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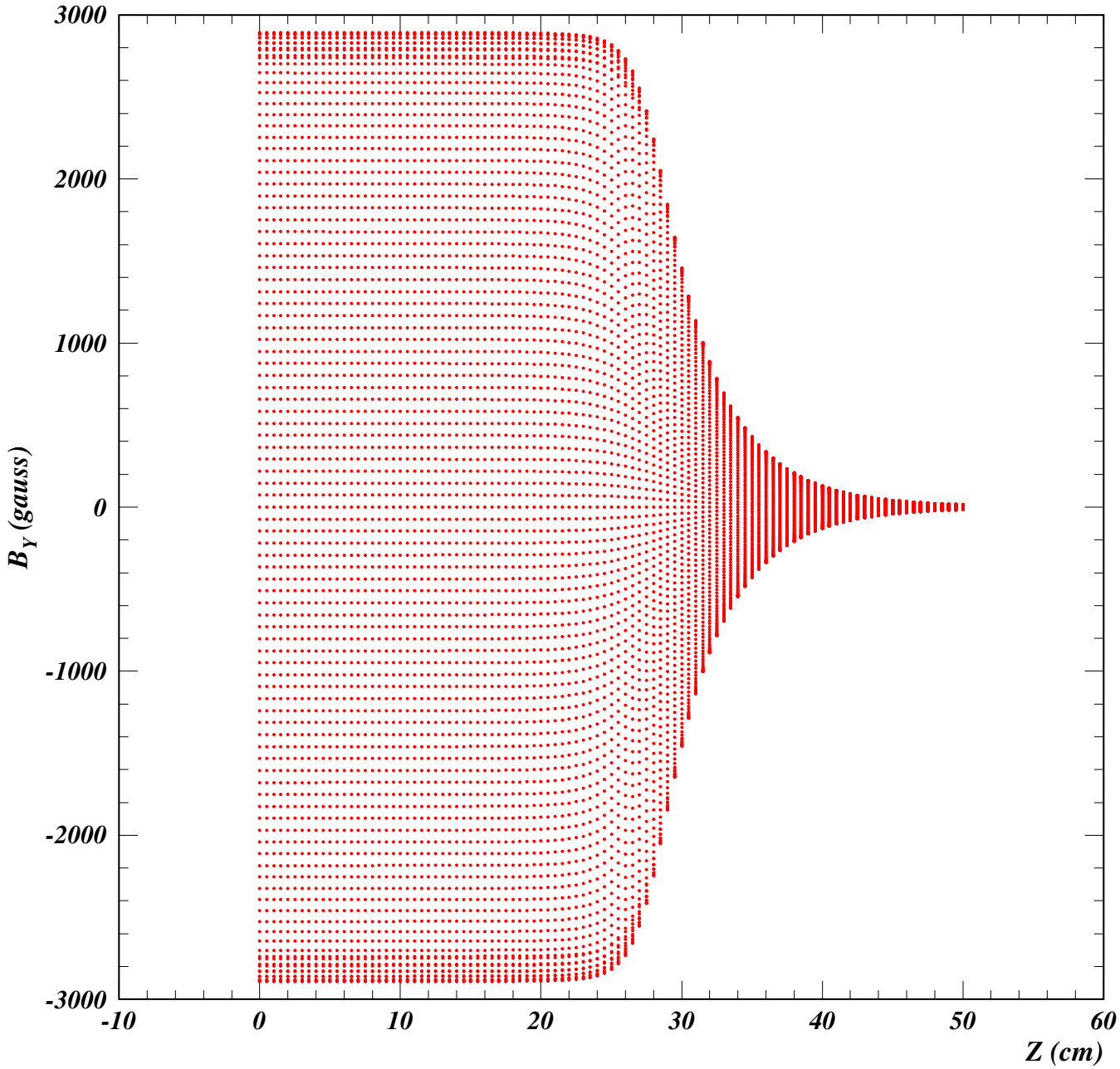
1/2 model. 114 A. 3.6 T/m.



by VS. z

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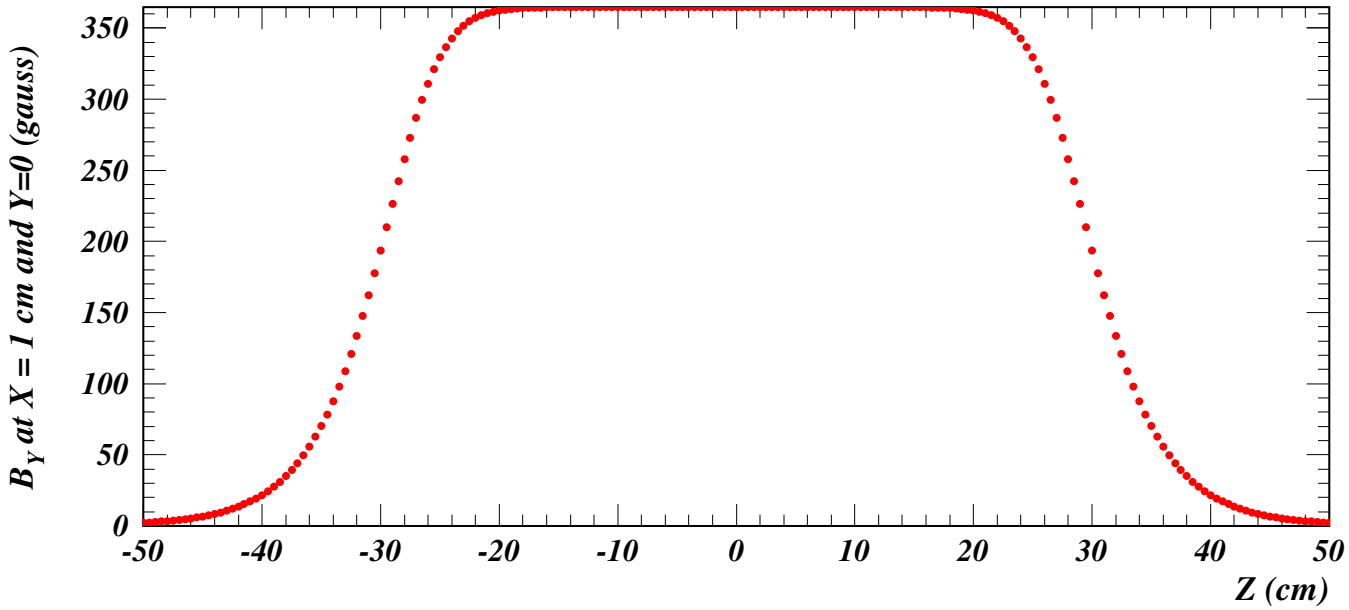
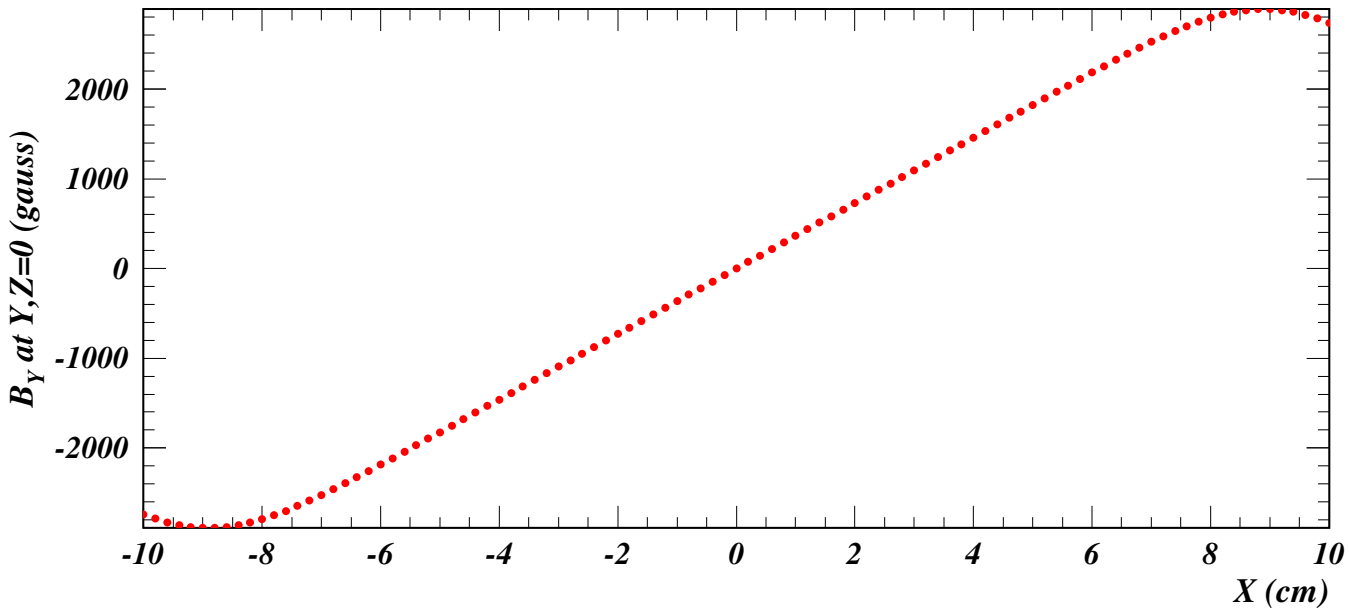
1/2 model. 114 A. 3.6 T/m.





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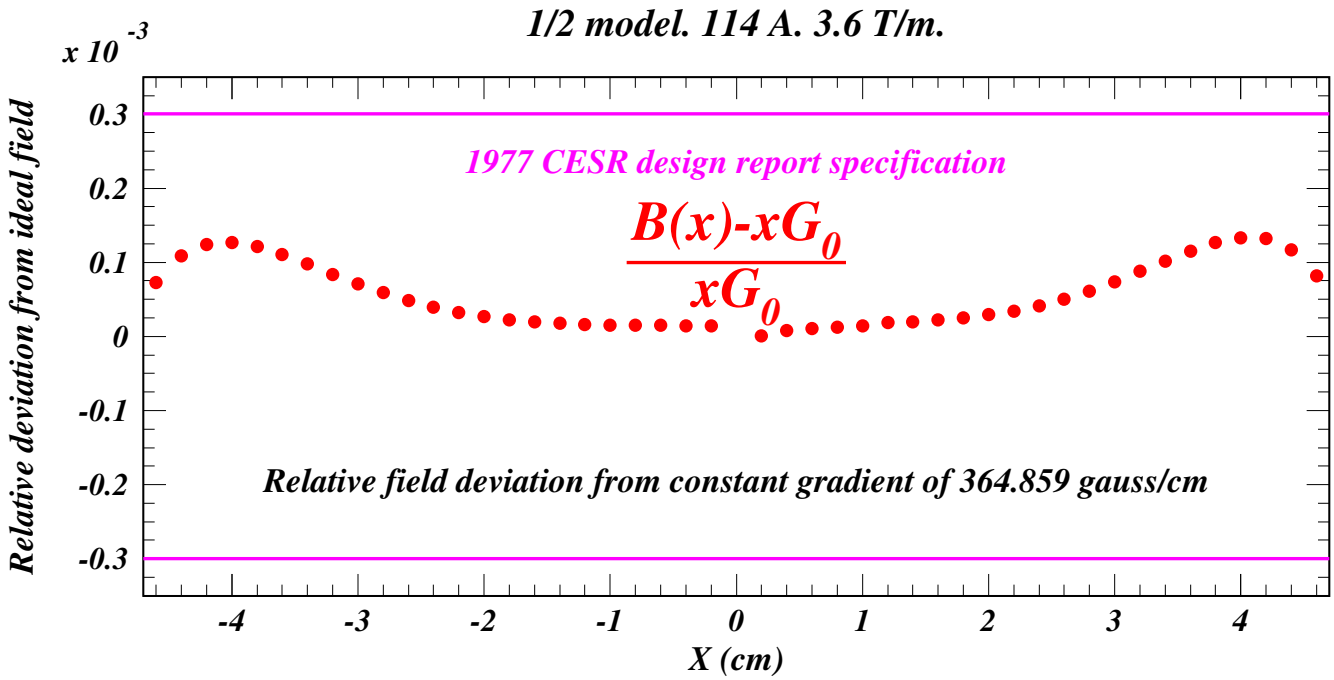
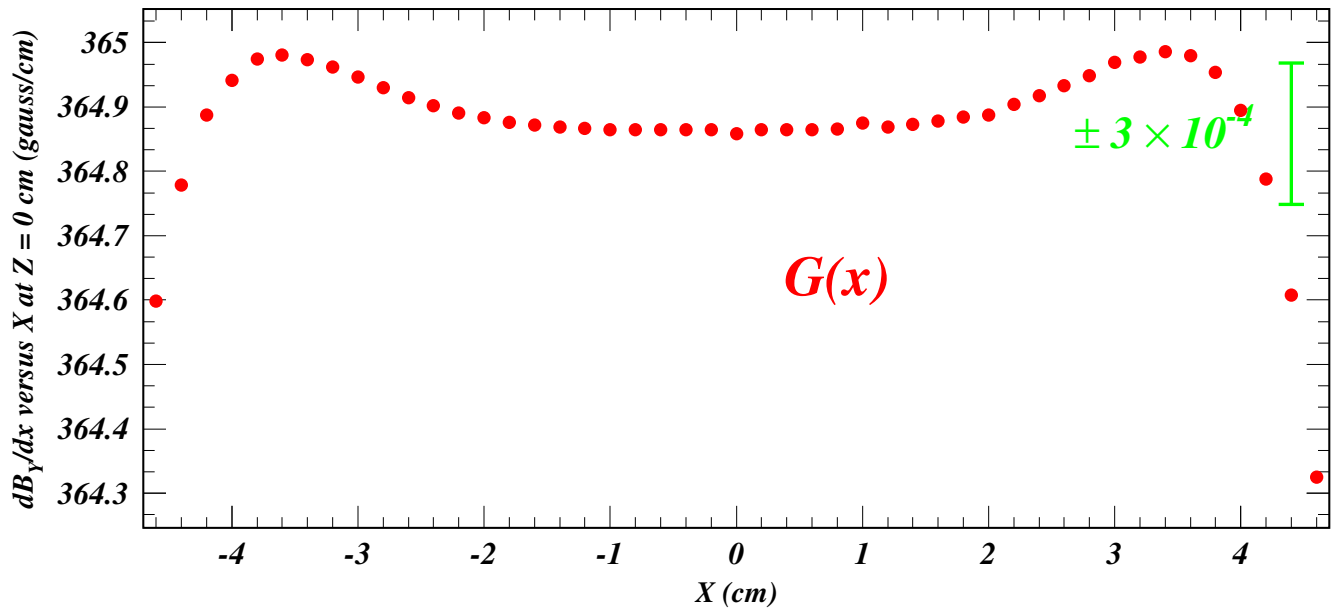

