SSRL B|L 5
SUMMARY

5/18/04
J.M., H.I., L.G

MIRROR MASK

	X	Y
A)	-.002	~~0~~
B)	—	~~0~~

MIRROR PLATE

	X	Y	Z
A)	+.001	-.001	—
B)	+.004	-.001	+.001

SLIT

	X	Y	Z
1)		+.007	—
2)		+.007	—
3)		+.002	—
4)		+.013	—
5)	+.002	+010	-,122 @ 17.9927M
6)		+.010	—

IN VAC. COLLIMATOR

T/B's	X	Y
u/s)	-.053	+.012
D/S)	-.065	+.011

GRATING ROTATION AXIS

T/B's	X	Y	Z
(+)	—	-.004	-.002
(-)	—	-.008	-.009

GRATING TANK

Pitch +.023

X

u/s)	+.010
D/s)	+.003

ZERO ORDER BAFFLE

	Y
(+)	Ø
—	-.002

SSRL B/L 5 5/13/04
SGM SLIT A.I., J.M., L.G.
Check 5-17-04 JM

IN. VAC. Collimator

(Y)

33.798
1.750
35.548

-41.363 EL. HBL6530
-5.815
8.219 ℄ SLIT
-14.034 HI @ SLIT

-23.8 to ℄ SLIT
3.5 T/B — T/B

T/Bs z = -25.550
6.373

u/s) -14.034
4.891 VALUE X COS 40
9.143
1.782 Slope
7.361
1. —
6.361 S/R
6.373
+.012

Z's FROM ℄ OF SLIT
z = 22.050
6.619

d/s) -14.034
4.888
9.146
1.538 Slope
7.608
1. —
6.608 S/R
6.619
+.011

(X)
-29.528 COS
28.000 BUCKIN ON REF PLANE
-1.528 COS

T/B's

u/s) -1.528
(-).013
-1.515
1. —
.515 S/R
.462
-053

d/s) -1.528
(+).009
1.537
1. —
.537 S/R
.472
-065

SSRL B/L5
SGM SLIT

5/13/04
H.I., J.M., L.G.

Check 5-17-04 JM

(Y)

18.235 HI
8.219 ℄ SLIT
10.016 HI@SLIT

2.735 DIA

D/S CROSS (Z from ℄ SLIT; ANAL. SLOPE) U/S CROSS

19"
u/s) 10.016
1.368
8.648
1.325 slope
7.323 S/R
7.330
-.007

29"
D/S) 10.016
1.368
8.648
2.023 SLOPE
6.625 S/R
6.638
-.013

28.5
u/s) 10.016
1.368
8.648 slope
Z 23.8" u/s SLIT
3.5 T/B 2 T/B

18.5
D/S) 8.648

(X) -29.528 LOS

u/s) 29.528
1.325
28.203 S/R
28.213
+.010

d/s) 28.203 S/R
28.203
0

1.5
5.2

SSRL BLS

SLIT

(Y)

HI	18.235
dh @ slit	8.219
HI @ slit	10.016

TBS 3+6
$dy = (\sin 4°)\,1.614 + .0$
$y = 1.614 + dy$
$= 1.731$

TBS 1+4
$dy = (\sin 4°)\,1.142$
$-.004$
$y = 1.614 + dy$
$= 1.530$

Y's +.009 FROM THESE NUMBERS BECAUSE Z = -.122

$\alpha = 4°$

$\cos\alpha = \frac{Y}{1.614}$

$Y = 1.614 \cos 4°$
$\equiv 1.610$ TB2+5

	TB2	TB5
HI	10.016	
VAL	1.610	
SIT	8.406	
FT	1	
SIR	7.406	7.406
FND	7.206 +.200	7.315 +.091
SET	7.408 -.002	7.405 +.001

	TB1	TB4
	10.016	
	1.530	
	8.486	
	1	
	7.486	7.486
up	7.488 -.002	7.482 +.004
down	7.516	

	TB3	TB6
	10.016	
	~~1.723~~	
	~~8.293~~	
	1	
	~~7.293~~	7.293
	7.300 -.007	7.292 +.001

Set Y @ U/S + D/S positions +/- 200m

U/S SIR 7.448 D/S
D/S SIR 6.849

	TB2	TB5
* U/S	-.001	-.002
D/S	-.001	-.002

(X) LOS = .75m = 29.528"

