

Sep 8, 1994

EXPECTED_QRJ.TABLE2j_E

QRJ (Q3) Table 2j(e)

Expected values of body harmonics in 130 mm Insertion Quadrupoles
QRJ (Q3) at 5000 A :

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

n	<bn>	d(bn)	sig(bn)	<an>	d(an)	sig(an)
1	0	10.	10	0	0	10
2	0.	0.5	2.4	0.0	0.1	1.2
3	0	1.0	.6	0.0	0.3	.7
4	0.	0.3	.6	0.0	0.1	.5
5	-1.2	0.5	.5	0.0	0.4	.6
6	0.0	0.12	.11	0.0	0.09	.12
7	-0.2	.05	.05	0.0	0.03	.12
8	0.0	0.04	.05	0.0	0.05	.09
9	0.0	0.2	.03	0.0	0.03	.03

Expected body harmonics at 660 A
(same as above except for b5 and b9)

5	-4.7	0.5	.5
9	-0.2	0.2	.03

Expected body harmonics at 1450 A
(same as above except for b5 and b9)

5	-2.2	0.5	.5
9	-0.1	0.2	.03

Expected values of harmonics in LEAD END at "ALL" currents (Unit-m)

n	<Bn>	d(Bn)	sig(Bn)	<An>	d(An)	sig(An)
1	0	0	0	0	0	0
2	0.0	0.1	0.7	0.0	1.	2.
3	0.0	0.3	.3	0.0	0.4	.8
4	0.0	0.1	.3	0.0	0.3	.4
5	4.6	.5	.3	-1.5	0.5	.2
6	.0	0.01	.04	0.0	0.06	.06
7	0.0	0.04	.05	0.0	0.02	.01
8	0.0	0.04	.05	0.0	0.02	.02

9	-0.5	.05	.02	0.2	.05	.03
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Expected values of harmonics in RETURN END at "ALL" currents (Unit-m)

n	<Bn>	d(Bn)	sig(Bn)	<An>	d(An)	sig(An)
1	0	0	0	0	0	0
2	0.0	0.3	1.8	0.0	0.7	1.
3	0.0	0.1	.2	0.0	0.1	.3
4	0.0	0	.25	0.0	0.2	.2
5	1.	0	.6	0.0	0.1	.1
6	0.0	0.06	.03	0.0	0.06	.02
7	0.0	0.01	.02	0.0	0.02	.05
8	0.0	0.03	.03	0.0	0.01	.02
9	-.1	0	.03	0.0	0.04	.01

Notes:

1. This table is derived from the table 2i(e) in file EXPECTED_QRI.TABLE2i_E. The change is in reduced <b9> which is granted due to a cross section iteration based on the magnet QRI120. The warm test in first two QRJ magnet indicate that the cross section iteration has accomplished the desired results.

Table 2j(e)

EXPECTED_QRj.TABLE2j_E