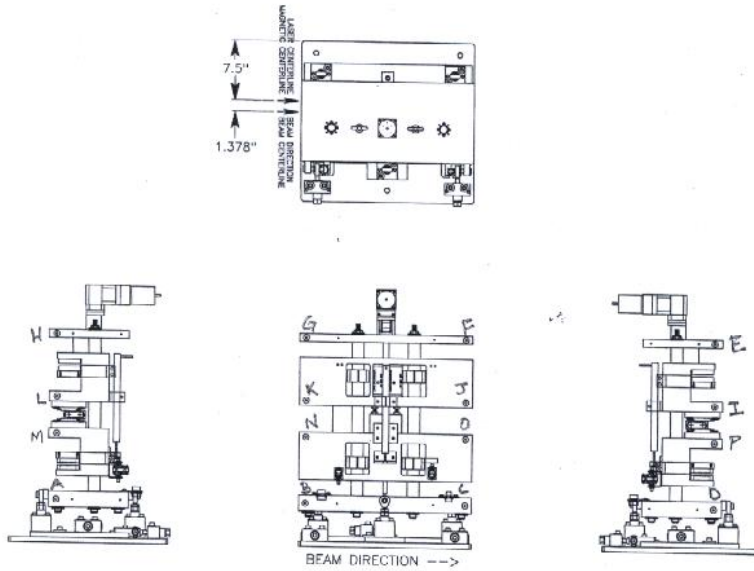


12/08

LCLS LASER HEATER UNDULATOR



LCLS MAG SYSTEMS
LASER HEATER UNDULATOR
MAGNET ASSEMBLY
SA-380-376-01

	X	Y	Z
A	+1.539	-10.633	-11.819
B	-8.458	-10.643	-9.999
C	-8.462	-10.652	+9.991
D	+1.527	-10.644	+11.807
E	+1.525	+10.108	+11.814
F	-8.468	+10.107	+9.996
G	-8.472	+10.111	-9.994
H	+1.520	+10.118	-11.812
I	+1.528	+2.470	+11.810
J	-5.967	+2.470	+9.996
K	-5.971	+2.474	-9.994
L	+1.523	+2.474	-11.816
M	+1.532	-2.497	-11.816
N	-5.962	-2.500	-9.997
O	-5.967	-2.500	+9.993
P	+1.526	-2.496	+11.810

*T/B"M" IS Q IN THE DECK

LAB DATA

MMF

12-9-08

LLCS LASER HEATER UNDULATOR

MIR., L.C.

