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National Laboratory

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RHIC Injection and Beam Dump Schemes

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U.S. Department of Energy

USDOE Office of Science (SC)

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RHIC Injection and Beam Dump Schemes

J. Claus

BNL

April 22, 1987

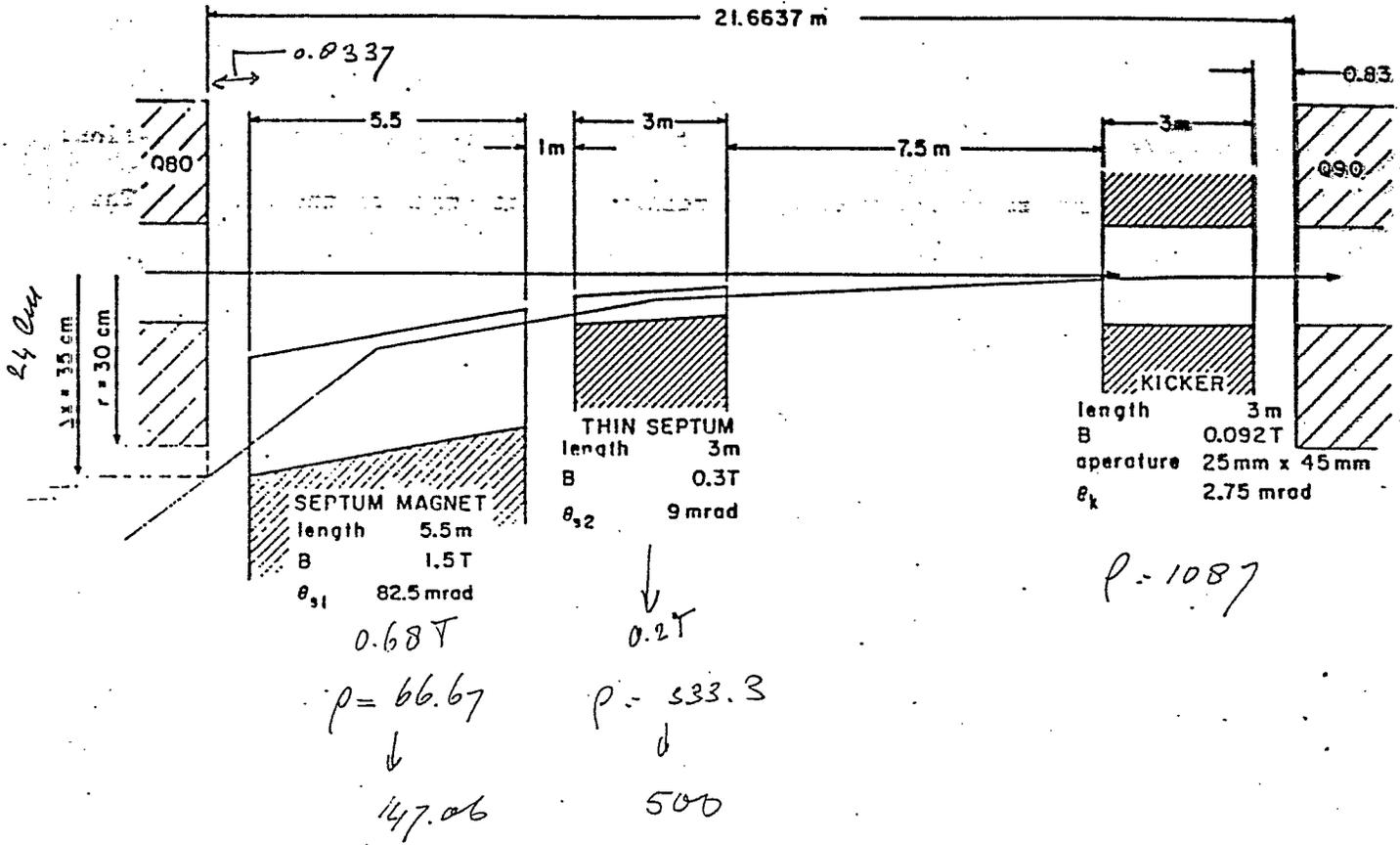
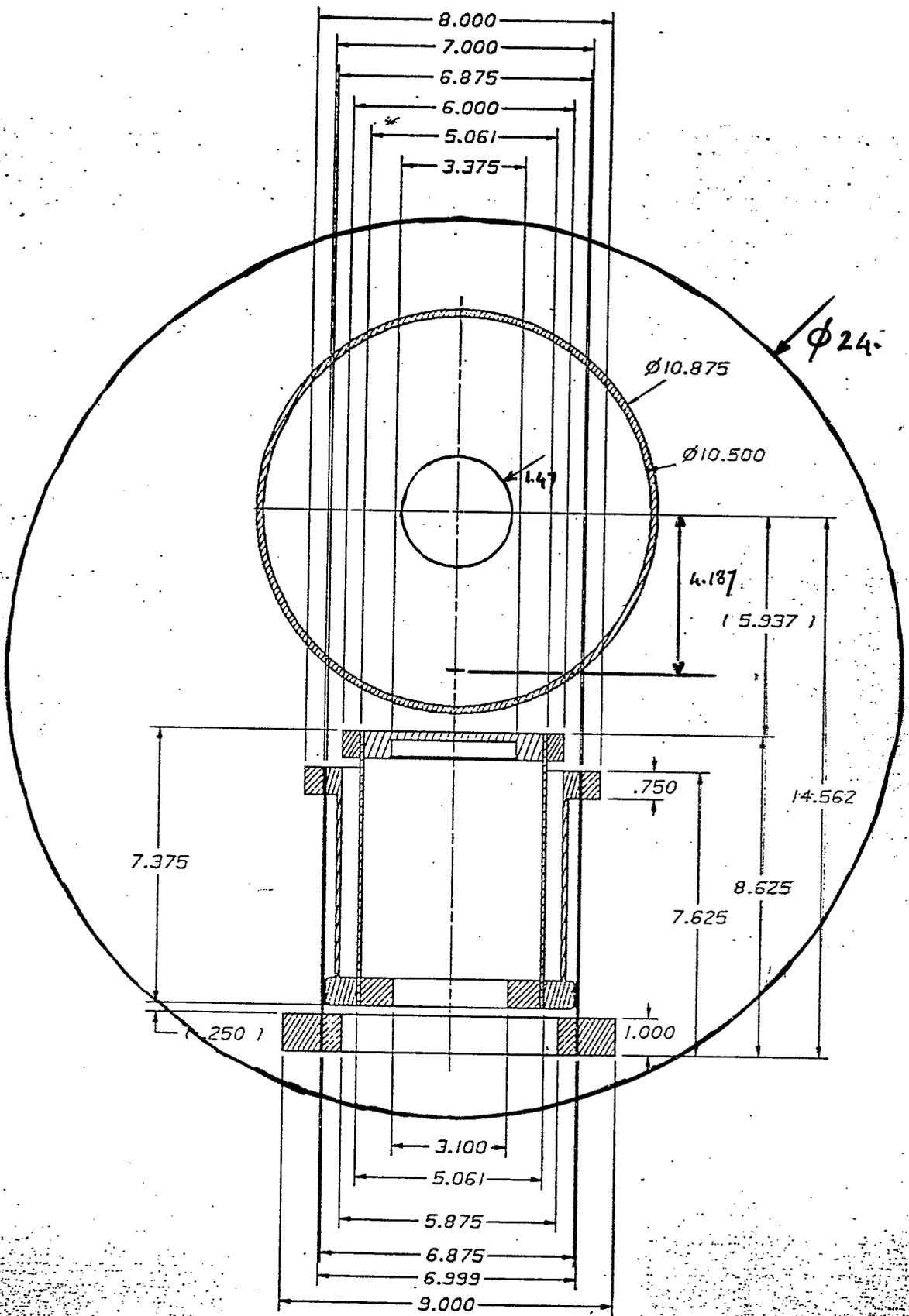
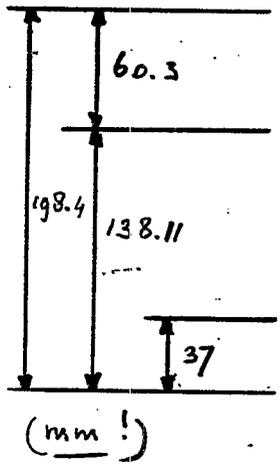