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.859 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBy/dx versus X at Z = 0 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
±3×10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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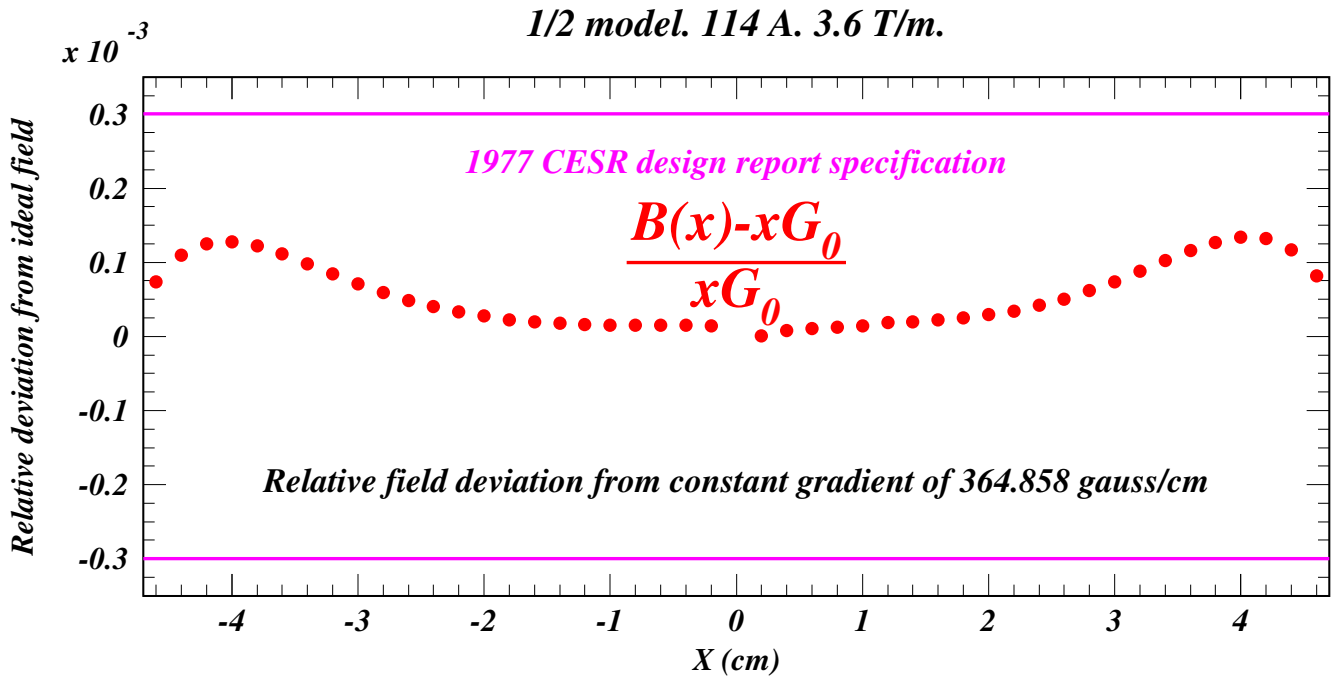
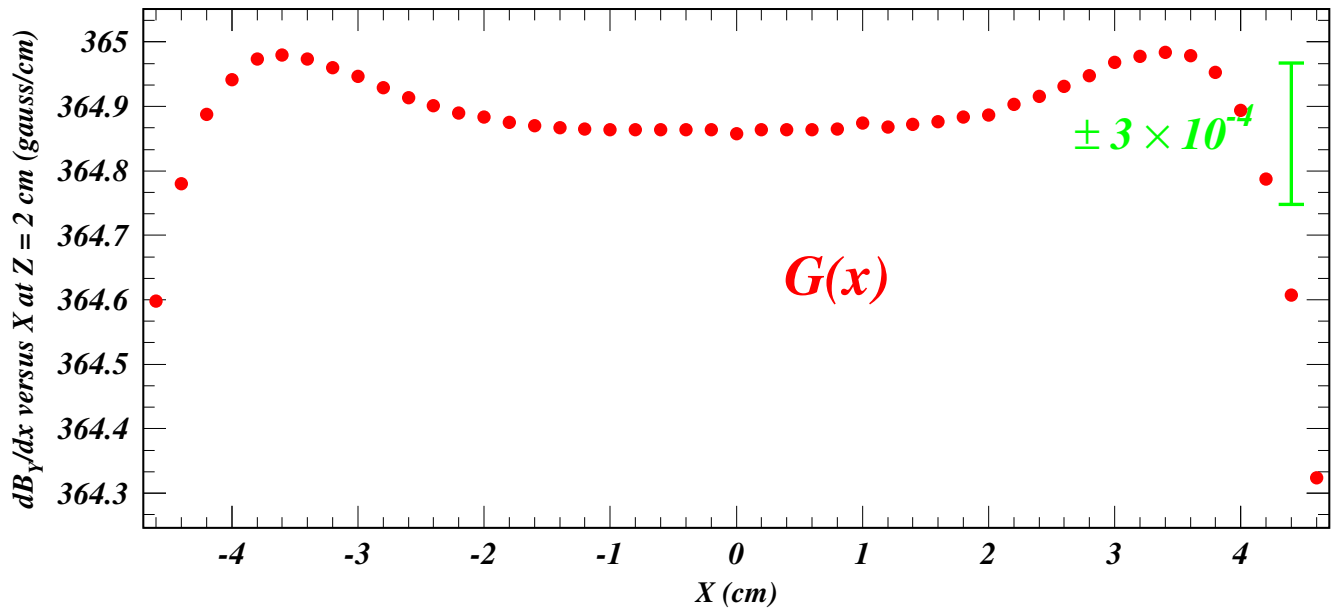

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.858 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBy/dx versus X at Z = 2 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
± 3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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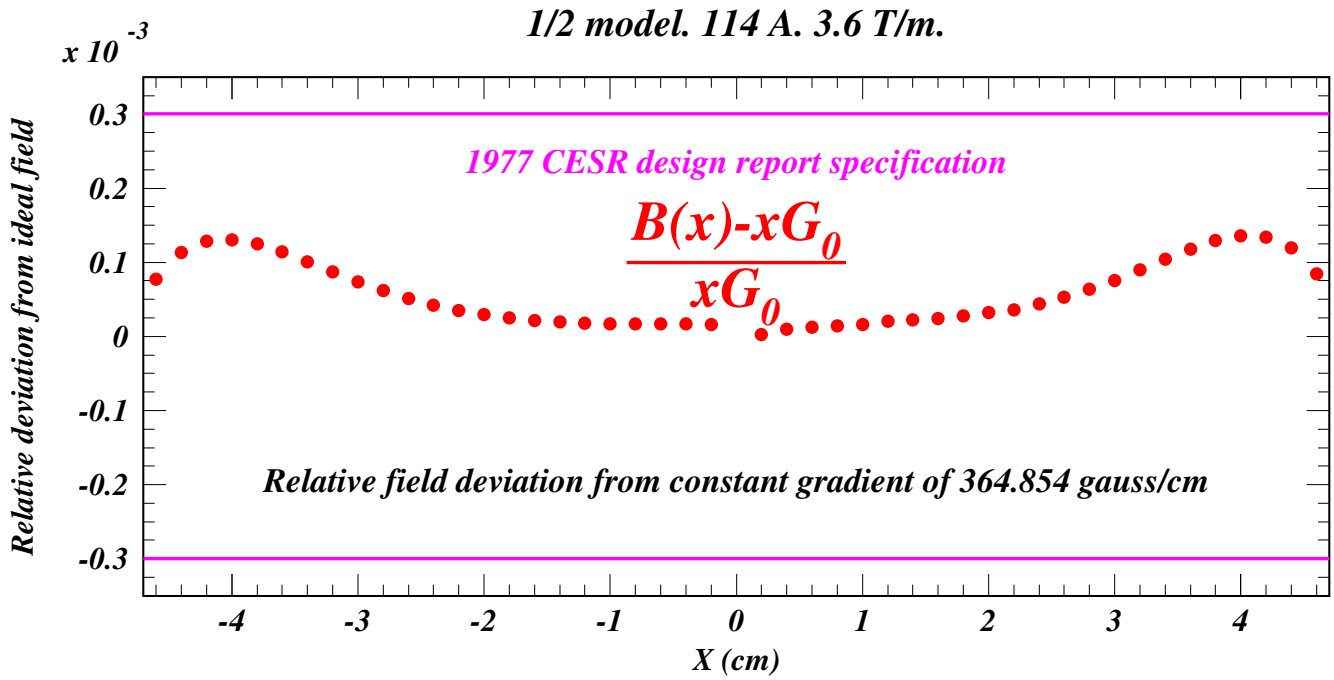
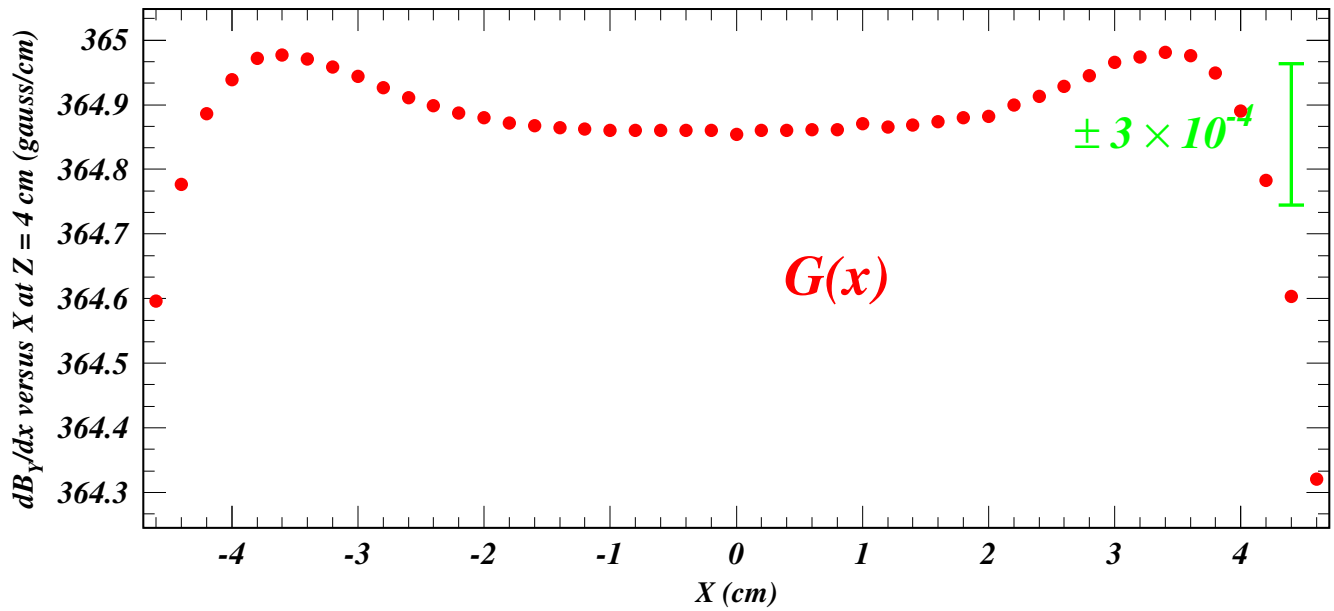

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.854 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBy/dx versus X at Z = 4 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
±3×10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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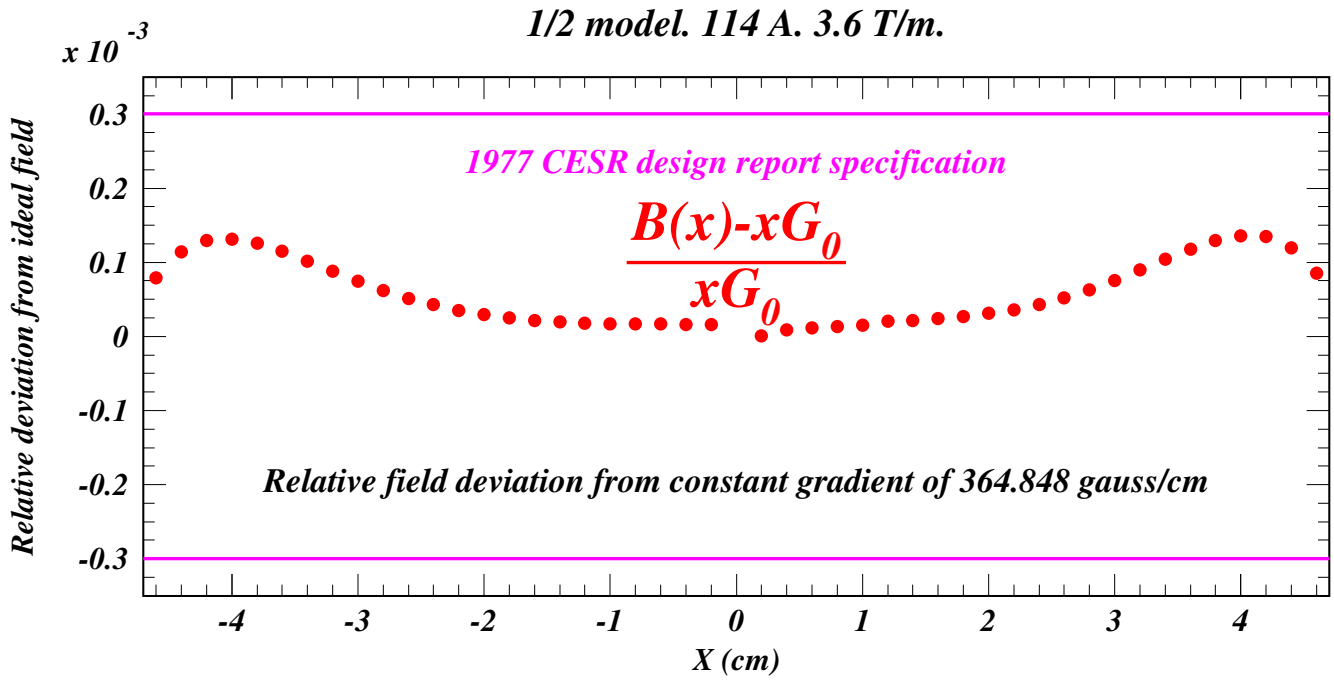
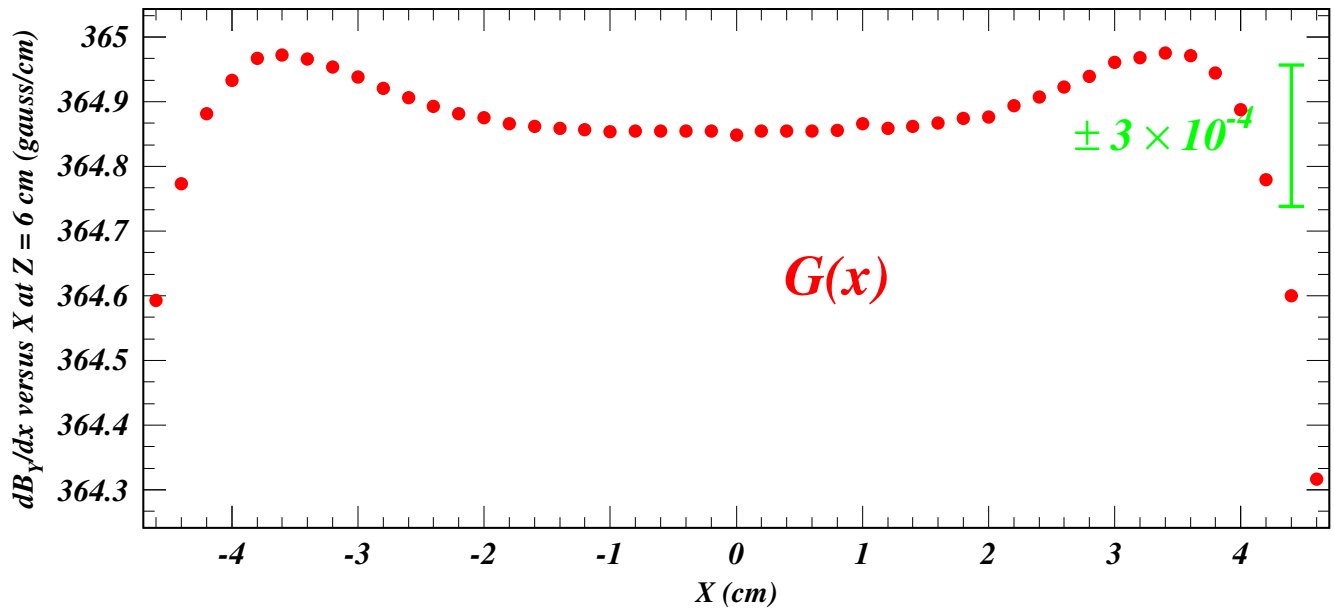

