

## MDX05 resistive dipole measurements with the Single Stretched Wire System

### Field at the center of the gap

SSW measurements performed at 60A with a 20mm step.

SSW STDEV on 10 repetitions

B0= 0.5125 Lm= 0.4616

J'ai mesuré avec la sonde NMR No 3 à I = 60A et j'ai trouvé au centre de l'aimant MDX05 un champ de 0.5125T.

Ensuite, j'ai démagnétisé l'aimant.

| Field |               | Current |              |
|-------|---------------|---------|--------------|
| NMR   | [T]           | Current | STDEV        |
| SSW   | 0.24098 [Tm]  | 60 [A]  | 2.00E-03 [A] |
|       | STDEV         |         |              |
|       | 1.00E-04 [Tm] |         |              |

Paul

### Integrated Field as a function of lateral displacement inside the aperture at nominal current

Typical deviation on 3 repetitions =  $7e-5$ [Tm]

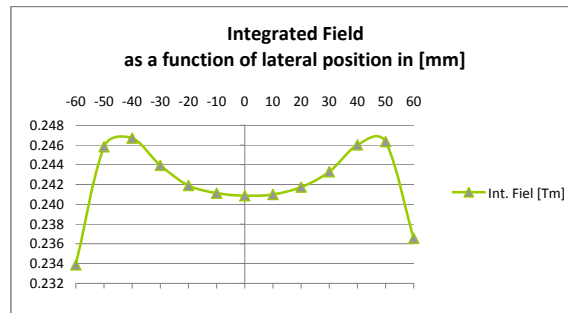
I = 340 [A]

SSW step length = 10mm

probe beam

| Lateral distance from center [mm] | Integrated field [Tm] |
|-----------------------------------|-----------------------|
| -60                               | 0.23388               |
| -50                               | 0.24584               |
| -40                               | 0.24669               |
| -30                               | 0.24394               |
| -20                               | 0.2419                |
| -10                               | 0.24112               |
| 0                                 | 0.24088               |
| 10                                | 0.24101               |
| 20                                | 0.24175               |
| 30                                | 0.2433                |
| 40                                | 0.24603               |
| 50                                | 0.24636               |
| 60                                | 0.23657               |

Non-homogeneity  
0.012703



### Magnetization curve

SSW step length = 20mm

Typical current deviation on 3 repetitions =  $2e-3$  [A]

Typical field deviation on 3 repetitions <  $3e-5$  [Tm]

| Current [A] | Int. Field [Tm] |
|-------------|-----------------|
| 0           | -1.00E-05       |
| 60          | 0.24095         |
| 100         | 0.39999         |
| 120         | 0.47735         |
| 140         | 0.54885         |
| 160         | 0.60394         |
| 180         | 0.64698         |
| 200         | 0.68362         |
| 220         | 0.71583         |
| 240         | 0.74329         |