Figure 1. Injection component layout.



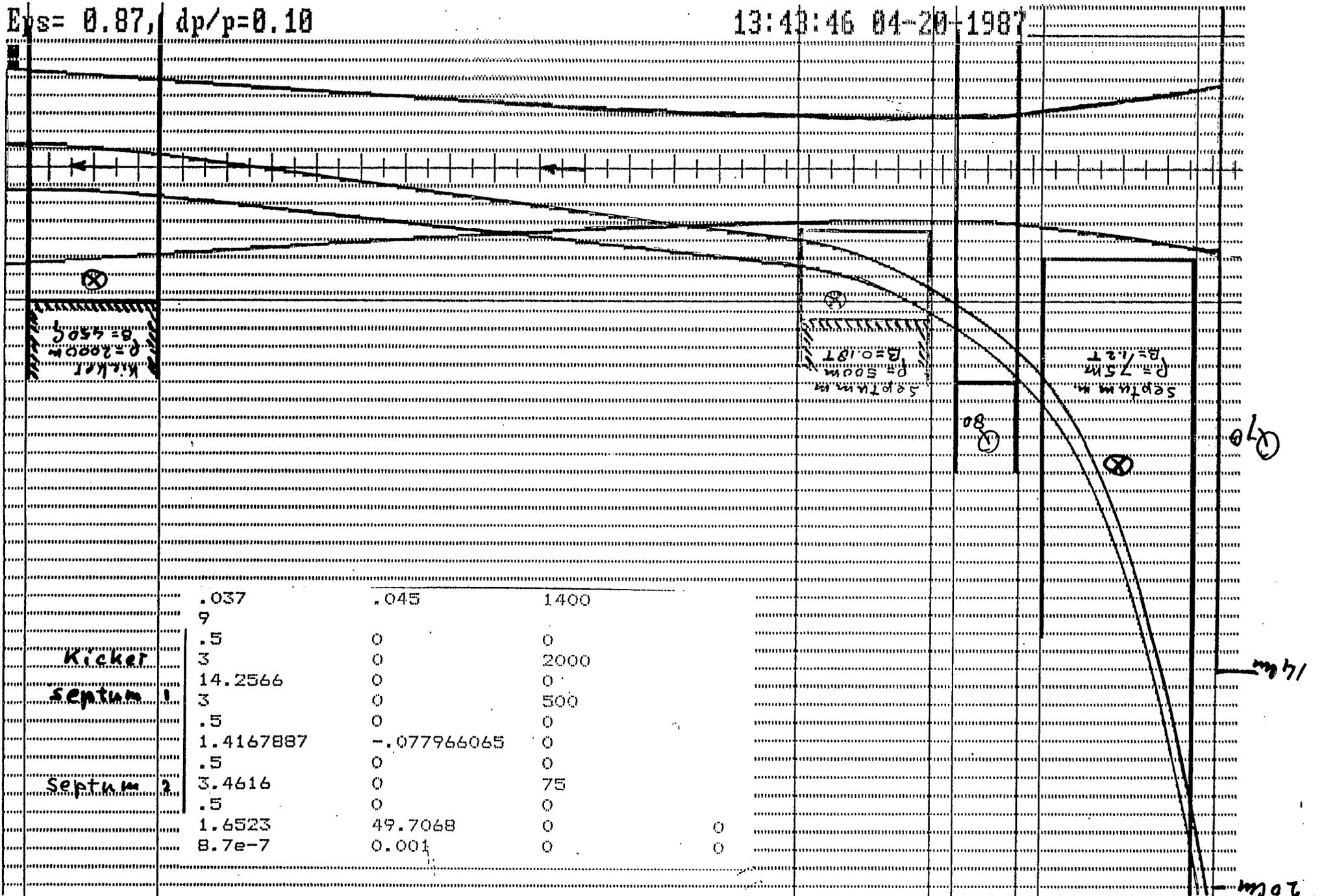
R. MEIER

RHIC CRY
DATE 2-20-87

LOW

$E_{ps} = 0.87, dp/p = 0.10$

13:48:46 04-20-1987

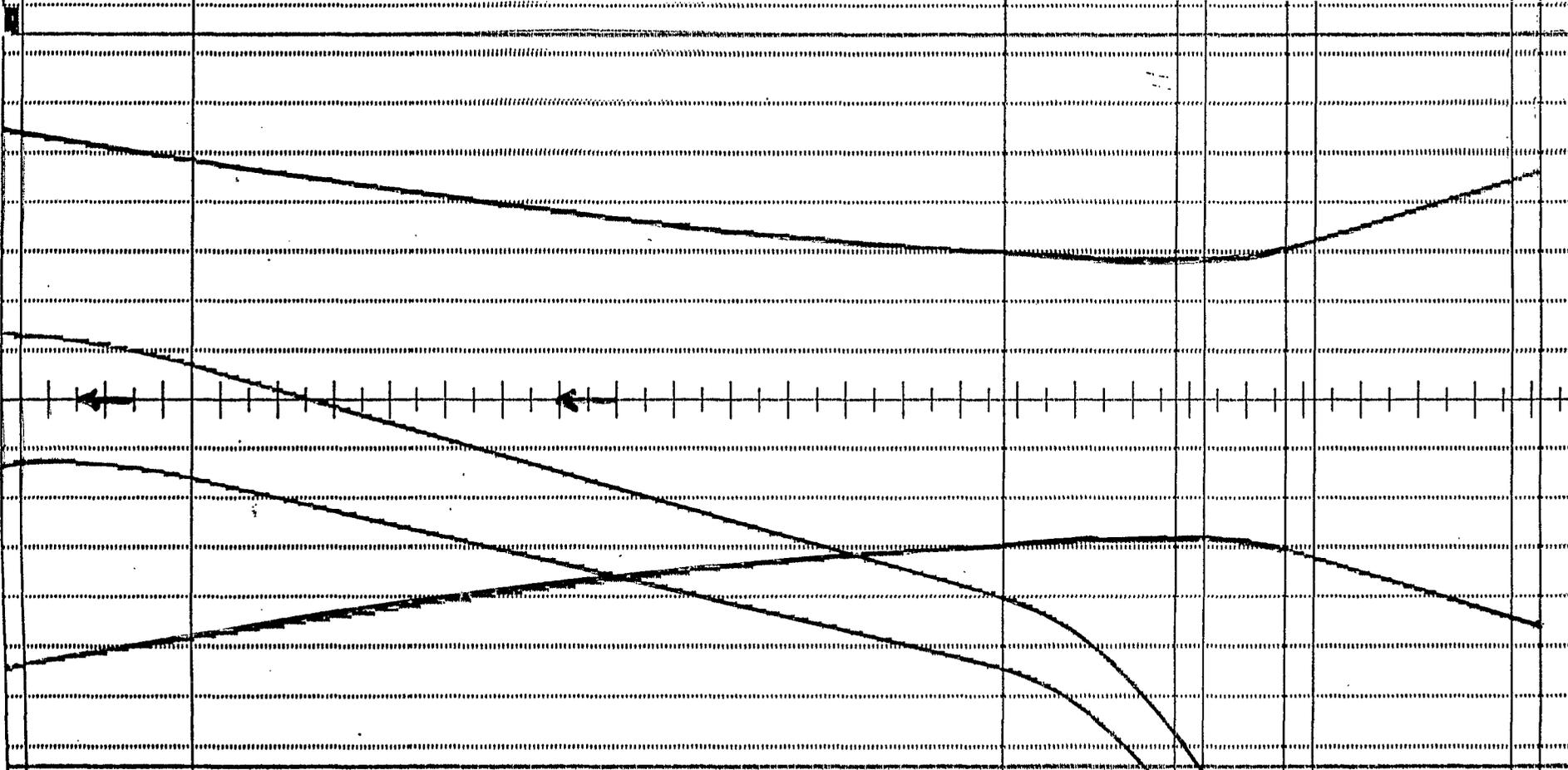


1/2

2000

$\epsilon_p = 0.87, dp/p = 0.10$

14:00:05 04-20-1987



Kicker
 $\rho = 2.500m$
 $B = 450g$

3m

| | | |
|-----------|-------------|------|
| .037 | .045 | 3000 |
| 9 | 0 | 0 |
| .5 | 0 | 0 |
| 3 | 0 | 2000 |
| 14.2566 | 0 | 0 |
| 3 | 0 | 500 |
| .5 | 0 | 0 |
| 1.4167887 | -.077966065 | 0 |
| .5 | 0 | 0 |
| 3.4616 | 0 | 75 |
| .5 | 0 | 0 |
| 1.6523 | 49.7068 | 0 |