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.848 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBy/dx versus X at Z = 6 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
± 3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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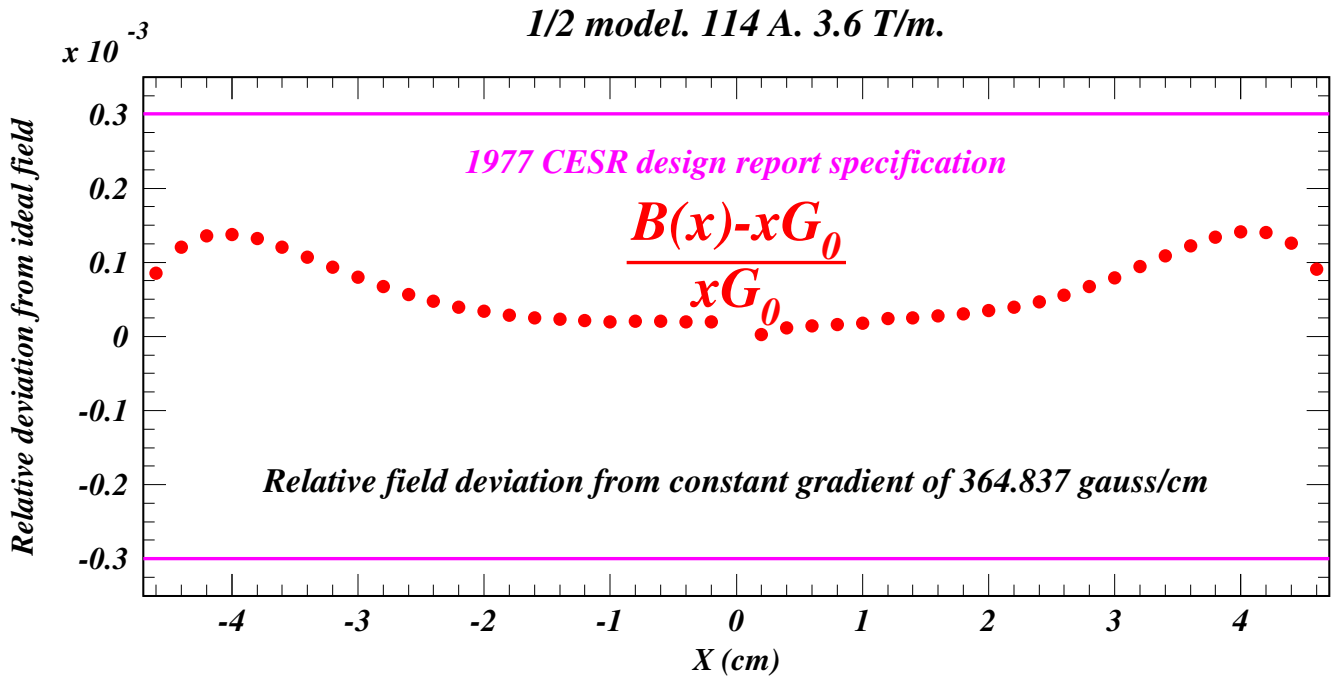
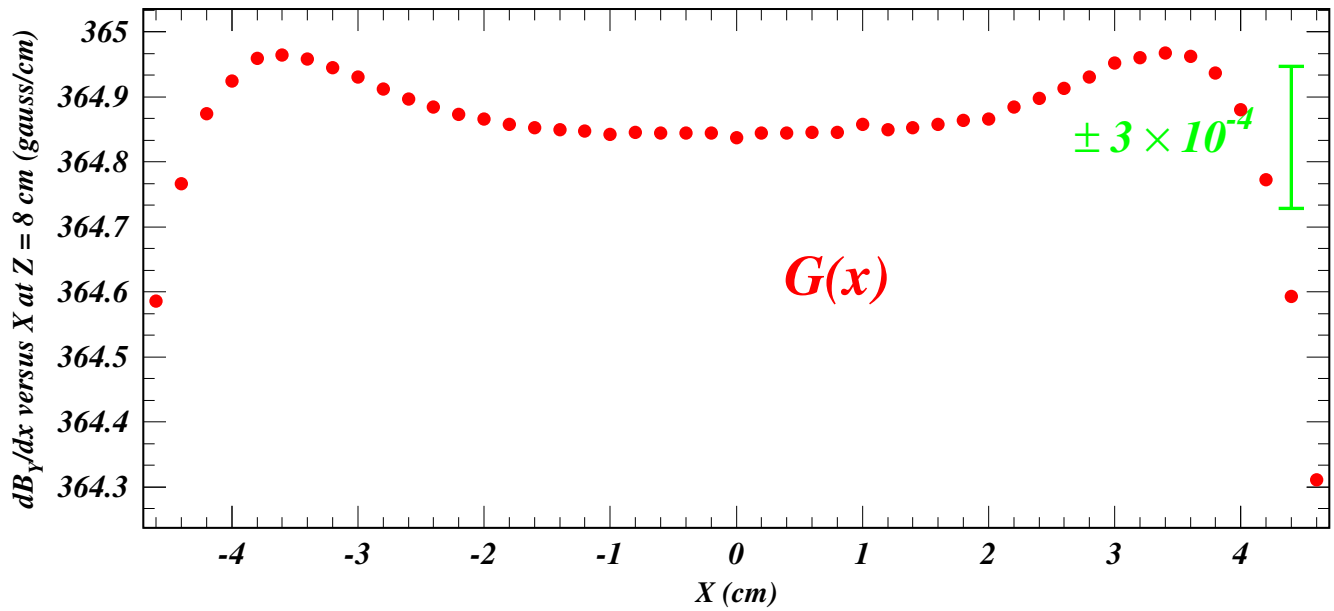

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.837 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBy/dx versus X at Z = 8 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
± 3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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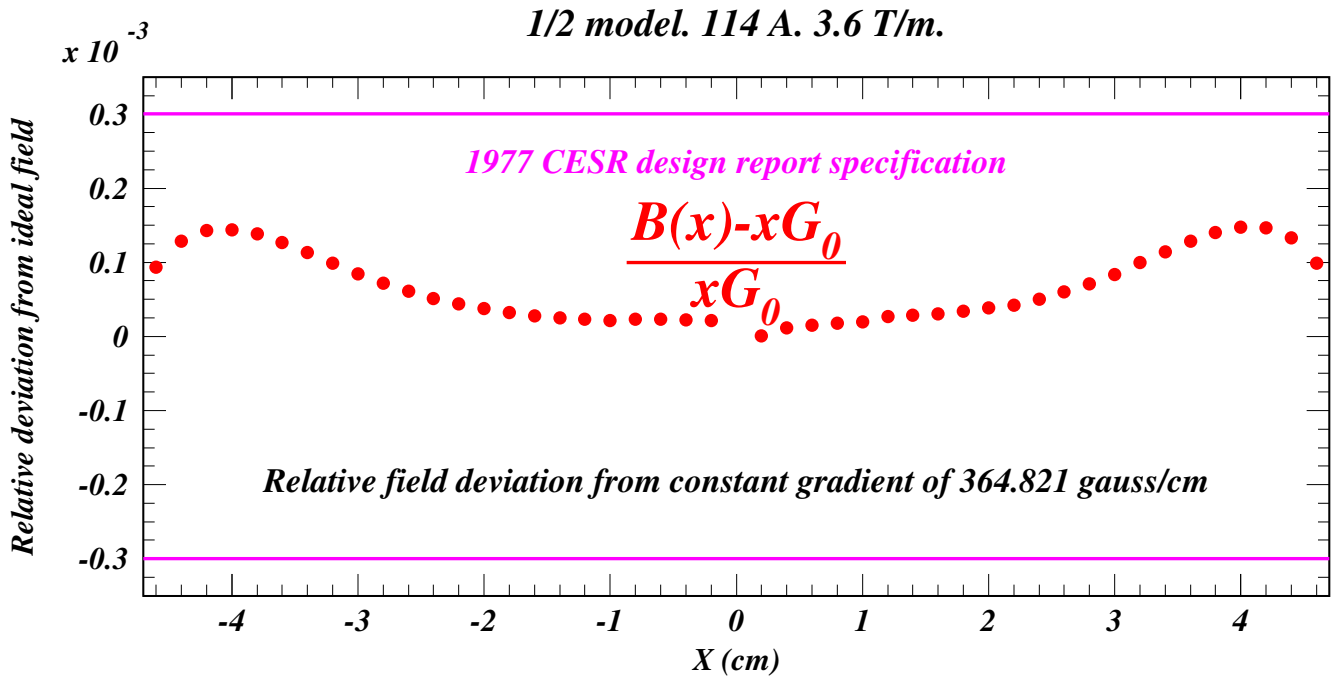
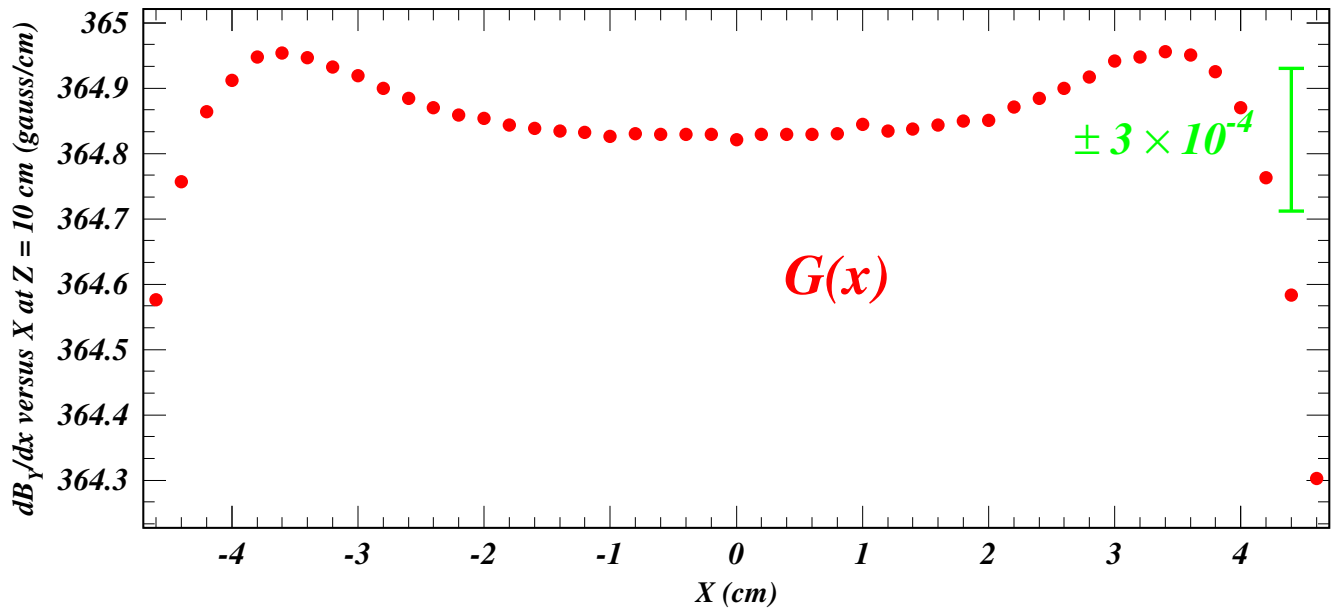

