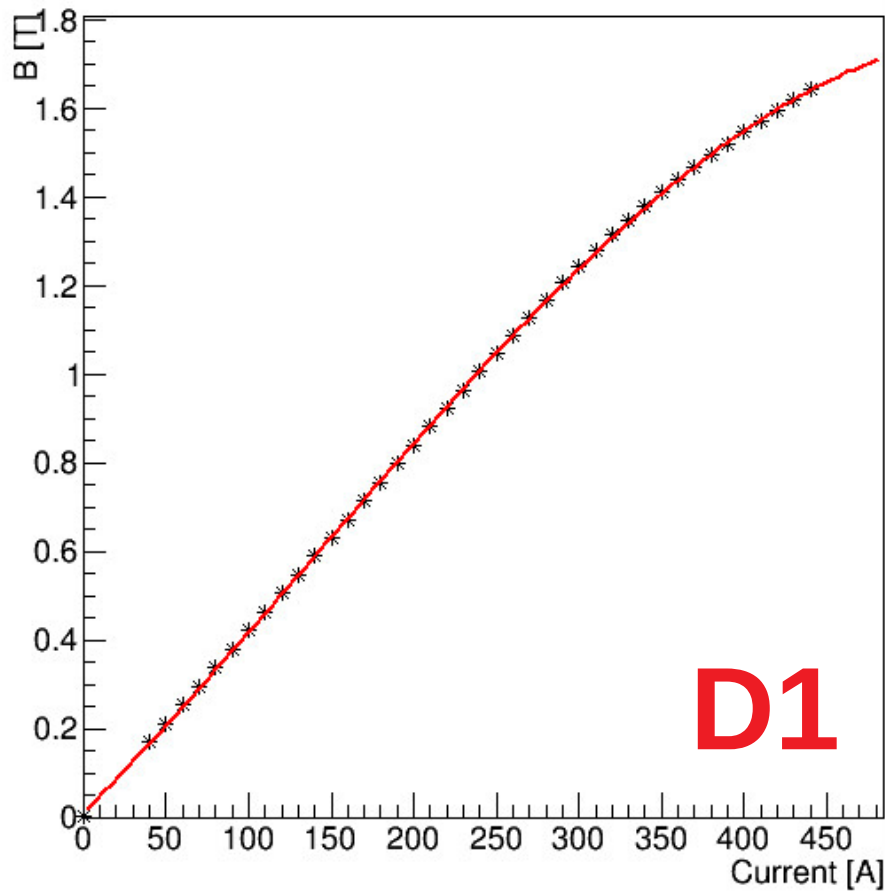
Measurements



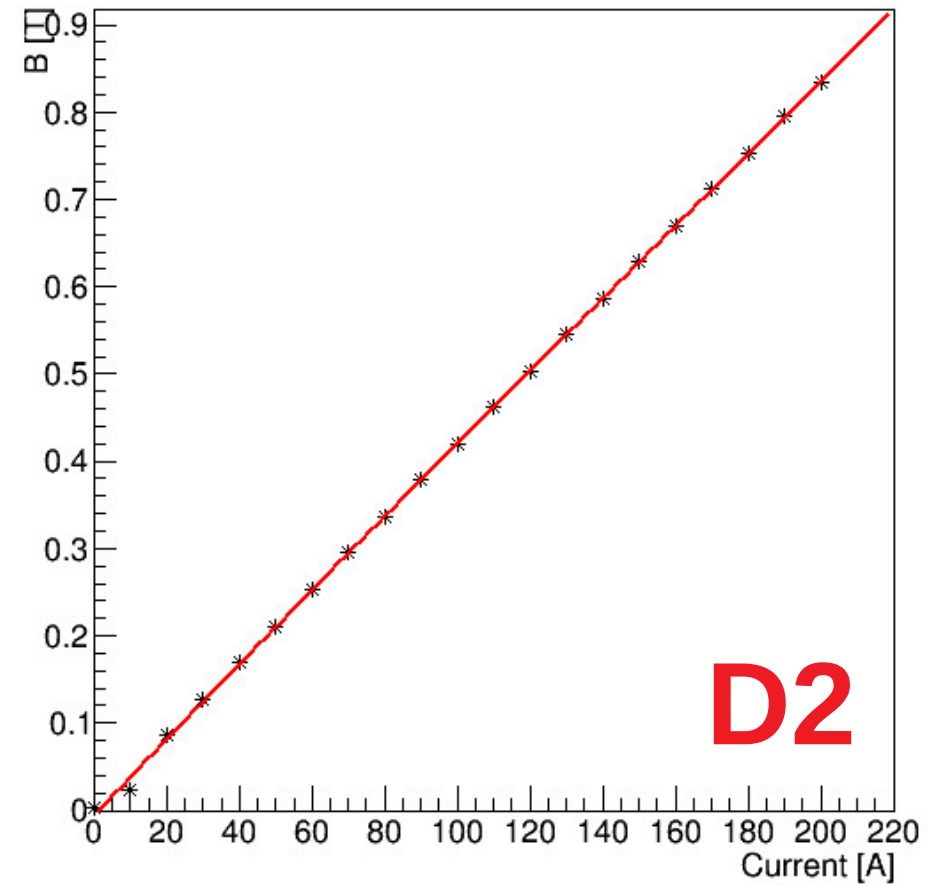
Measurements and fit



Field vs current



Field vs current

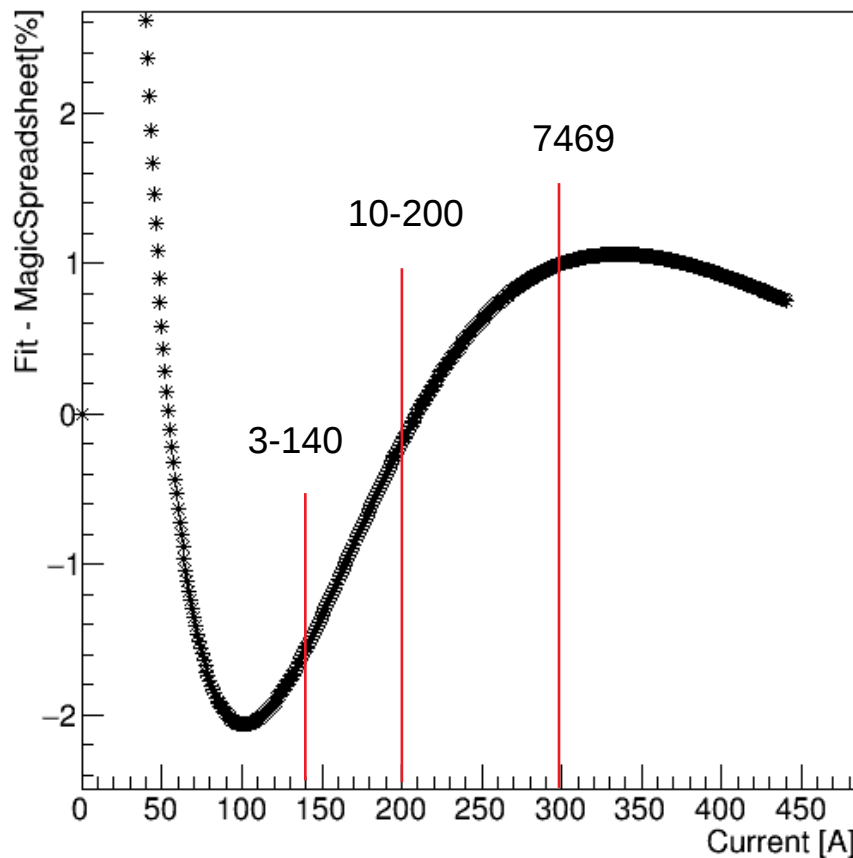


Magic spreadsheet corrections

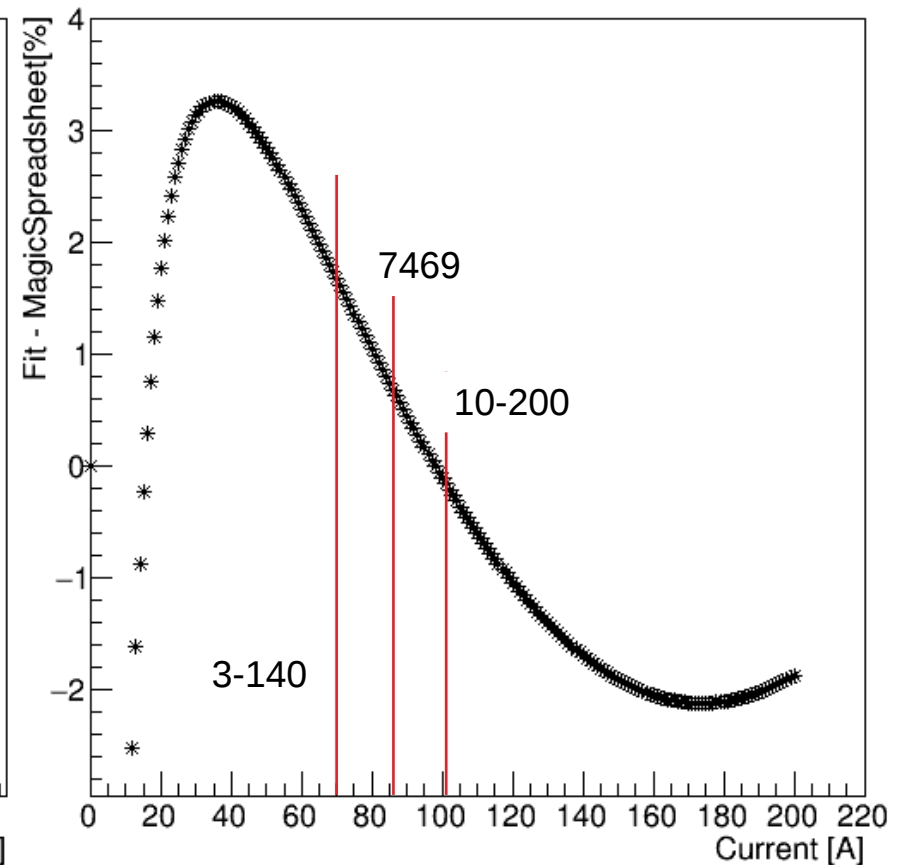


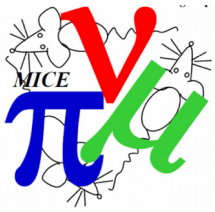
- Corrections lower than $|2\%|$

MS corrections vs Currents



MS corrections vs Currents





Final fits

$$B = 0.00966745 + 0.00382304I + 3.41212 \cdot 10^{-6} I^2 - 8.34544 \cdot 10^{-9} I^3$$

$$B = -0.00503767 + 0.00436283I - 1.30544 \cdot 10^{-6} I^2 + 2.46632 \cdot 10^{-9} I^3$$

Conclusions



- MICE Note #520
- Produce G4BL input settings
- Few more corrections could come from other position surveys of the dipoles