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Booster Dipole Field Computations

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January 1986

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Brookhaven National Laboratory

U.S. Department of Energy

USDOE Office of Science (SC)

DISCLAIMER

BOOSTER DIPOLE FIELD COMPUTATIONS

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January 10, 1986

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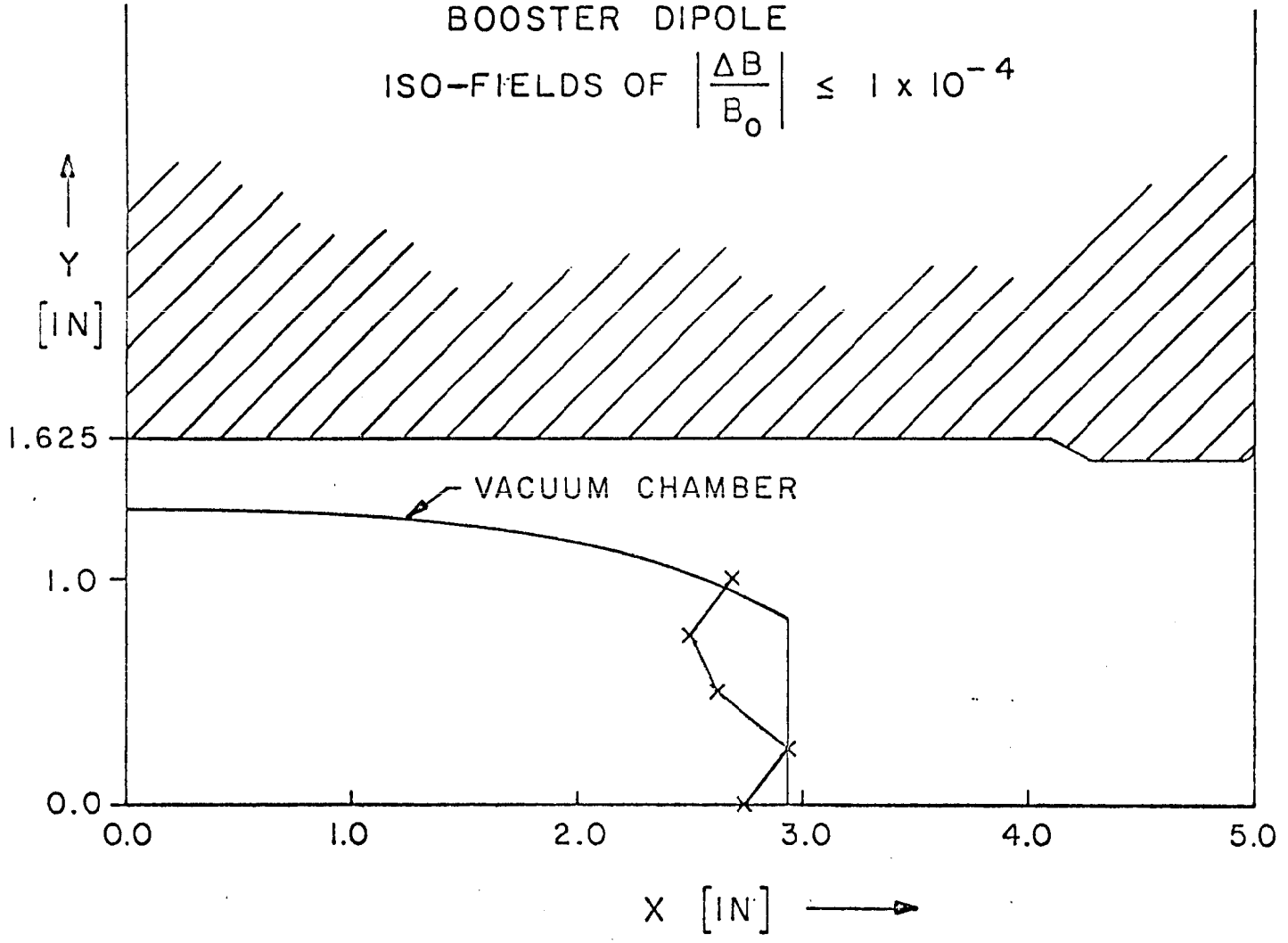
BOOSTER DIPOLE
ISO-FIELDS OF $\left|\frac{\Delta B}{B_0}\right| \leq 1 \times 10^{-4}$
Y
[IN]
1.625
VACUUM CHAMBER
1.0
0.0
0.0
1.0
2.0
3.0
4.0
5.0
X [IN]

Fig. 1.

Fig. 2.