(X) BULKIN COVER TABLE

L.H. U/S) ϕ
 L.H. D/S) ϕ
 40,000
 37.659
 35,000
 36.519
 36.968
 36.968

2.604
 B) 15.310
 1. —
 16.310 ✓
 2.606
 18.916 ✓

3.757
 C) 14.160
 1. —
 15.160 ✓
 3.757
 18.917 ✓

3.756
 D) 14.161
 1. —
 15.161 ✓
 3.756
 18.917 ✓

- 18.917 LOS -

A) 19.456
 1. —
 20.456 ✓
 18.917
 +1.539 ✓

B) 9.459
 1. —
 10.459 ✓
 18.917
 -8.458 ✓

C) 9.455
 1. —
 10.455 ✓
 18.917
 -8.462 ✓

D) 19.444
 1. —
 20.444 ✓
 18.917
 +1.527 ✓

E) 19.442
 1. —
 20.442 ✓
 18.917
 +1.525 ✓

F) 9.449
 1. —
 10.449 ✓
 18.917
 -8.468 ✓

G) 9.445
 1. —
 10.445 ✓
 18.917
 -8.472 ✓

H) 19.437
 1. —
 20.437 ✓
 18.917
 +1.520 ✓

I) 19.445
 1. —
 20.445 ✓
 18.917
 +1.528 ✓

J) 11.950
 1. —
 12.950 ✓
 18.917
 -5.967 ✓

K) 11.946
 1. —
 12.946 ✓
 18.917
 -5.971 ✓

L) 19.440
 1. —
 20.440 ✓
 18.917
 +1.523 ✓

M) 19.449
 1. —
 20.449 ✓
 18.917
 +1.532 ✓

N) 11.955
 1. —
 12.955 ✓
 18.917
 -5.962 ✓

O) 11.950
 1. —
 12.950 ✓
 18.917
 -5.967 ✓

P) 19.443
 1. —
 20.443 ✓
 18.917
 +1.526 ✓

LAB DATA

MMF

12-9-08

LCLS LASER HEATER WNDULATOR

M.R., L.G

2.734

2.732

1.191

Y

A) 4.675 READ

B) 4.676

C) 6.216

GAP

1. → FT

1. →

1. →

34MM

5.675 ✓

5.676 ✓

7.216 ✓

ENCODER

2.734 VAL

2.732

1.191

19067

8.409 ✓

8.408 ✓

8.407 ✓

HI = 8.408 ✓

A) 18.041

B) 18.051

C) 18.060

D) 18.052

1. →

1. →

1. →

1. →

19.041 ✓

19.051 ✓

19.060 ✓

19.052 ✓

8.408

8.408

8.408

8.408

-10.633 ✓

-10.643 ✓

-10.652 ✓

-10.644 ✓

E) 0.700

F) 0.699

G) 0.703

H) 0.710

1.000

1. →

1. →

1. →

1.700 ✓

1.699 ✓

1.703 ✓

1.710 ✓

8.408

8.408

8.408

8.408

+10.108 ✓

+10.107 ✓

+10.111 ✓

+10.118 ✓

I) 4.938

J) 4.938

K) 4.934

L) 4.934

1. →

1. →

1. →

1. →

5.938 ✓

5.938 ✓

5.934 ✓

5.934 ✓

8.408

8.408

8.408

8.408

+2.470 ✓

2.470 ✓

2.474 ✓

2.474 ✓

M) 9.905

N) 9.908

O) 9.908

P) 9.904

1. →

1. →

1. →

1. →

10.905 ✓

10.908 ✓

10.908 ✓

10.904 ✓

8.408

8.408

8.408

8.408

-2.497 ✓

-2.500 ✓

-2.500 ✓

-2.496 ✓

24.126
Z

u 4/5 FALE

T) 8.157

B) 8.150

21.650 / 2 = 10.825

20.490 SIDE 2 SIDE

24.126 END 2 END

M = 8.154

10.825 1/2 MAG.

-18.979 LOS

A) 6.160

1. —
7.160 ✓
18.979

-11.819

E-W

E) 24.126

1.500
23.626 ✓
11.812

11.814

I-L

F) 24.126

1.500
23.626 ✓
11.816

+11.810

M) 6.163

1. —
7.163 ✓
18.979

-11.816

B) 7.980

1. —
8.980 ✓
18.979

-9.999

F-G

F) 20.490

1.500
19.990 ✓
9.994

9.996

J-K

J) 20.490

1.500
19.990 ✓
9.994

9.996

N) 7.982

1. —
8.982 ✓
18.979

-9.997

B-C
C) 20.490

1.500
19.990 ✓
9.999

9.991

G) 7.985

1. —
8.985 ✓
18.979

-9.994

N-O

O) 20.490

1.500
19.990 ✓
9.997

+9.993

A-D
D) 24.126

1.500
23.626 ✓
11.819

11.807

H) 6.167

1. —
7.167 ✓
18.979

-11.812

K-P

P) 24.126

1.500
23.626 ✓
11.816

11.810

MMF
LASER HEATER WND.

72-9-08
M.R., L.G.

(Y)

PROBE

TOP
+.094
.079 to sensor

-.015

BOTTOM
-.067

T/B C) 0.948
.250

1.198
||| 1.198 ||| VAL

- .007

(X)

1.569

1.

2.569 END OF PROBE
.039 to sensor

2.608

1.135
PM

MMF
LASER HEATER UND.

12-8-08
M.R., L.G.

(Y)

REF.
13.243 = PROBE SENSOR
18.270
+ 5.027 HI RELATIVE TO SENSOR

REF. BLOCK

A) 1.293

1. —

2.293 ✓

5.027

2.734 ✓

B) 1.295

1. —

2.295 ✓

5.027

2.732 ✓

C) 2.836

1. —

3.836 ✓

5.027

1.191 ✓

(X)

+ 2.606 T/B "B" FROM PROBE SENSOR

B) 18.154

1. —

19.154 ✓

2.606

21.760 LOS ✓

C) 17.003

1. —

18.003 ✓

21.760

+ 3.757 ✓

D) 17.004

1. —

18.004 ✓

21.760

+ 3.756 ✓

MMF
LASER HEATER UNDUULATOR
LONG COIL

12-5-08
M.R., L.G.