| $8.7e-7$ | 0.001 | 0 |

Septum m1
 $\rho = 500m$
 $B = 0.187$

3m

Septum m2
 $\rho = 75m$
 $B = 1.27$

3.462m

Q70

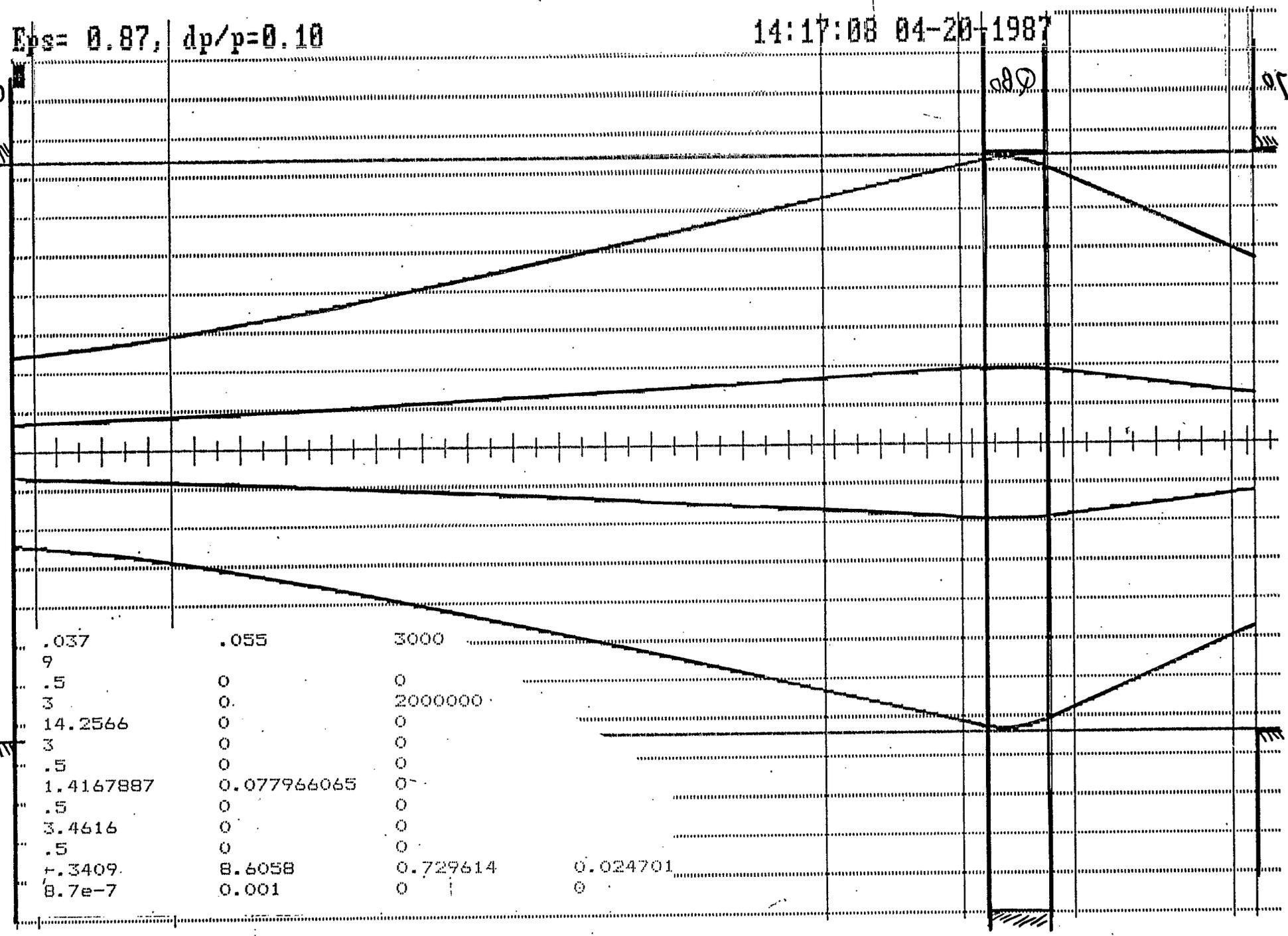
Q80

$\epsilon = 0.87, dp/p = 0.10$

14:17:08 04-20-1987

080

010



| | | | | |
|-----------|-------------|----------|----------|--|
| .037 | .055 | 3000 | | |
| 9 | | | | |
| .5 | 0 | 0 | | |
| 3 | 0 | 2000000 | | |
| 14.2566 | 0 | 0 | | |
| 3 | 0 | 0 | | |
| .5 | 0 | 0 | | |
| 1.4167887 | 0.077966065 | 0 | | |
| .5 | 0 | 0 | | |
| 3.4616 | 0 | 0 | | |
| .5 | 0 | 0 | | |
| r.3409 | 8.6058 | 0.729614 | 0.024701 | |
| 8.7e-7 | 0.001 | 0 | 0 | |