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.821 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 10 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
± 3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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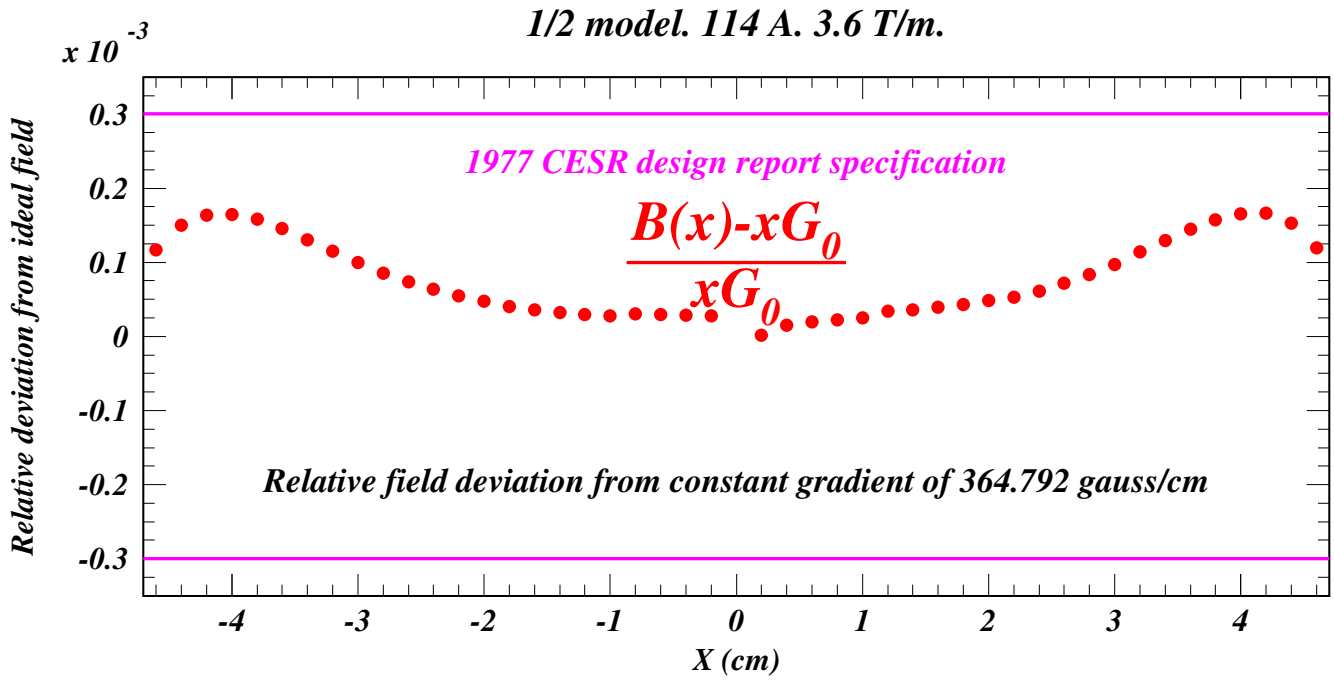
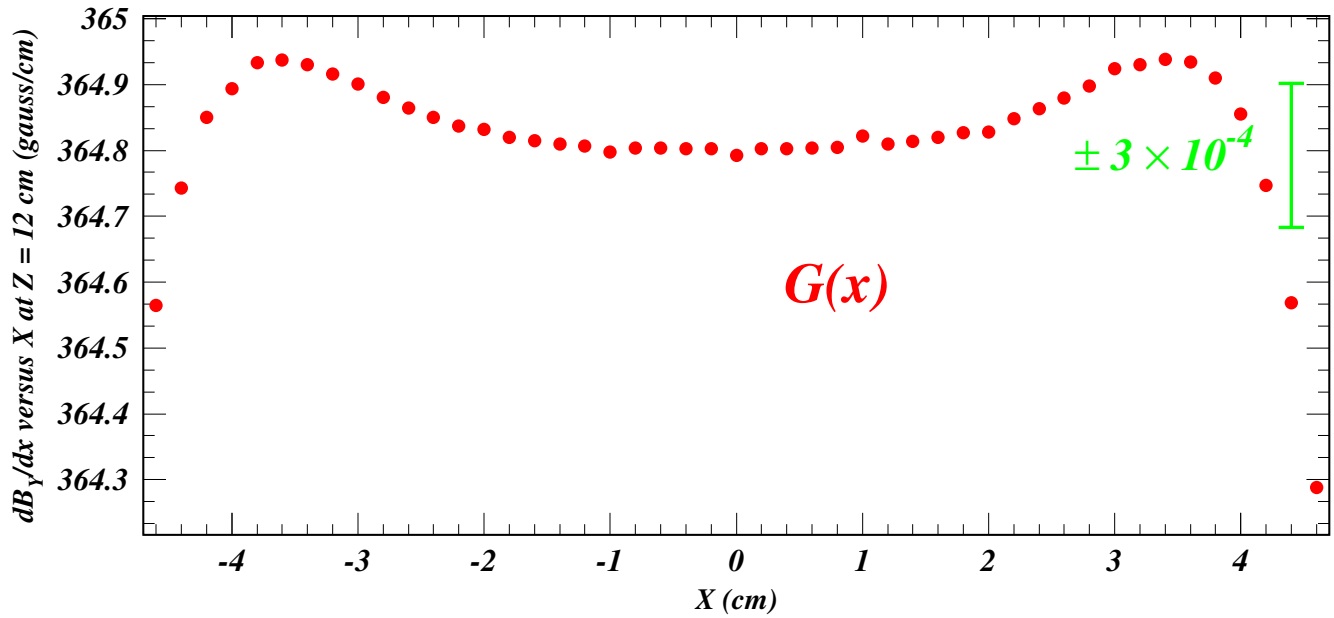

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.792 gauss/cm
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 12 cm (gauss/cm)
365
364.9
364.8
364.7
364.6
364.5
364.4
364.3
±3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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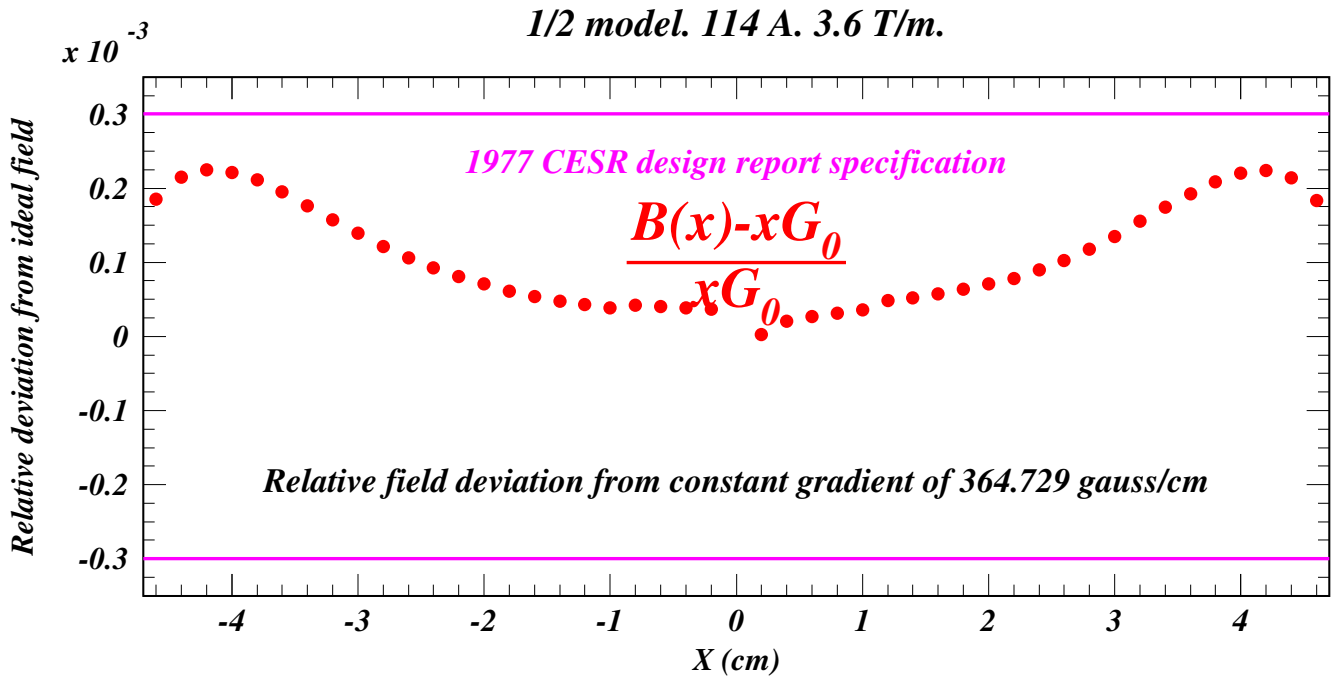
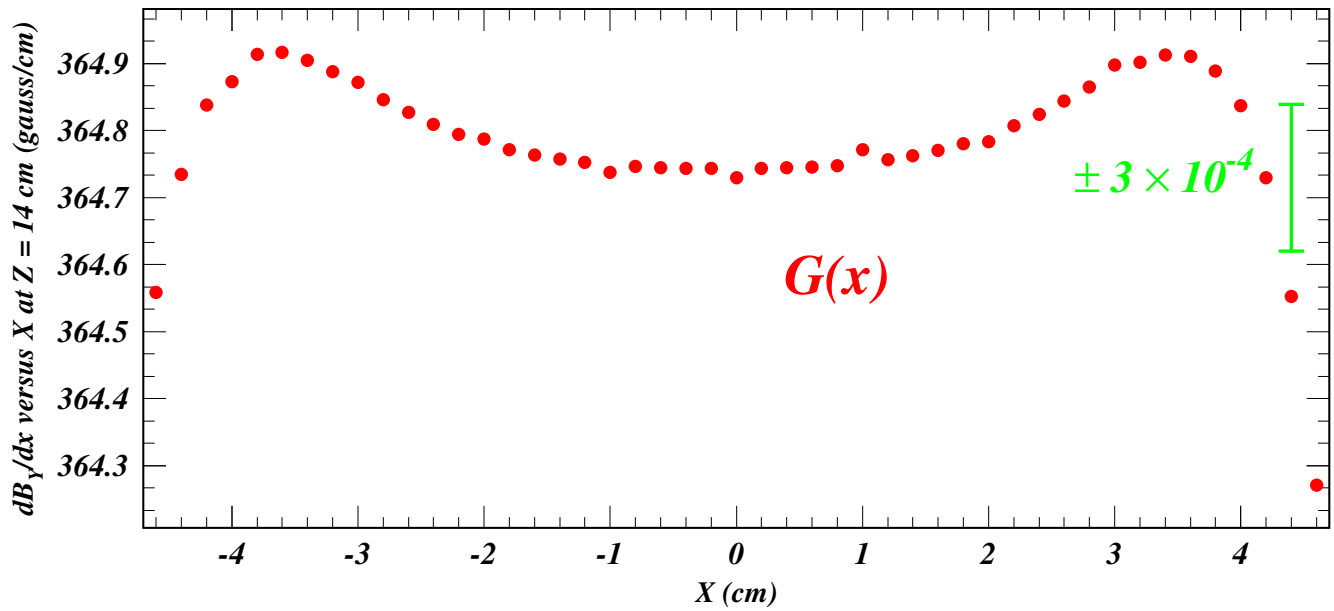

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.729 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 14 cm (gauss/cm)
364.9
364.8
364.7
364.6
364.5
364.4
364.3
± 3 × 10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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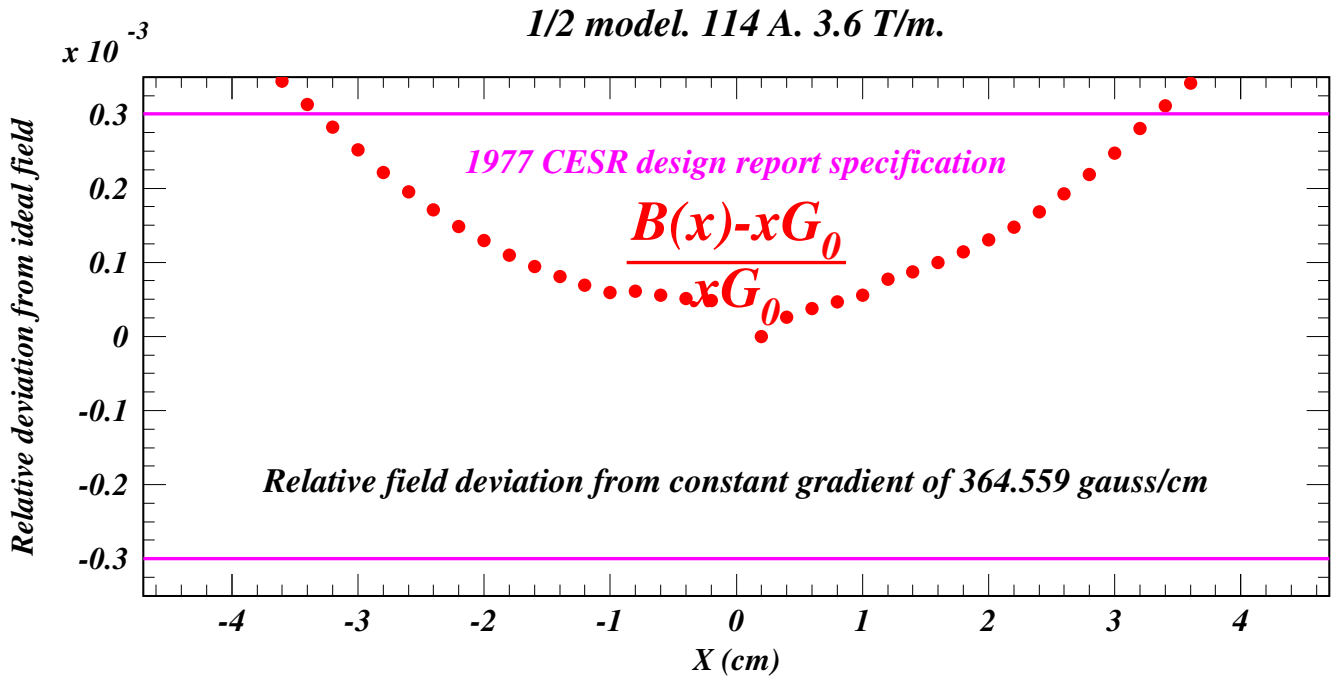
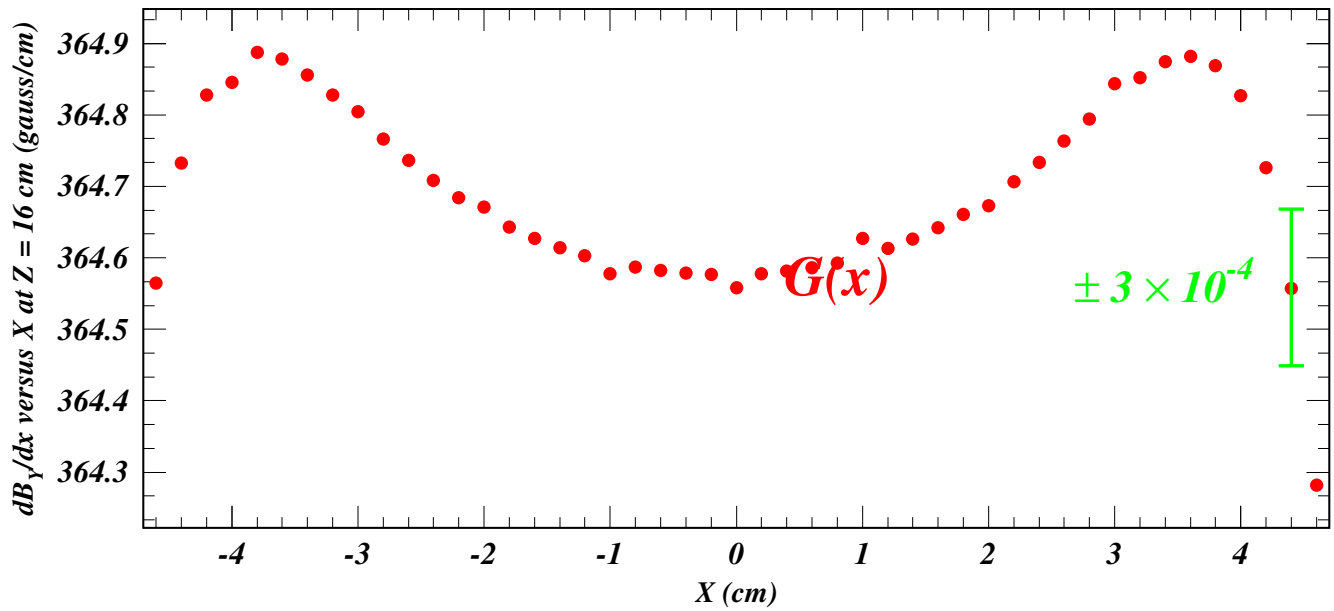