DOVER TABLE

(X) p/s) \emptyset
u/s) \emptyset
10.000 + 32
8.288 + 32
6.000 + 32
7.370 + 32
7.778 + 32
7.778 + 32
39.779 ✓

c) 14.970 d) 16.971
 1. ———

 17.970 ✓ 17.971 ✓

B) 18.121
 1. ———

 19.121 ✓

LONG COIL

4) 21.706 12) 21.715 $\bar{m} = 21.711$

LONG COIL
 21.711
 19.121 T/B "B"

 - 2.590 ✓

DOVERT

12-8-08 5.034

p/s \emptyset
u/s \emptyset
~~39.779~~
~~39.870~~
39.900
37.838

B) 18.154 c) 17.003 d) 17.004
 1. ——— 1. ——— 1. ———

 19.154 ✓ 18.003 ✓ 18.004 ✓

39.819
39.814
39.812
778

MOVED TO + END OF PROBE + .039"
(SET TARGETS) - 2.567 FROM T/B "B")

B) —
 2.317
 .250

 - 2.567 ✓
 .039 to PROBE

 - 2.606 ✓

MMF
LASER HEATER WWD.

12-5-08
M.R., L.G.

(Y)

REF. BLOCK

A) 1.293	B) 1.295	C) 2.836	
1. —	1. —	1. —	
<u>2.293</u> ✓	<u>2.295</u> ✓	<u>3.836</u> ✓	3.836
2.673 ^{VAL}	2.673	4.967	
<u>4.966</u> ✓	<u>4.968</u> ✓	<u>1.131</u> ✓	
+4.967 HT ✓			

18.270 REF
4.967
13.303 = ϕ GB

13.228 REF
13.303 ϕ
-.075 HT ✓

LONG COIL

A) +.003	12) ϕ
+.075	-.075
<u>-.072</u> ✓	<u>-.075</u> ✓

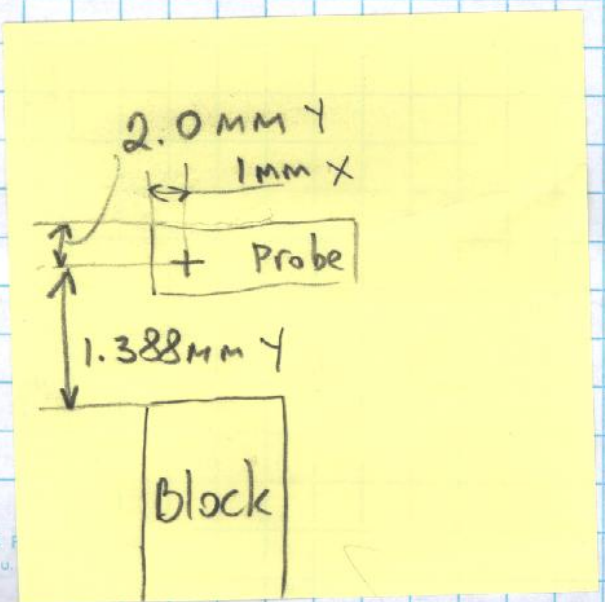
$\bar{M} = -.074$ ✓

TOP OF LASER GAUGE BLK

-.032
-.075
-.107 ✓

B PROBE

+ .094 TOP +.019
- .032 Bot -.107



MMF
 LASER HEATER UND.
 LONG COIL ID HALL PROBE

12-8-08 (1)
 M.R., L.G.

(Y)

.094 to Top of Probe
 - .079 to Probe sensor

 - .015 HI RELATIVE to Probe sensor

13.228 REF.
 - .015 HI

 13.243 = ϕ Probe sensor

LONG COIL

4) +.003	12) ϕ
- .015	- .015
-----	-----
- .012 /	- 015 /
$\bar{m} = -.014 /$	

(X)

- 2.590 L.L. FROM T/B "B"
 - 2.606 PROBE FROM T/B "B"

 + .016 L.L. FROM PROBE

.126

.133