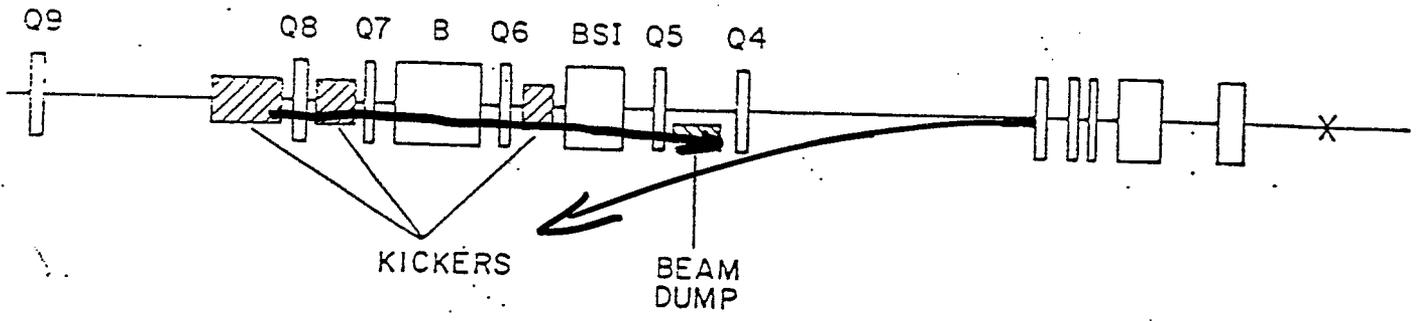
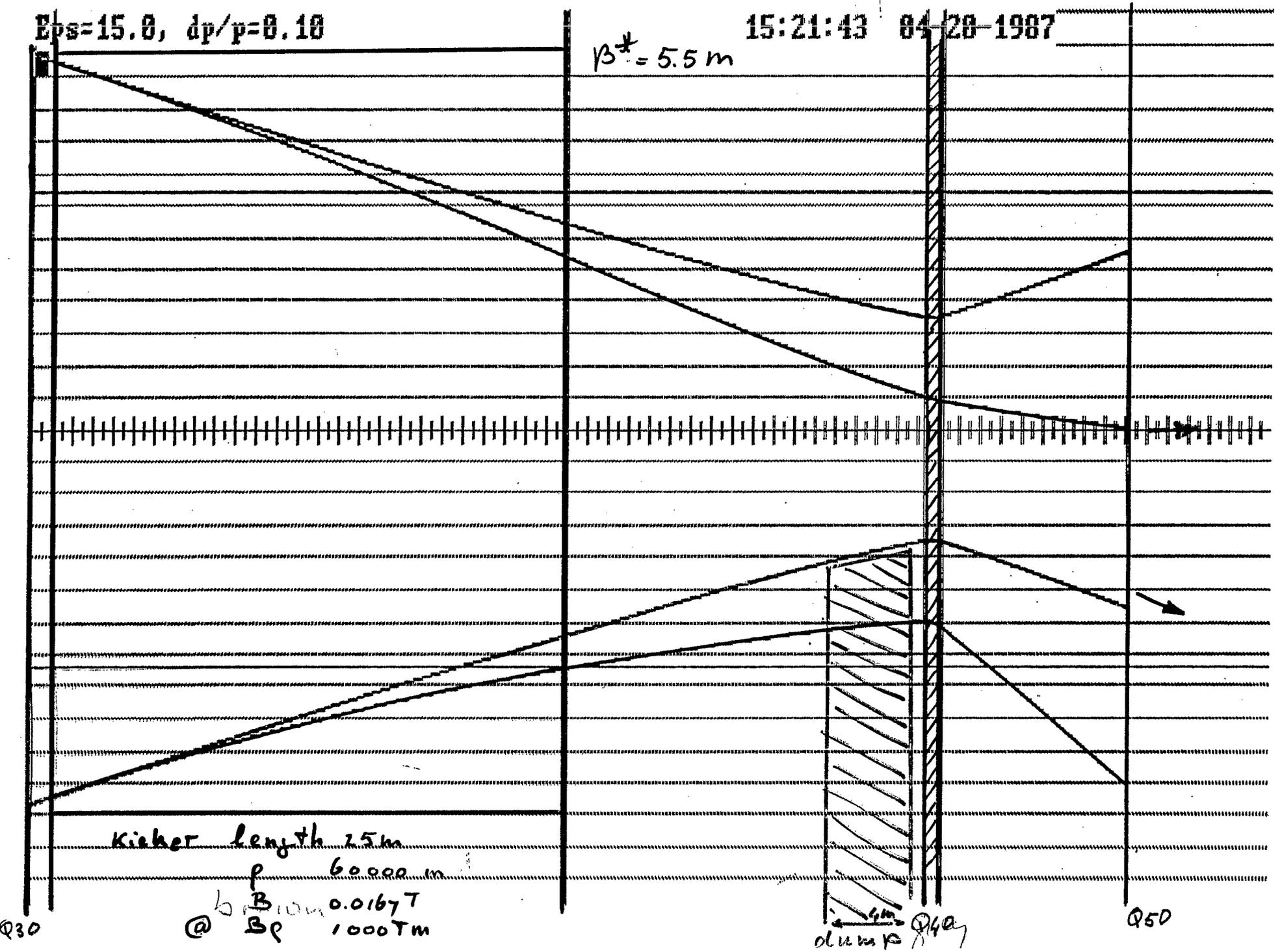


Figure 2.

