

Apr 30, 1996

EXPECTED_s10.TABLE6_E

Table 6(e)

Expected values of body harmonics in 100 mm BNL built Helical Magnet
2 Layers and 2 currents. Body Harmonics at all field at 31 mm radius:

[<bn> = mean, d(bn) = uncertainty in mean, sig(bn) = sigma for bn]

n	<bn> 2-d	<bn> spiral	d(bn)	sig(bn)	<an>	d(an)	sig(an)
1	0.	0	5.	0.8	0	1.	1.3
2	0	-13.7	10.	2.3	0	0.4	0.5
3	0.	0	3.	.3	0	.3	1.0
4	-0.1	2.5	3.	.6	0	.1	.2
5	0	0.	1.	.1	0	0.1	.3
6	-0.3	0.02	1.	.1	0	.03	.1
7	0	0.	.3	.1	0	.03	.1
8	-6.7	0.	1.	.1	0	.03	.1
9	0.0	0.	.1	.1	0	.03	.1
10	2.7	0.	.5	.1	0	.03	.1

Expected "End" harmonics in LEAD+RETURN ENDS at ALL current (Unit-m)
THE VALUES ARE ABOUT THE SAME IN THE TWO ENDS

n	<Bn>	d(Bn)	sig(Bn)	<An>	d(An)	sig(An)
1	0	2	1	0	4	1.
2	0.2	10	2	164.	20.	1
3	0.	.2	.2	0	2	1.
4	0.04	3.	.2	19.	4.	.3
5	0	.2	.2	0	1	.2
6	0.04	1.	.1	3.8	1.	.2

Expected values of body harmonics in 100 mm BNL built Helical Magnet
2 Layers and 1 current.

Body Harmonics at 2 TESLA field at 31 mm radius:

[<bn> = mean, d(bn) = uncertainty in mean, sig(bn) = sigma for bn]

n	<bn> 2-d	<bn> spiral	d(bn)	sig(bn)	<an>	d(an)	sig(an)
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1	0.	0	5.	0.8	0	1.	1.3
2	-50.	-13.7	10.	2.3	0	0.4	0.5
3	0.	0	3.	.3	0	.3	1.0
4	5.2	2.5	3.	.6	0	.1	.2
5	0	0.	1.	.1	0	0.1	.3
6	0.24	0.02	1.	.1	0	.03	.1
7	0	0.	.3	.1	0	.03	.1
8	-7.5	0.	1.	.1	0	.03	.1
9	0.0	0.	.1	.1	0	.03	.1
10	2.9	0.	.5	.1	0	.03	.1

BODY Harmonics at 3.8 TESLA field at 31 mm radius:
(SAME AS ABOVE, EXCEPT THE FOLLOWINGS)

n	<bn> 2-d	<bn> spiral	d(bn)	sig(bn)	<an>	d(an)	sig(an)
2	-103.	-13.7	10.	2.3			
4	-1.8	2.5	3.	.6			
6	1.3	0.02	1.	.1			
8	-7.5	0.0	1.	.1			
10	2.9	0.0	.5	.1			

Expected "End" harmonics in LEAD+RETURN ENDS at ALL current (Unit-m)
THE VALUES ARE ABOUT THE SAME IN THE TWO ENDS

n	<Bn>	d(Bn)	sig(Bn)	<An>	d(An)	sig(An)
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Table 6(e)

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