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.559 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 16 cm (gauss/cm)
364.9
364.8
364.7
364.6
364.5
364.4
364.3
G(x)
± 3 × 10^-4
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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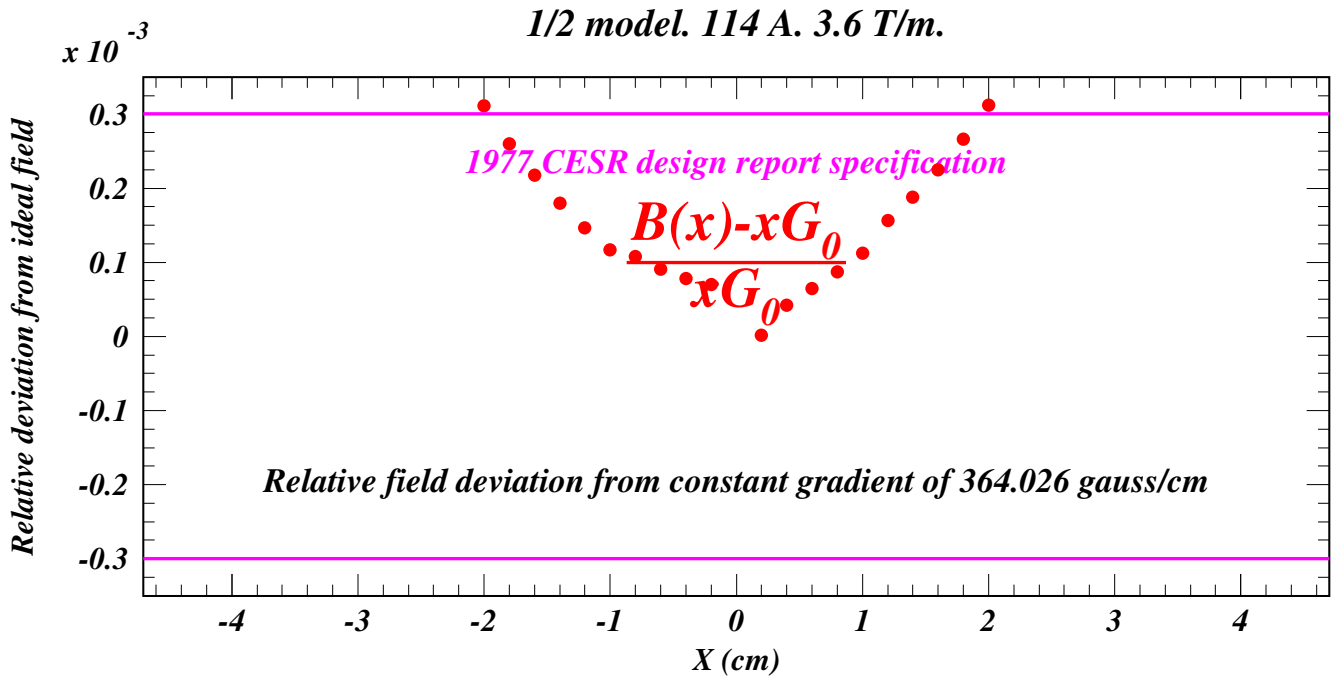
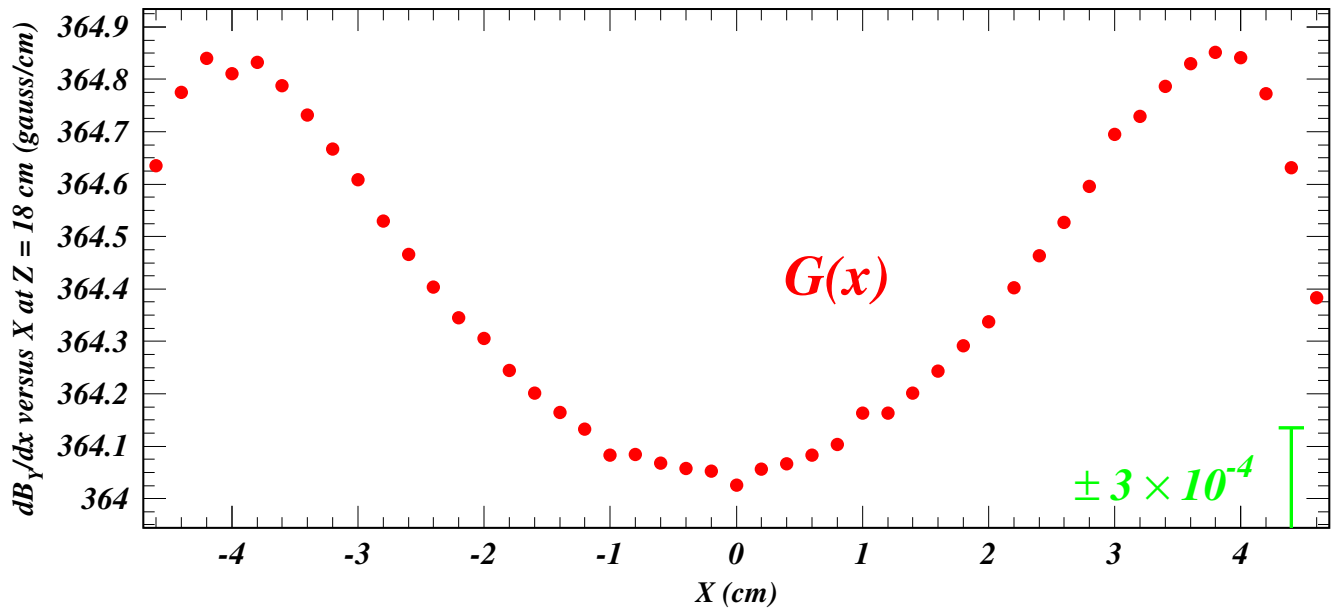

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 364.026 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 18 cm (gauss/cm)
364.9
364.8
364.7
364.6
364.5
364.4
364.3
364.2
364.1
364
G(x)
± 3 × 10^-4
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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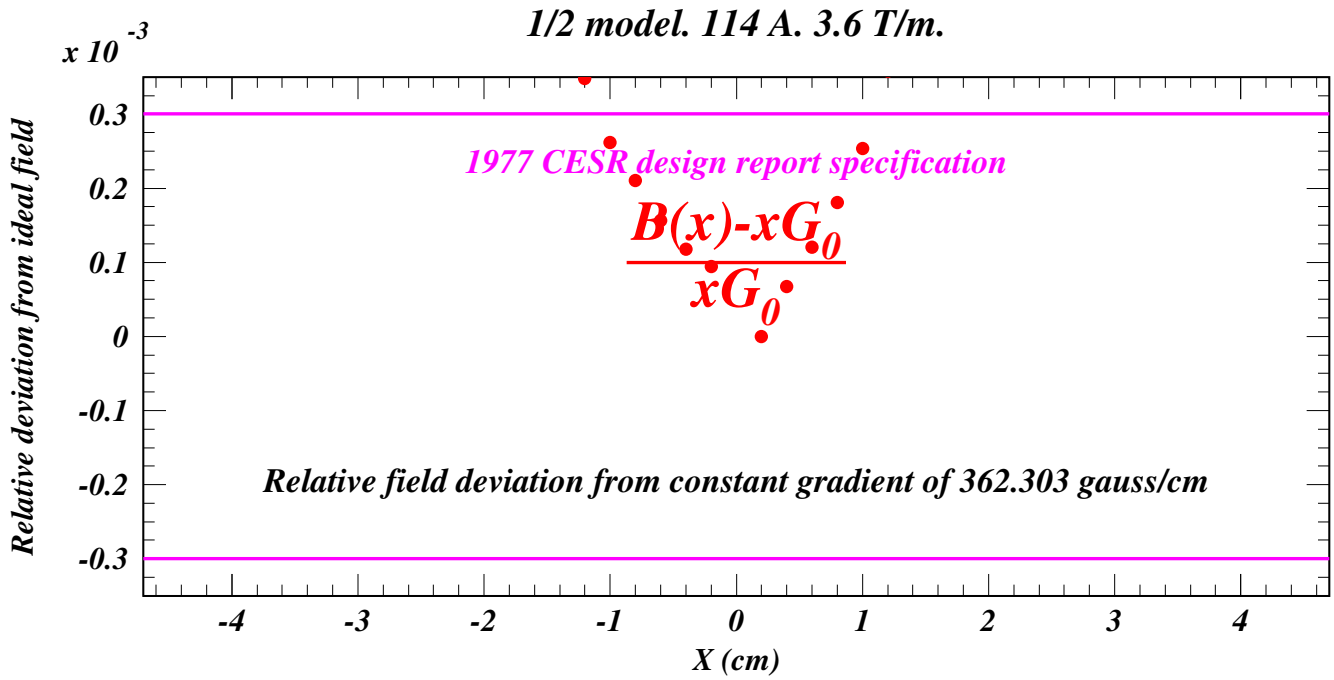
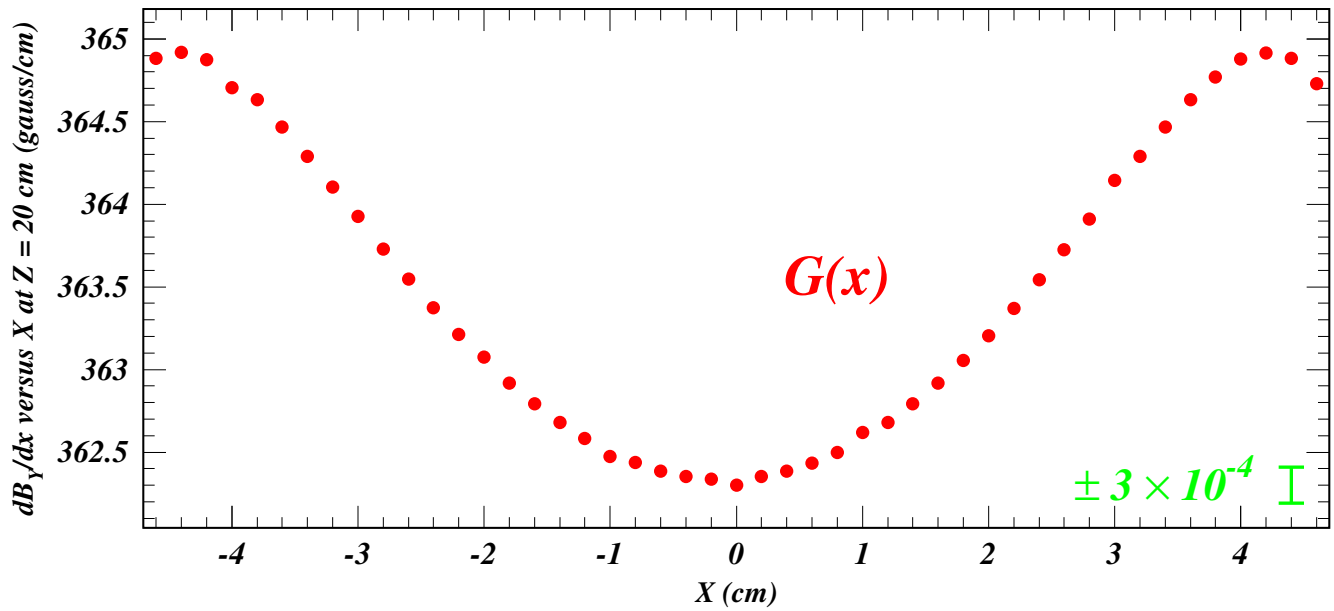