$E_{ps}=15.0, dp/p=0.10$

15:21:43 04-20-1987

$\beta^* = 5.5 m$



Kicker length 2.5m

$p = 60.000 m$

@ $\beta_{10m} = 0.0167 T$
 $\beta_p = 1000 T m$

Q30

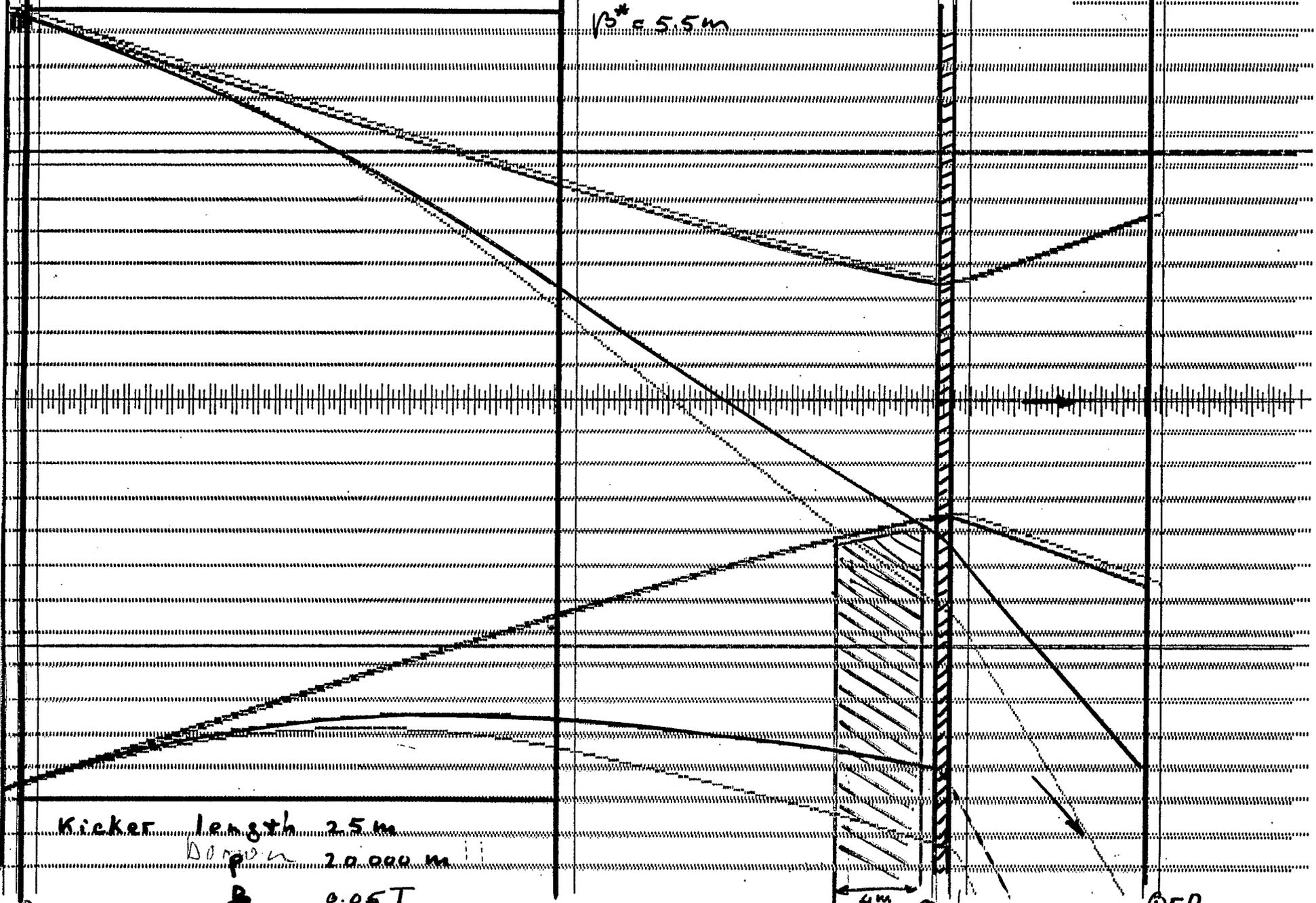
4m
dune Q40

Q50

EPs=15500, dpp/p00100

154051375 00420019807

$\beta^* = 5.5m$



Kicker length 2.5m

