

MDX54 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

NMR	Field [T]	B0=	0.561523	Lm=	0.431808 m	z	Paul	
SSW	Int. Field [Tm]	STDEV	2.00E-04 [Tm]	Current	60 [A]	STDEV	2.00E-03 [A]	drive beam

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

Typical deviation on 3 repetitions = 2E-3[Tm]

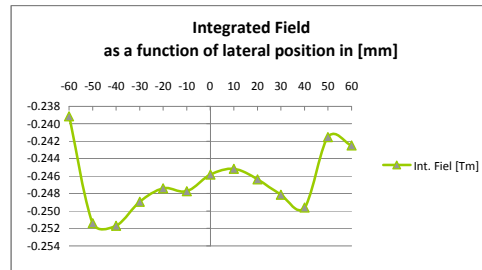
I = 60 [A]

SSW step length = 10mm

Lateral distance from center [mm]	Integrated field [Tm]
-60	-0.23914
-50	-0.25141
-40	-0.2517
-30	-0.24895
-20	-0.2474
-10	-0.24774
0	-0.24581
10	-0.24517
20	-0.24638
30	-0.24813
40	-0.24961
50	-0.24154
60	-0.24247

Non-homogeneity

-0.01538



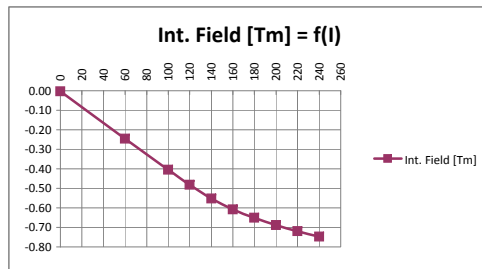
Magnetization curve

SSW step length = 20mm

Typical current deviation on 3 repetitions = 1e-3 [A]

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

Current [A]	Int. Field [Tm]
0	-3.88E-03
60	-0.24558
100	-0.40499
120	-0.48195
140	-0.55297
160	-0.60878
180	-0.65128
200	-0.68812
220	-0.71953
240	-0.74751



J'ai mesuré avec la sonde NMR No 3 à I = 60A et j'ai trouvé au centre de l'aimant MDX54 un champ de 0.51523T.

Ensuite, j'ai démagnétisé l'aimant.

Salut Marco,

The MDX nominal operation current is around 60 A.

Required field integral is 0.238 Tm (180 MeV electrons, 22.75 degr. bending angle).

The field region used is +/- 30mm from the center.