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 362.303 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 20 cm (gauss/cm)
365
364.5
364
363.5
363
362.5
G(x)
± 3 × 10^-4
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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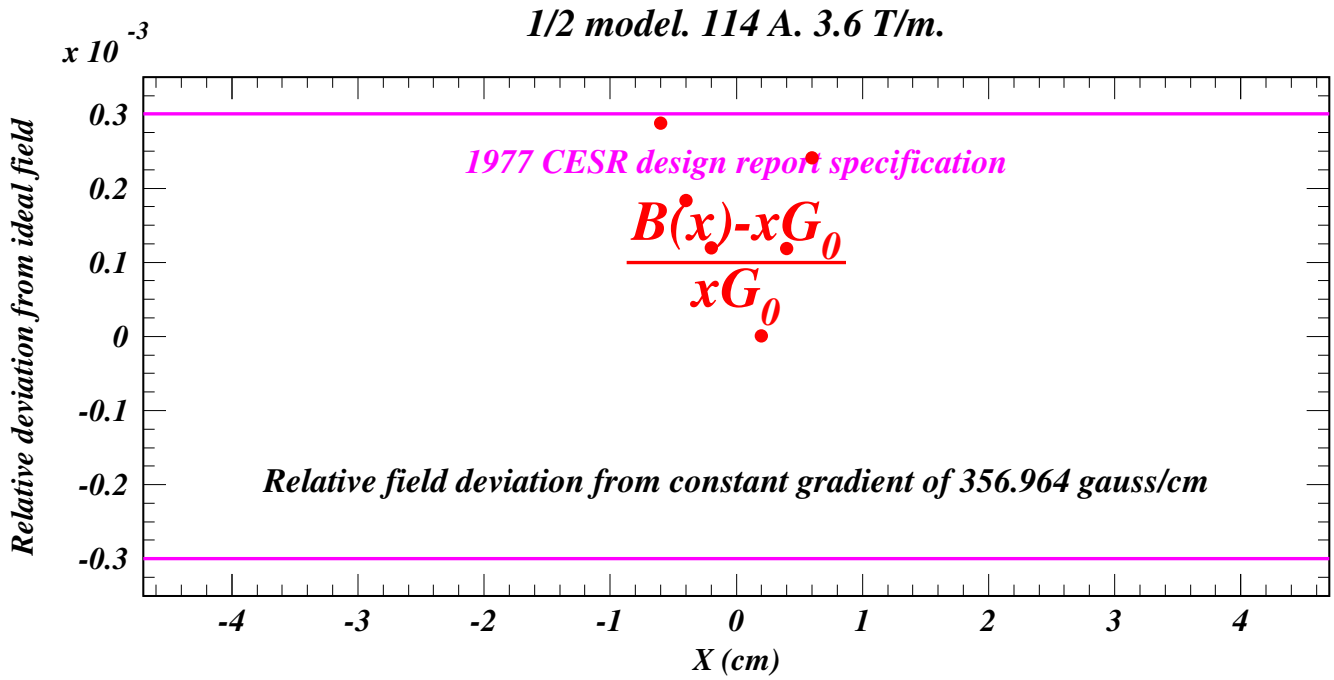
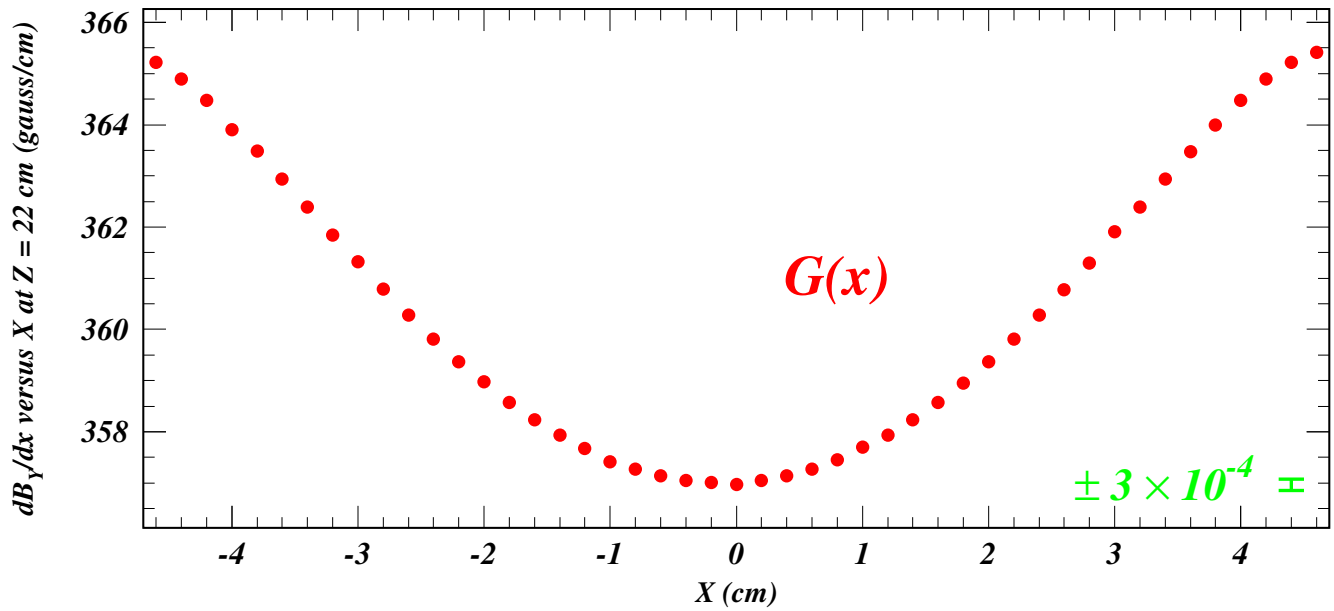

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 356.964 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 22 cm (gauss/cm)
366
364
362
360
358
G(x)
± 3 × 10^-4
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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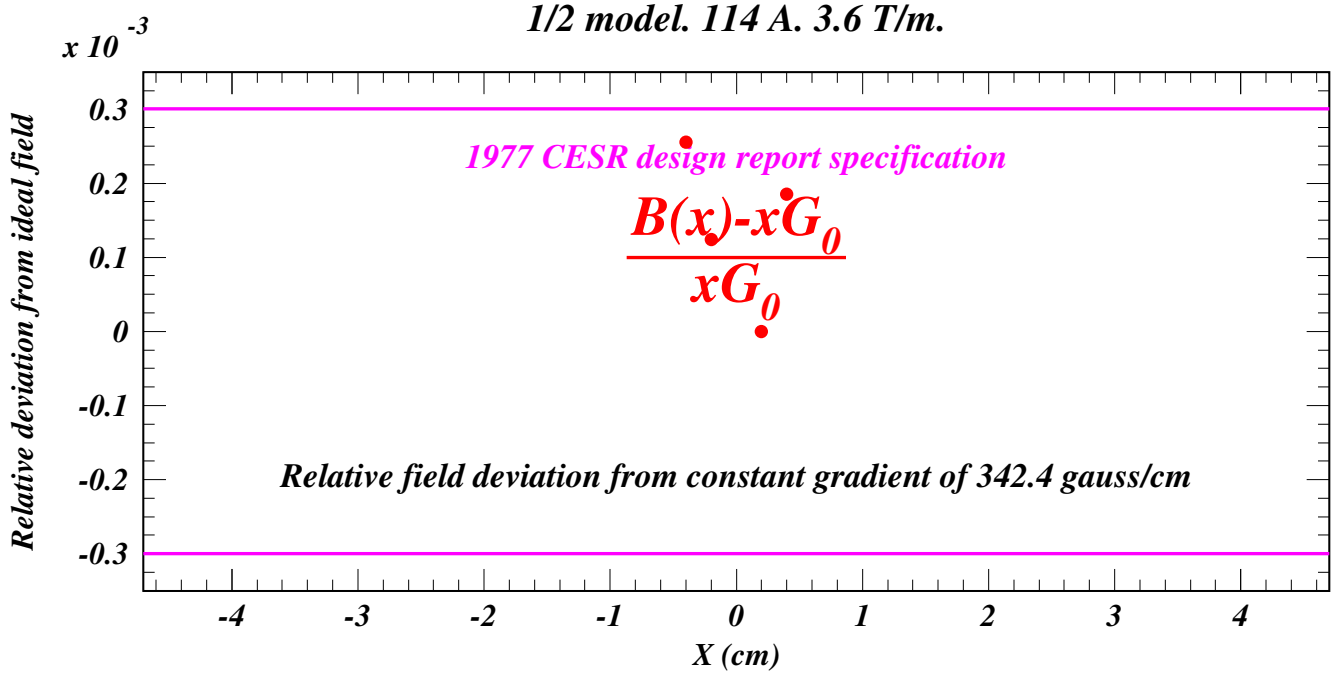
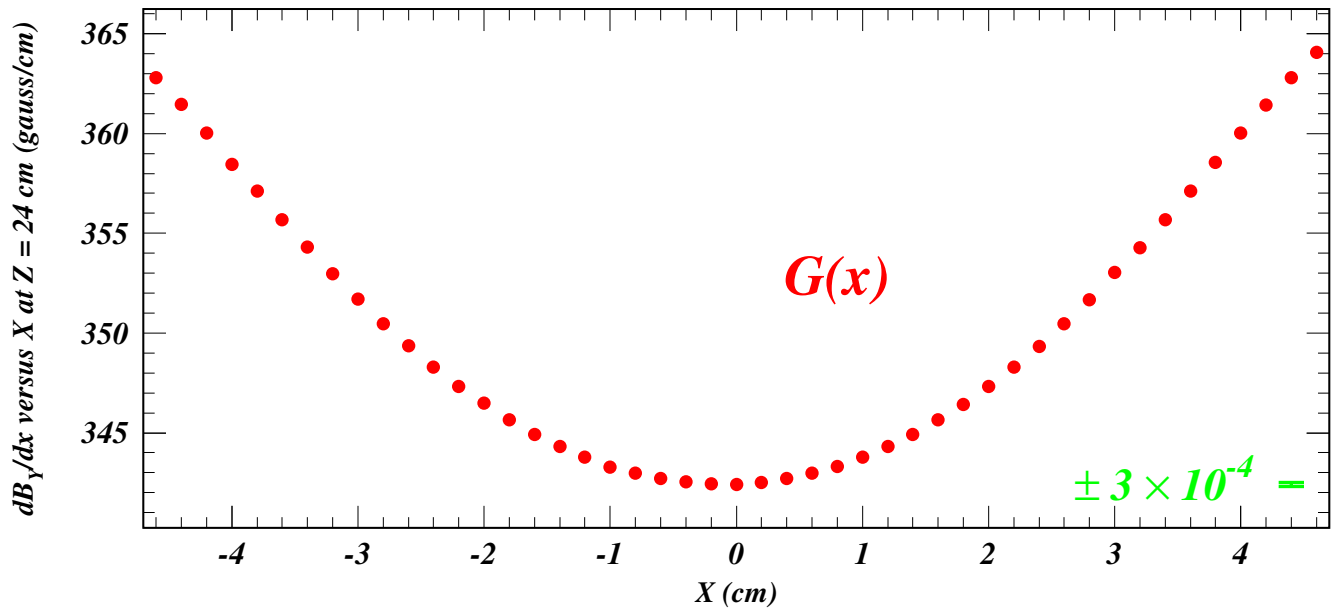
1/2 model. 114 A. 3.6 T/m.





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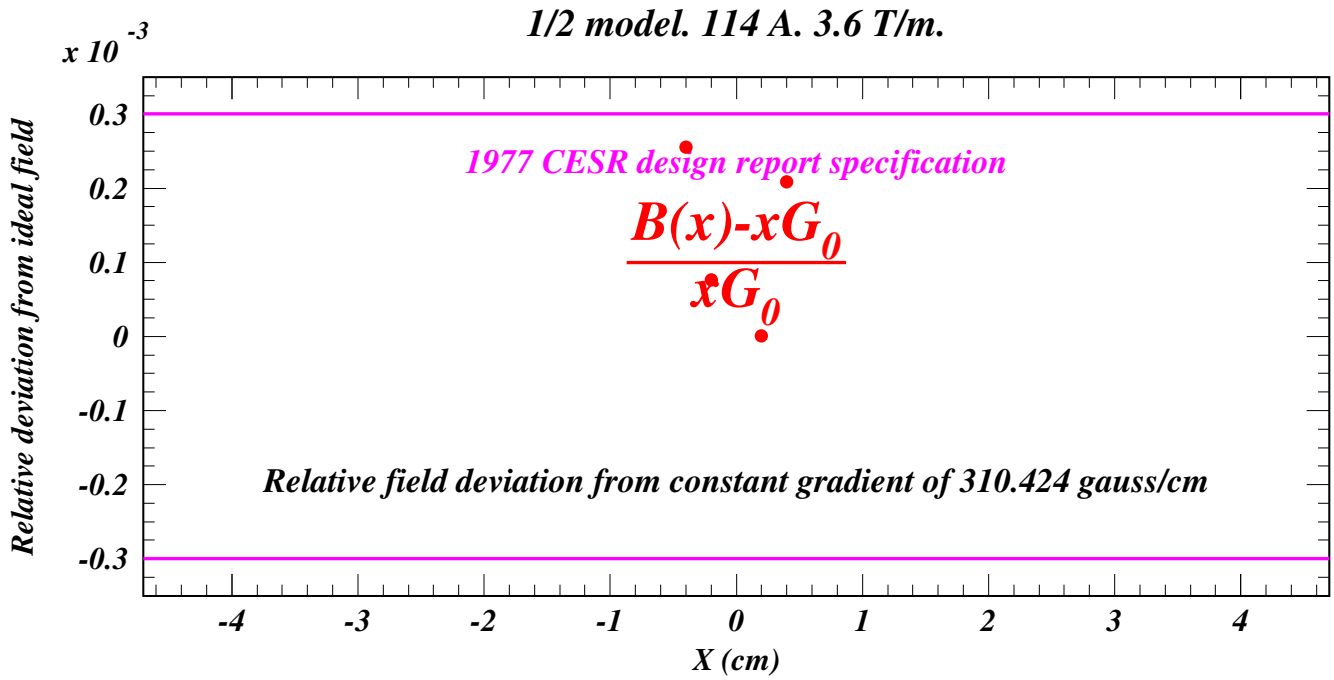
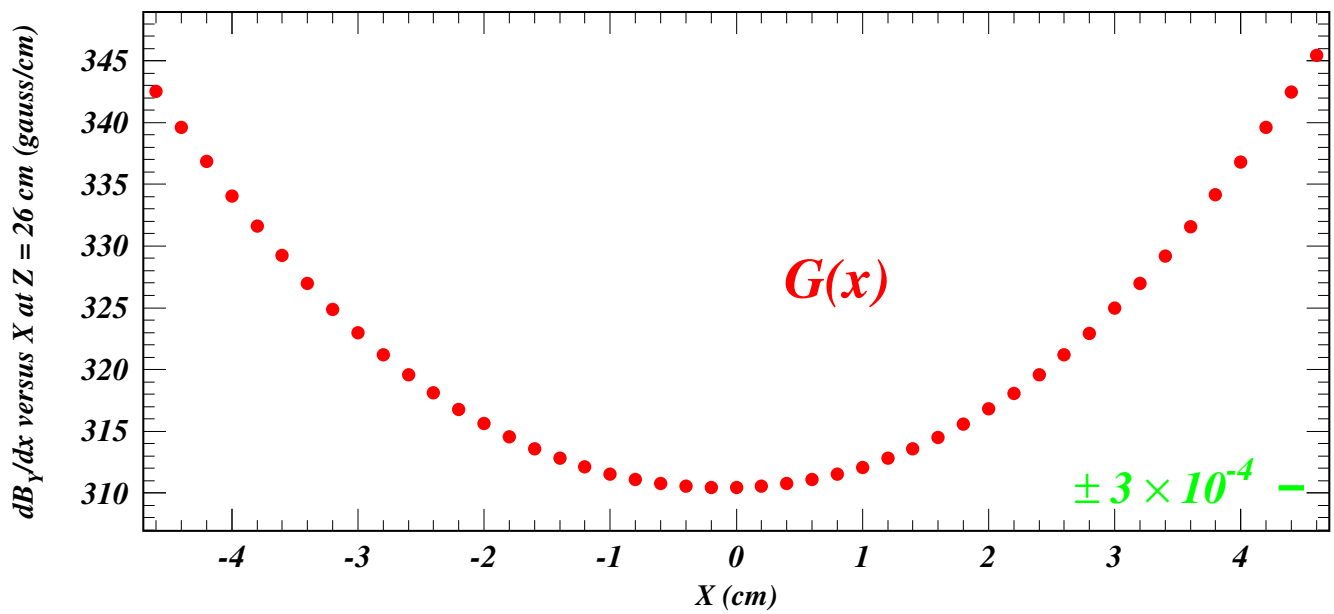

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 310.424 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 26 cm (gauss/cm)
345
340
335
330
325
320
315
310
G(x)
± 3 × 10^-4
-4
-3
-2
-1
0
1
2
3
4
X (cm)