Down 2.000 m

@ Sp 0.05T 1000Tm

4m dump Q40

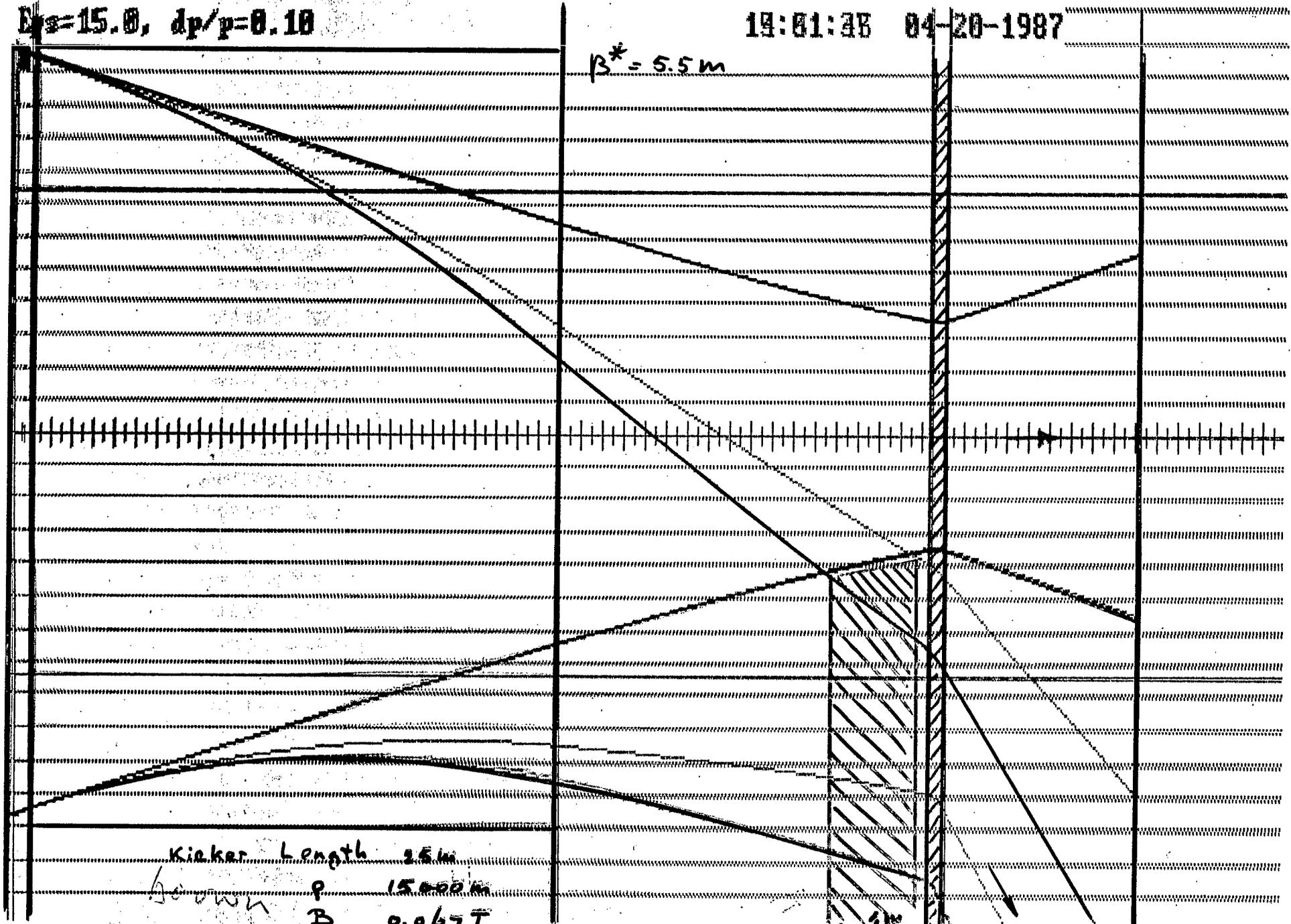
Q50

Q30

$E_s = 15.0, dp/p = 0.10$

19:01:38 04-20-1987

$\beta^* = 5.5 m$



Kicker Length 2.5 m
Beam P 15000 m
B 0.067 T
@ $B_p = 1000 Tm$

1 m
dump @ 40°

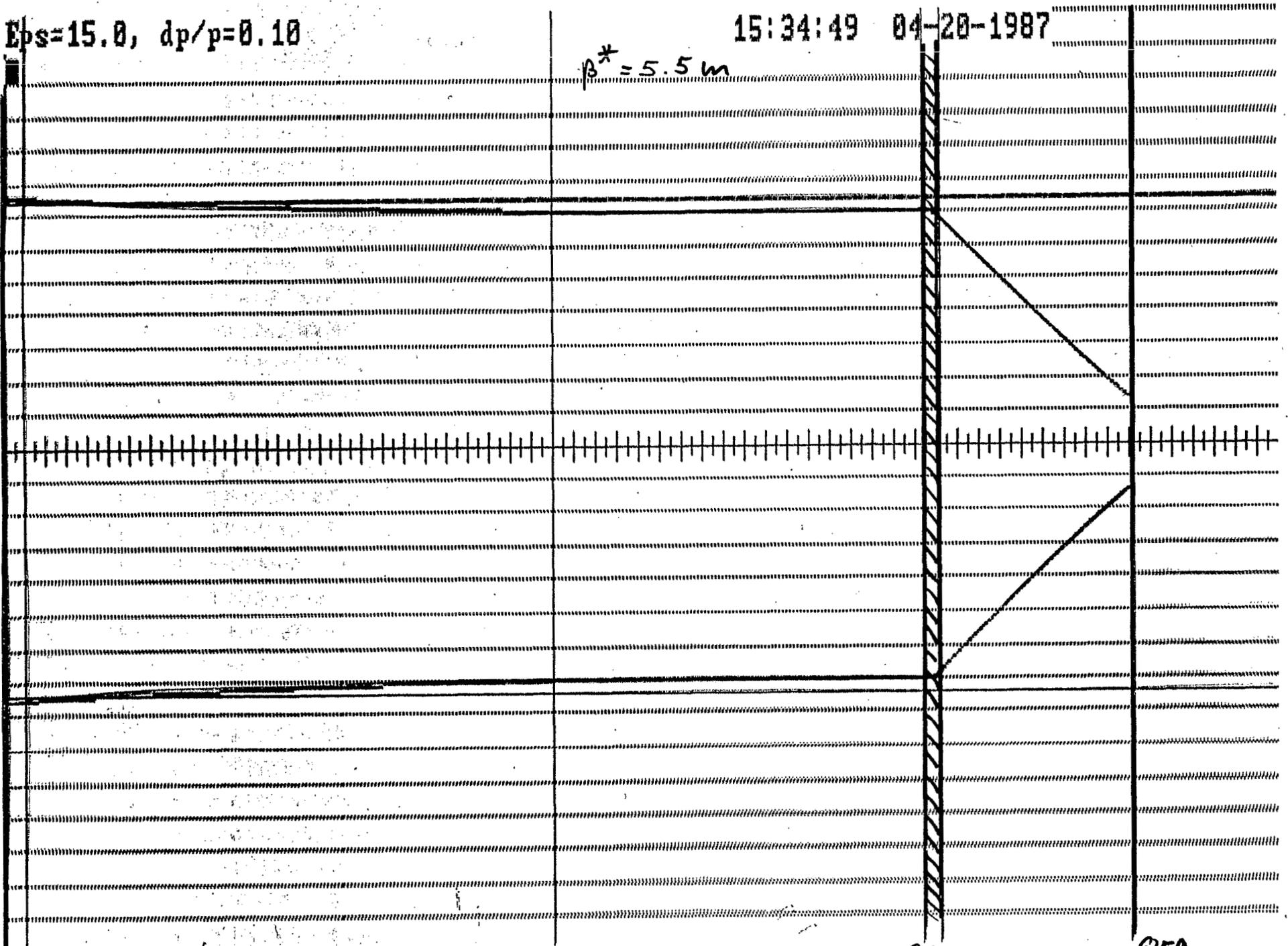
Q50

R30