	TB5
LOS	29.528
VAL	4.543
SIT	24.985
FT	1
SIR	23.985
FND	23.915 -.070
SET	

U/S TB5	D/S TB5
23.987 +.002	23.987 +.002

SSRL B/L5
SGM SLIT

check 5-17-04 JK

5/13/04
HI, J, M, L, G

(Y)

HBL5S15
19.177
40.750
59.927
-41.587 CL.
18.340
8.219 SLIT ℄
10.121 HI @ ℄

u/s CROSS (z from ℄ of SLIT)
z = -28.5
u/s) 10.121
1.368 RAO
8.753
(-) 1.988 slope
10.741 S/R
10.723
-.018

z = -18.5
d/s) 8.753
(-) 1.290 slope
10.043 S/R
10.041
+002

(X) -29.528 LOS

u/s) 29.528
1.325
28.203 S/R
28.136
-067

d/s) 28.203 S/R
28.144
-059

u/s
463

(Y)

SSRL B/L 5 5/12/04 1/
SGM Entrance Slit J.M., H.I.,

VAL	-41.587 HBL5S15
RD	19.072
SIT	-22.515
RD	40.750
HI	18.235

Pedestal Feet

Val = -40.440
-(-.600)
-39.840

	-Z +X	+Z +X	-X
HI	18.235		
VAL	-39.840		
S/+	58.075		
RD	40		
SIR	18.075	18.075	18.075
FND	18.092 -017	18.178 -103	18.482 -407
SET	18.063	18.069	18.090

(Z)

Rough-in Z
Plug = 19m = 748.031"

Slit @ 17.9927m
= 709.374"

2.735 DIA

Plug	748.031
RD	-24.372
LOS	723.659
Slit @	709.374
LOS	15.285

α = 4°

dz = sin4 Y
= -.247"
-.113
-.134
Set

= -.009" in Y

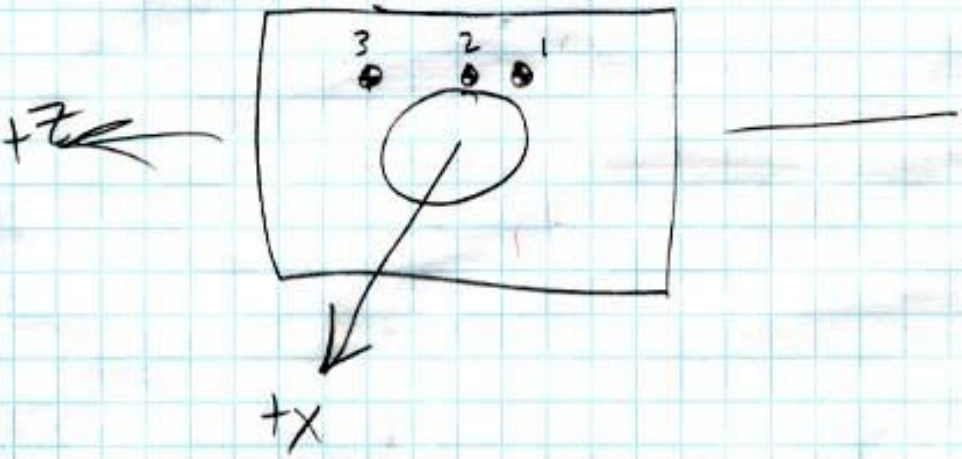
TBS

LOS	15.285	15.285
VAL	-(-.247)	-0.113
SIT	15.532	15.398
FT	1	1.
SIR	14.532	14.398 S/R
FND	14.476	
SET	14.520 +012	14.520
	14.420	-.122

SSRL B/L 5 5/12/04

Slit

6 5 4 on -X side



	Z	X	Y
1	-1.142	4.543	1.614
2	0.000	4.543	1.614
3	1.614	4.543	1.614
4	-1.142	-4.543	1.614
5	0.000	-4.543	1.614
6	1.614	-4.543	1.614

$dh = \frac{.070''}{1''}$

MO @ 15m & pitch = -4°
Ball 2 & 4 @ 17.9927m

$dH = \sin 4°(2.9927m) = 0.209m = 8.219''$