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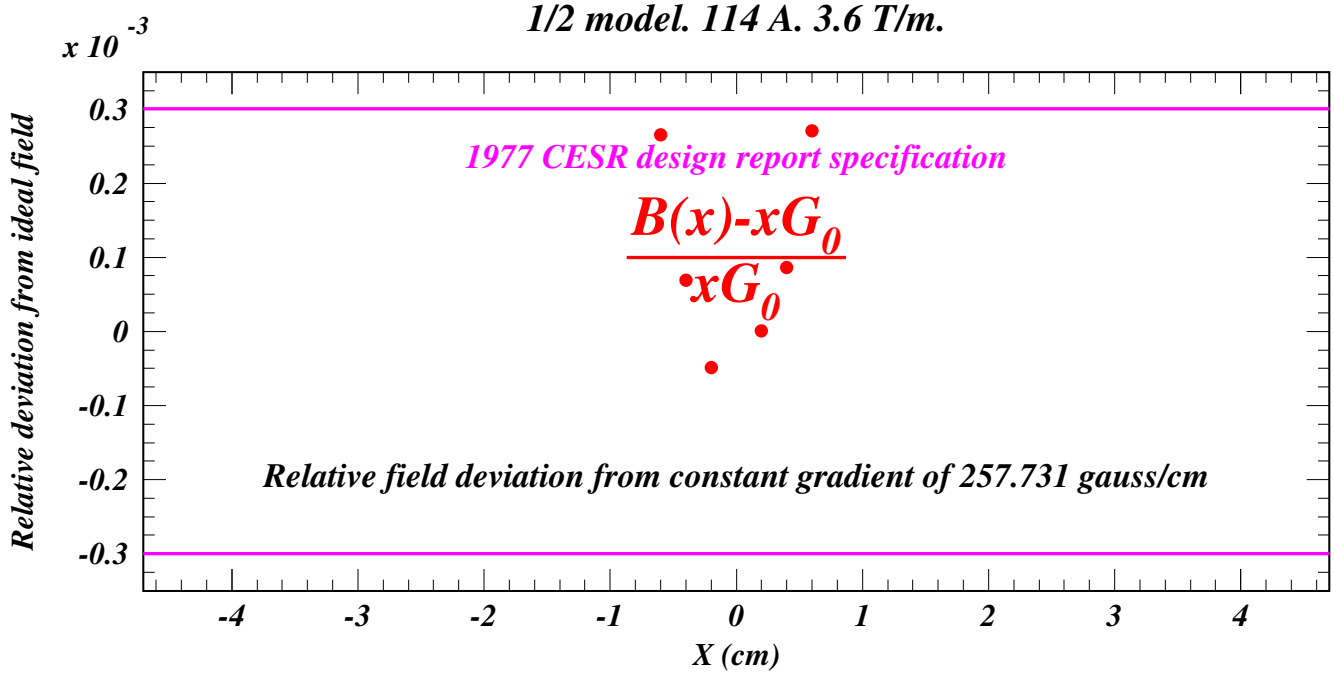
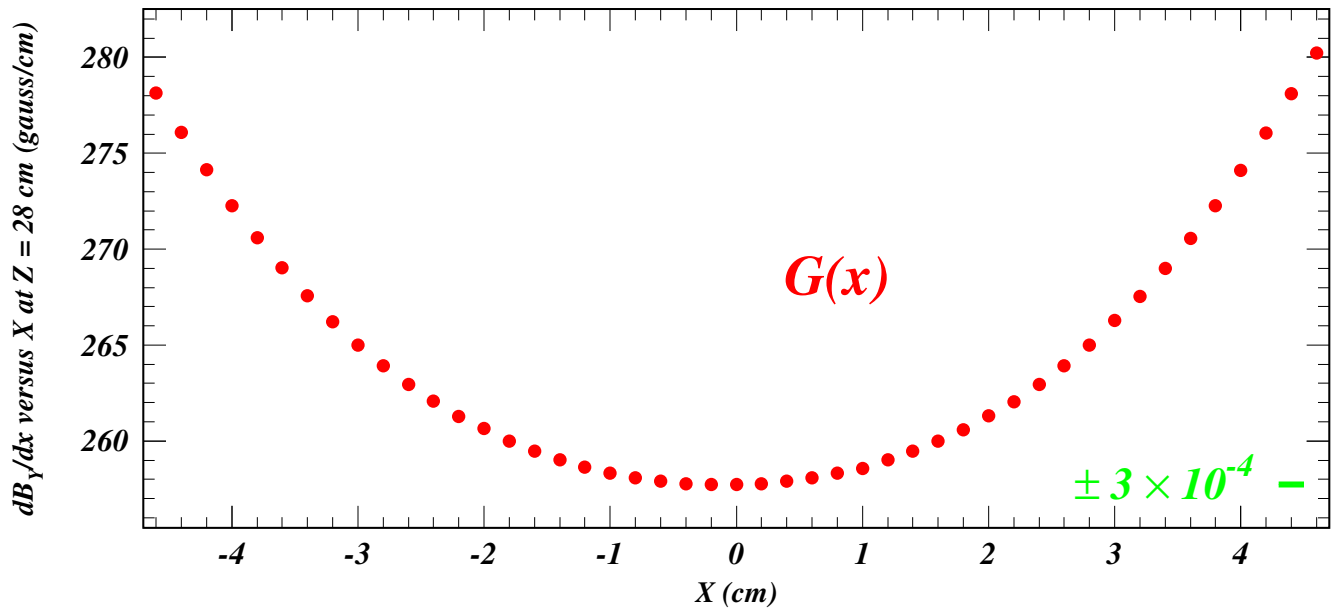
1/2 model. 114 A. 3.6 T/m.





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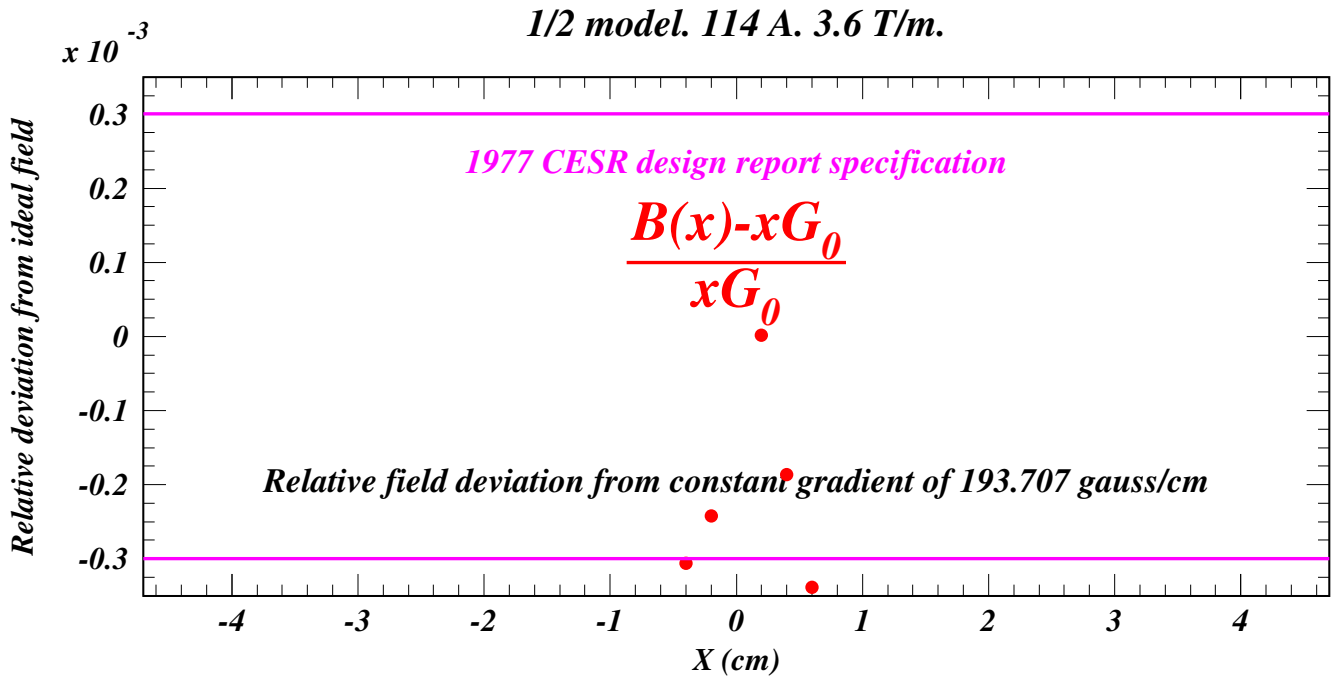
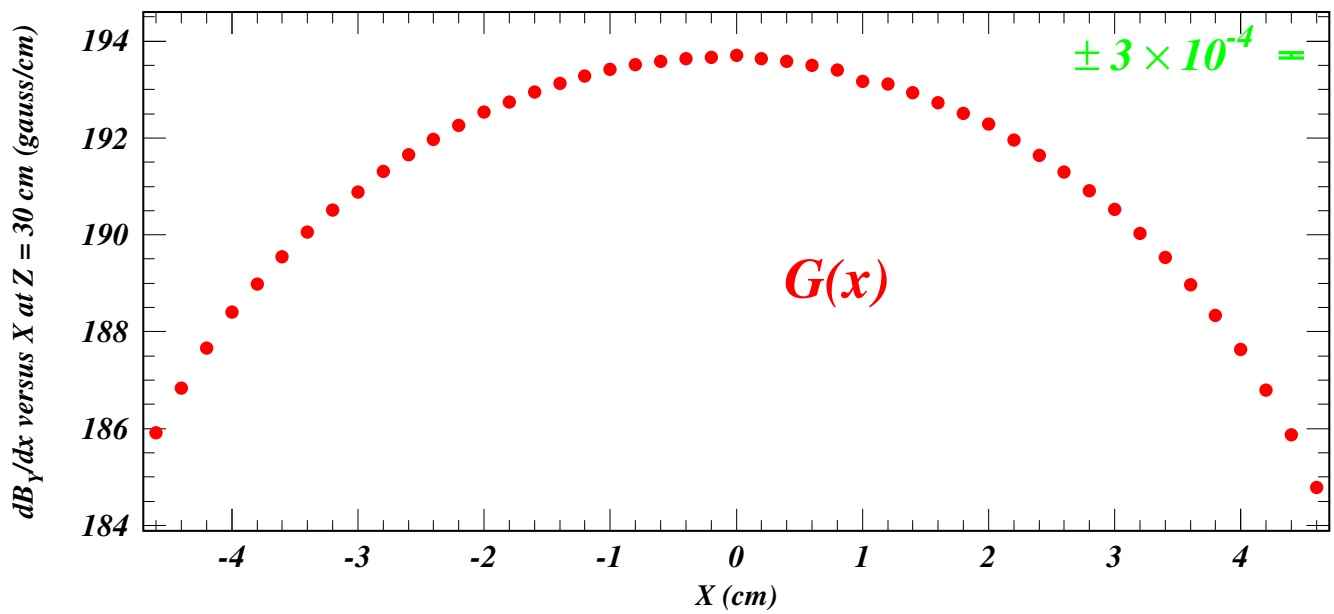
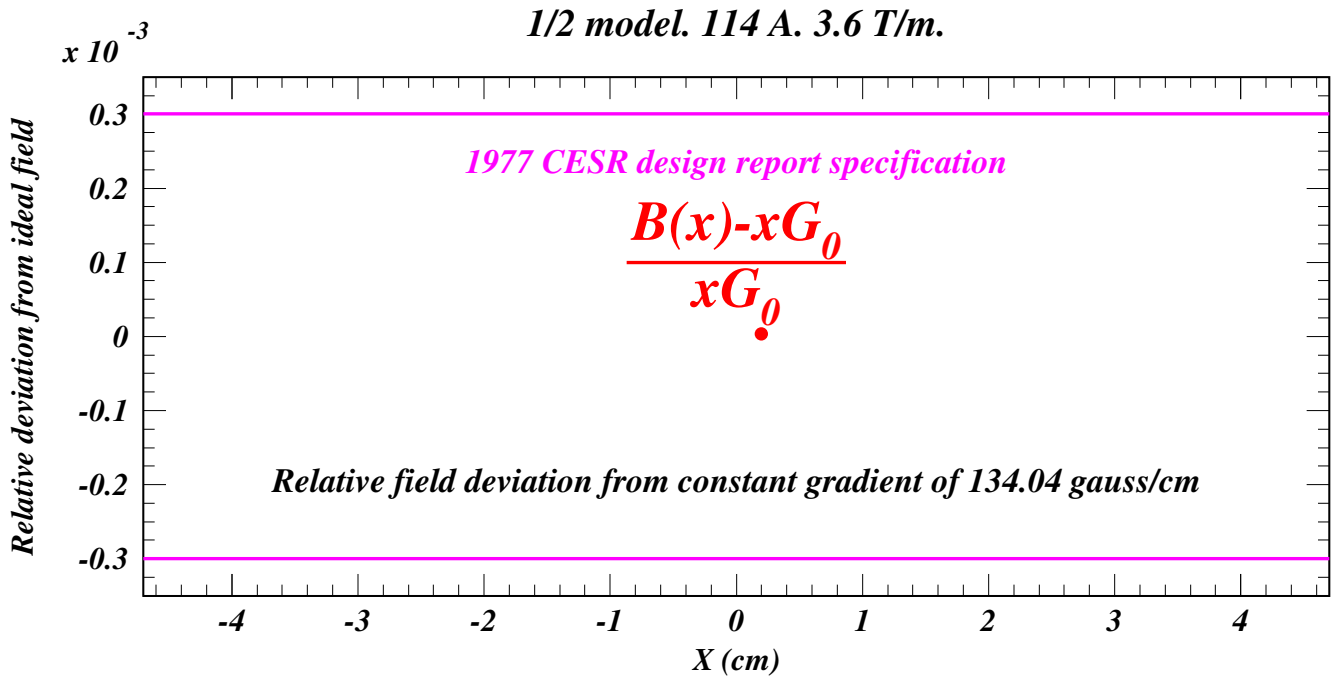
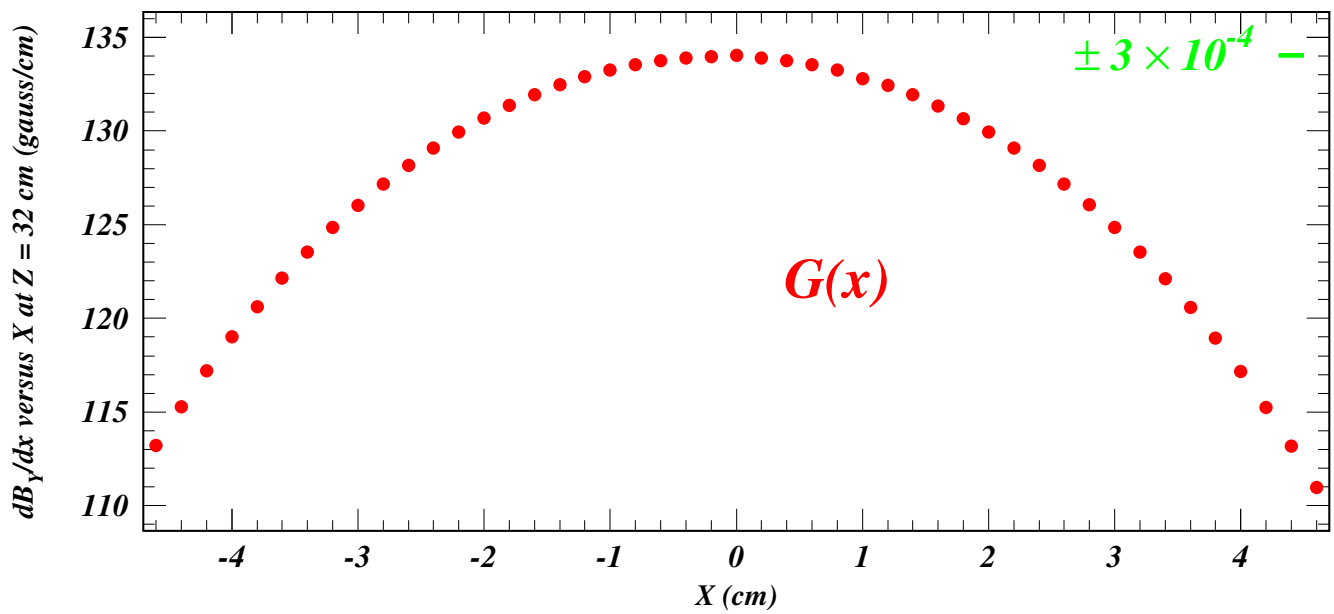