Eps=15.0, dp/p=0.10

15:34:49 04-20-1987

$\beta^* = 5.5 \text{ m}$



brown

Q40

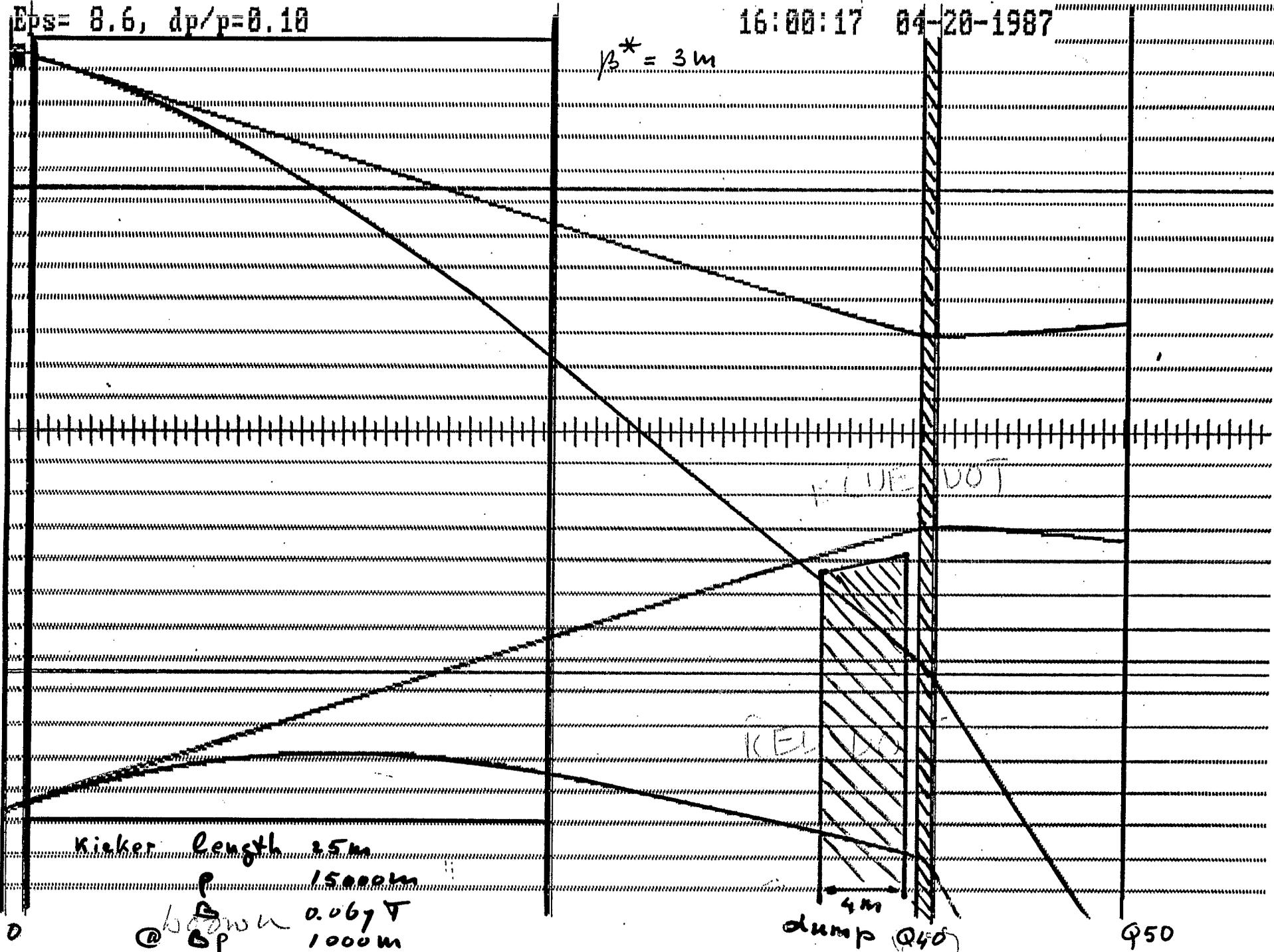
Q50

30

$E_p = 8.6, dp/p = 0.10$

16:00:17 04-20-1987

$\beta^* = 3m$



$\text{Eps} = 0.6, dp/p = 0.10$

15:49:41 04-20-1987

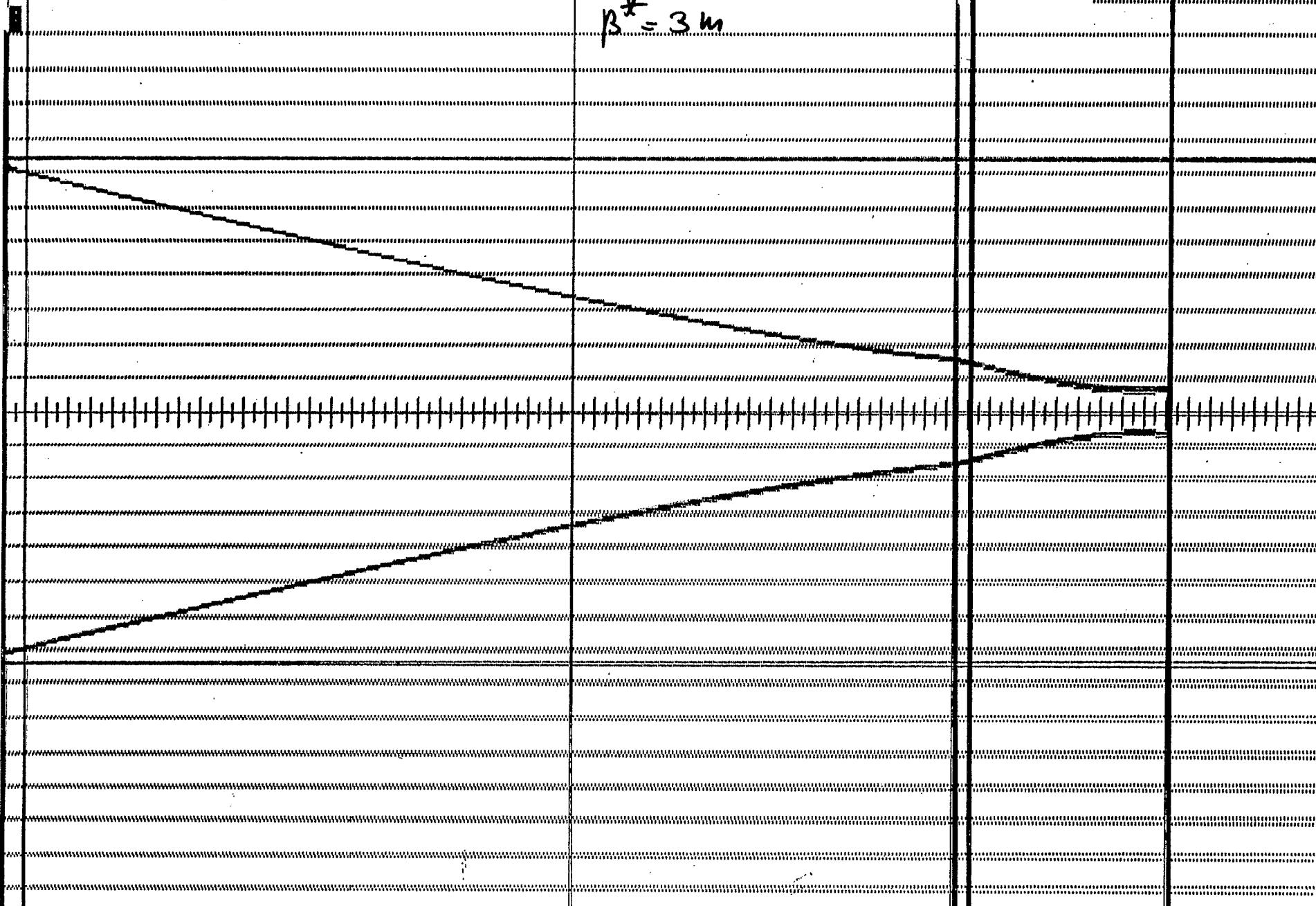
$\beta^* = 3m$