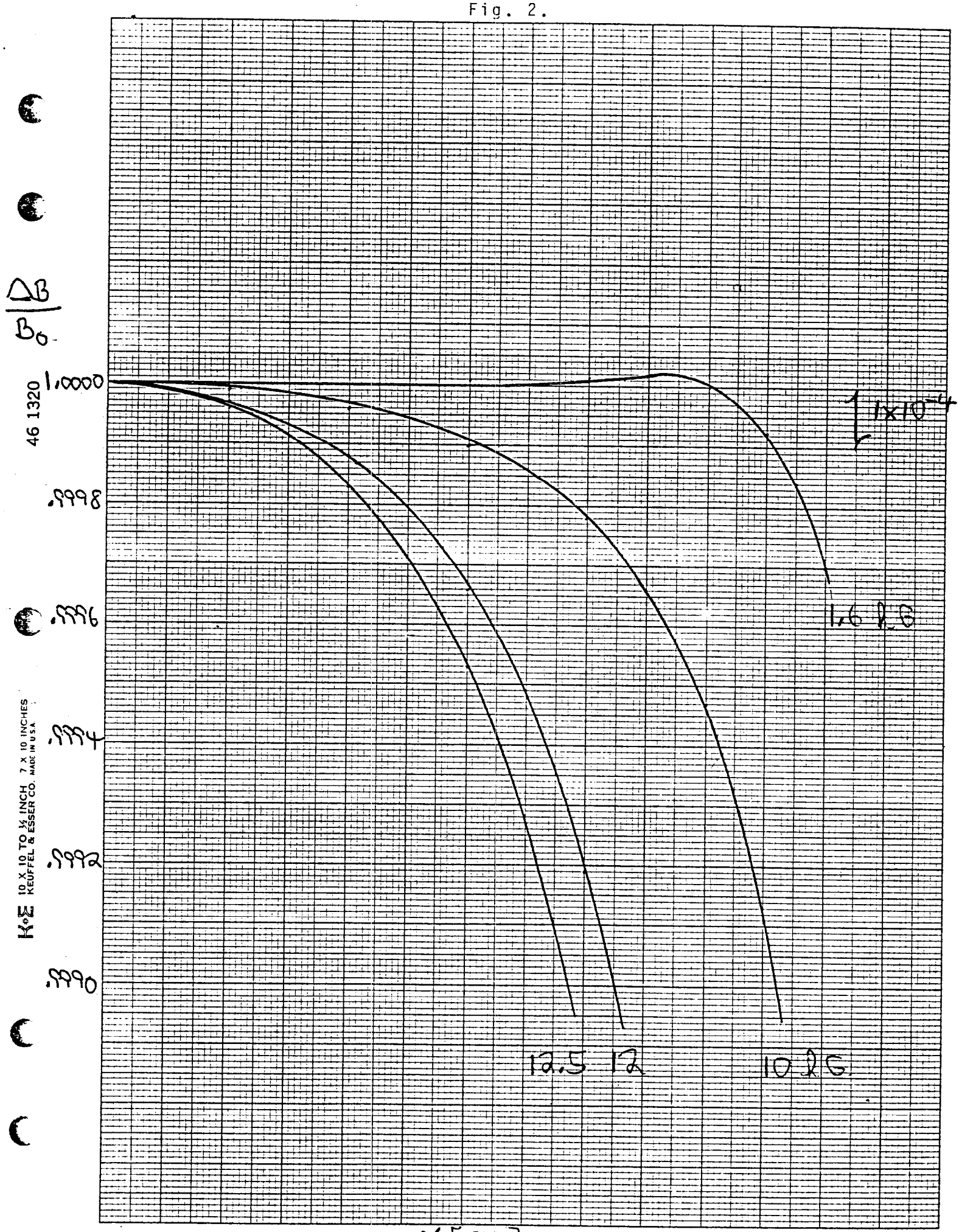
ΔB/B₀
1.0000
.9998
.9996
.9994
.9992
.9990
1 x 10⁻⁴
1.6 kG
12.5 kG
12 kG
10 kG
46 1320
10 X 10 TO ½ INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.
K&E

TABLE I.

BOOSTER DIPOLE CONCEPTUAL DESIGN

B_o (κG)	1·6	10	11	12	12·5	13
B_2/B_o	1·6	-0·314	-0·545	-1·042	-1·466	-2·032
B_4/B_o	0·2	-0·038	-0·076	-0·161	-0·229	-0·307
B_6/B_o	0·1	-0·003	-0·008	-0·015	-0·018	-0·019
B_8/B_o	0·1	-0·001	0·000	0·000	0·000	0·000
B_{10}/B_o	0·0	0·000	0·000	0·000	0·000	0·000

MULTIPOLES EXPRESSED IN UNITS OF 10^{-4} AT X = 1 IN., Y = 0 EXCEPT FOR 1·6 κG (INJECTION) WHICH IS EXPRESSED IN PPM'S.