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 193.707 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 30 cm (gauss/cm)
194
192
190
188
186
184
±3×10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

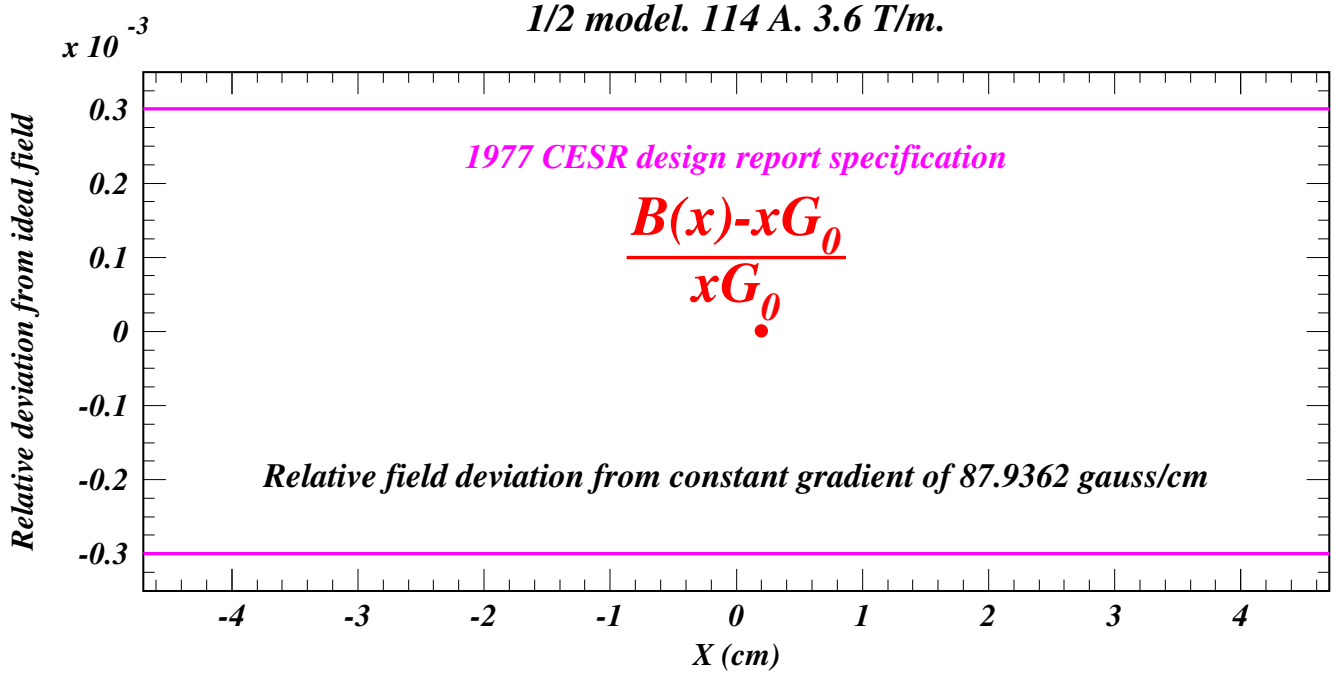
16/09/28 10.56

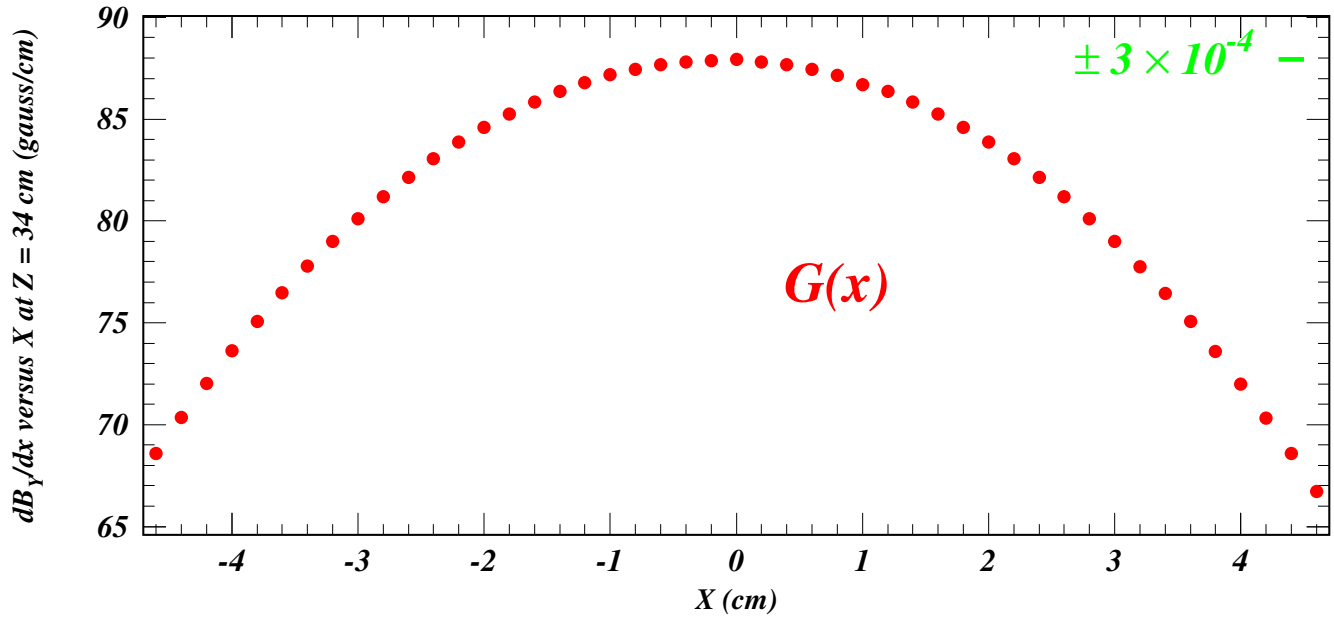

1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from ideal field
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
1977 CESR design report specification
B(x)-xG0
xG0
Relative field deviation from constant gradient of 134.04 gauss/cm
-4
-3
-2
-1
0
1
2
3
4
X (cm)


dBY/dx versus X at Z = 32 cm (gauss/cm)
135
130
125
120
115
110
±3×10^-4
G(x)
-4
-3
-2
-1
0
1
2
3
4
X (cm)

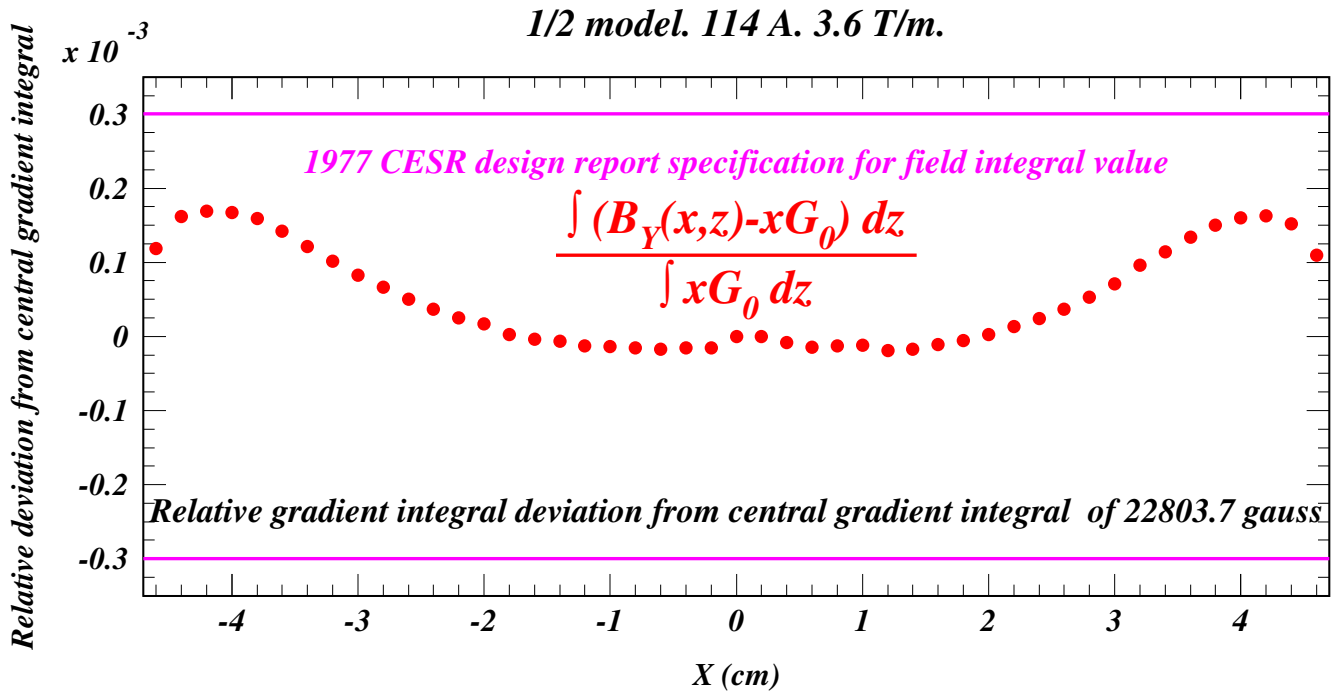
16/09/28 10.56

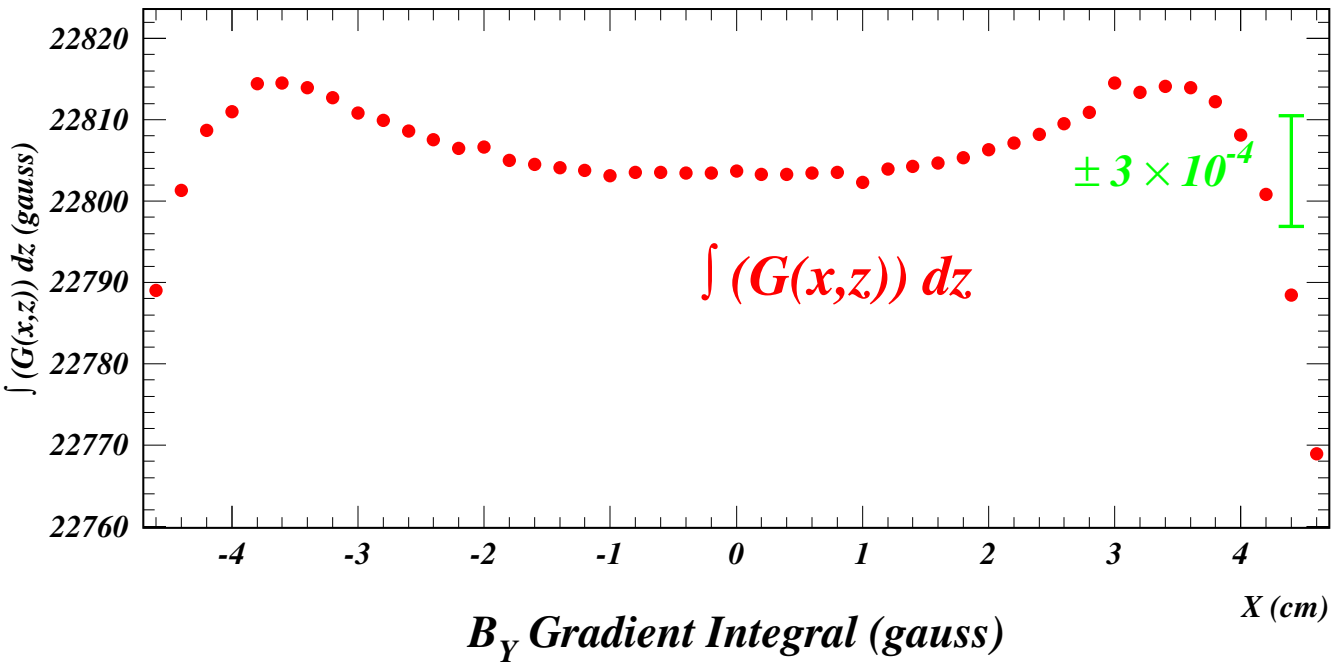
1/2 model. 114 A. 3.6 T/m.





16/09/28 10.56


1/2 model. 114 A. 3.6 T/m.
x 10^-3
Relative deviation from central gradient integral
1977 CESR design report specification for field integral value
∫ (B_Y(x,z)-xG_0) dz / ∫ xG_0 dz
Relative gradient integral deviation from central gradient integral of 22803.7 gauss
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-4
-3
-2
-1
0
1
2
3
4
X (cm)


∫ (G(x,z)) dz (gauss)
22820
22810
22800
22790
22780
22770
22760
± 3 × 10^-4
∫ (G(x,z)) dz
-4
-3
-2
-1
0
1
2
3
4
X (cm)
B_Y Gradient Integral (gauss)