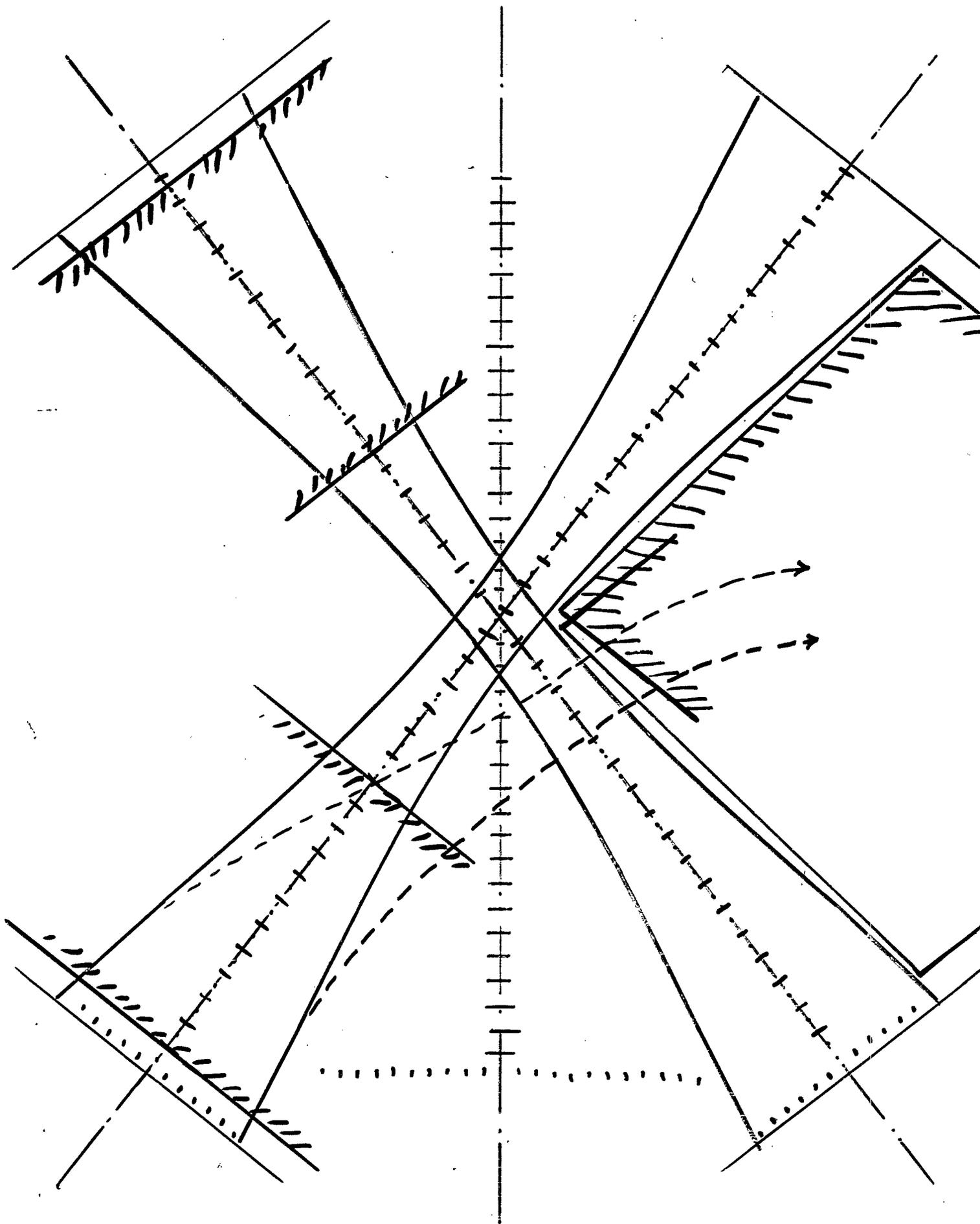
Q30

beam

Q40

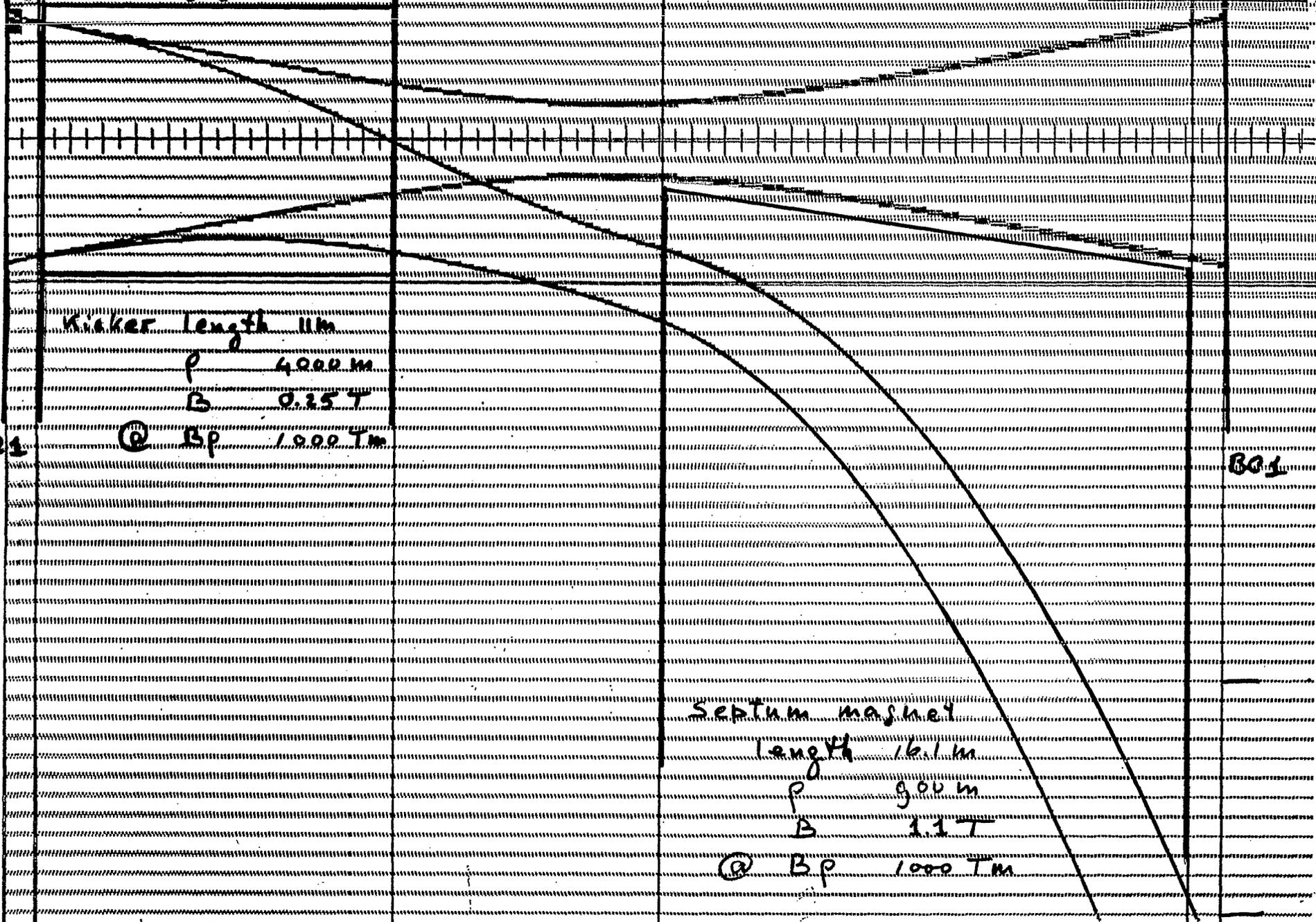
Q50





Eps=15.0, dp/p=0.10

16:41:26 04-20-1987



Kicker length 11m

p 4000 m

B 0.25 T

@ Bp 1000 Tm

BAL

Septum magnet

length 16.1m

p 900 m

B 1.1 T

@ Bp 1000 Tm

14 cm

20 cm

boon

p 4000 m