FN-107
0400

REGULAR CELL STRUCTURE

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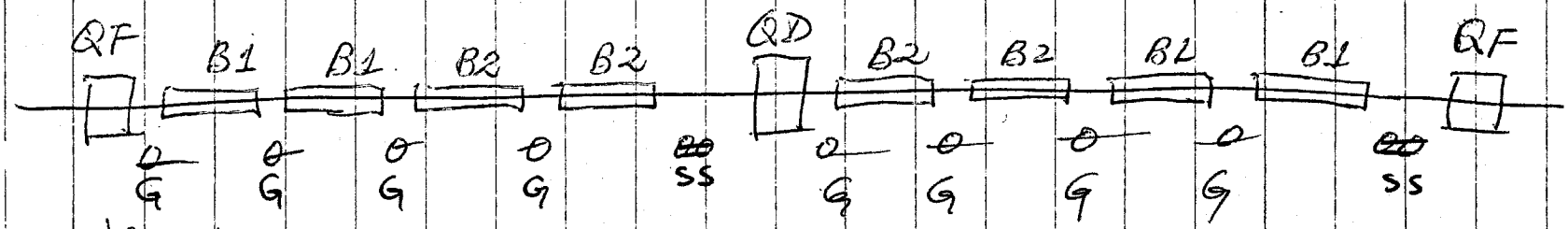
November 9, 1967



Lengths

$B1 = B2 = 6.2738\ m = 20.5833' = 20'\ 7''$ ✓

$QF = QD = 1.8288\ m = 6.0000' = 6'$ ✓

$G = 0.3048\ m = 1.0000' = 1'$ ✓

$SS = 2.3368\ m = 7.6667' = 7'\ 8''$ ✓

Total length of a cell $= 8 \times 6.2738 + 8 \times 0.3048 + 2 \times 1.8288 + 2 \times 2.3368 = 60.9600 = 200'$ ✓

<u>at 400 GeV.</u>

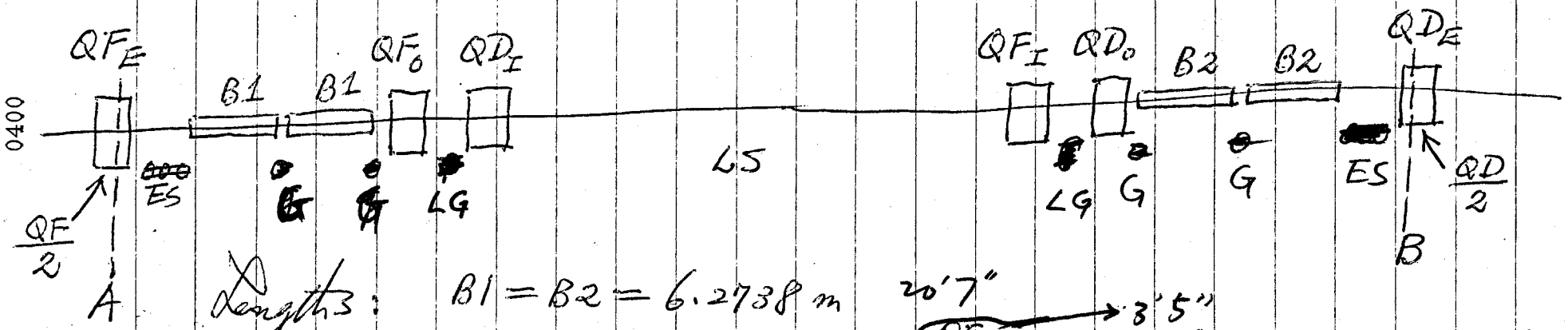
B1 and B2 field $= 18.0025$ kG

QF and QD field gradient $= 277.40$ kG/m

$\nu_x = 19.7358$ ✓

$\nu_y = 19.7707$ ✓

LCT 11/9/1967



Lengths:

$B1 = B2 = 6.2738\ m$ 20'7"

$QF_E = QD_E = 1.0494\ m = \frac{QF}{2} + 0.135$ (replacing $\frac{QF}{2}$ & $\frac{QD}{2}$) → 3'5"

$QF_O = QD_O = 2.9000\ m$ 9'6"

$QF_I = QD_I = 3.4850\ m$ 11'5"

$G = 0.3048\ m$ 1ft.

$ES = 3.1480\ m$ 10'4"

$LG = 1.8040\ m$ 5'11"

$LS = 53.059148\ m$ 174.1ft.

Total length of long straight (A to B) $= 4 \times 6.2738 + 4 \times .3048 + 2 \times 2.9000 + 2 \times 3.4850 + 2 \times 3.1480 + 2 \times 1.8040 + 2(1.0494 - .9144) + 53.059148$

$= 102.31755\ m$ 335.7'

Long straight

Superperiod

Total length = 15.5 (Regular cell) + Long straight
= 15.5 × 60.9600 + 102.31755
= 1047.19755

Total circumference = 6 × 1047.19755
= 6283.1853 m 20615 ft
(How about that!)