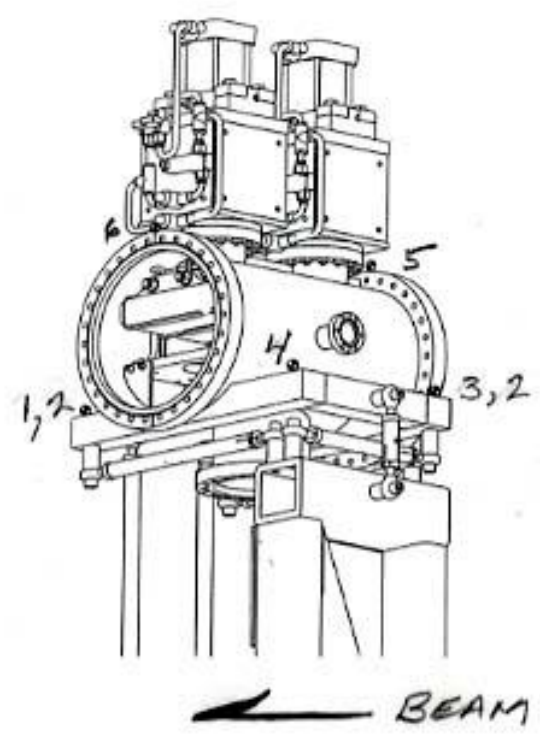


SSRL SPEAR 3
 BEAMLINE 1 STOPPER

2/19/03
 M.R., F.G.L.G.

kin
 8/27/03



	X	Y	Z
1	-7.125	-2.363	+5.541
2	-7.094	-2.352	-5.469
3	+7.160	-2.313	-5.460
4	+7.131	-2.328	+5.476
5	+0.052	+8.116	-8.911
6	-10.27	+8.120	+8.916

SSRL
B/L I

2/19/03
J.M.C., H.I.

D/S FL	-6.623	
W/S FL	-6.623	
1st F	-5	1.995
1st N	-4.372	2.008
2nd F	-3	
2nd N	-2.798	
S/R F	-2.056	
S/R N	-2.056	2.055 ✓
LOS	-8.679	

Lay Blades
@ 40.000
LOS 8.679
4 31321 ✓

✓ 2/24/03
mr

	<u>1</u>	<u>2</u>	<u>5</u>	<u>6</u>
LOS	-8.679	-8.679	-8.679	-8.679
RD	-0.554	-0.585	-7.731	-7.652
SIT	-8.125 ✓	-8.094 ✓	-0.948 ✓	-1.027 ✓
FT	1	1	1	1
VAL	-7.125 ✓	-7.094 ✓	0.052 ✓	-0.027 ✓

	<u>3</u>	f-1	<u>4</u>
3-2	15.004		15.006
2	-7.094 ✓	1	-7.125
SIT	7.910 ✓		7.881 ✓
Bushys	0.750		0.750
VAL	7.160 ✓		7.131 ✓

SSRL B/L Z

2/19/03

⊗

~~New Gun @ 4.050~~

J.M.C., HI

Q 31.321	LOS - 4.054	-Q 31.321	LOS - 3.954
4.050	VAL - 4.000	35.275	VAL 4.000
S/R 35.371	S/R 0.054	LOS - 3.954	S/R - 0.046
35.375 (A)			
LOS - 4.054			

Kim
2-27-03

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		
-046	-046	-046	-046		
.075	.011	.017	.020		
+061	+057	+063	+066		

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
.054 -046	.054 -046	.054 -046	.054 -046
.040 -060	.070 -052	.070 -052	.110 +005
-014 -04	+016 +04	+016 +04	+056 +051

<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
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SSRL
STOPPER

B 1

2/18/03

J.M.G., L.G.

(Y)

$$13.246/2 = 6.623 \text{ RADIUS}$$

$$7.970/2 = 3.985$$

✓ 2/24/03
m2

$$\begin{array}{r} u/s) \cancel{16.537} \\ \quad \cancel{6.623} \\ \hline 23.160 \\ 16.535 \\ \quad 6.623 \\ \hline 23.158 \checkmark \end{array}$$

$$\begin{array}{r} o/s) 16.533 \\ \quad 6.623 \\ \hline 23.156 \checkmark \end{array}$$

$$\begin{array}{r} side) 23.160 \\ \quad 3.985 \\ \hline 19.175 \text{ s/r} \checkmark \\ 19.173 \\ \quad 3.985 \\ \hline 23.158 \checkmark \end{array}$$

$$M = 23.15741$$

$$\begin{array}{r} 1) 24.520 \\ \quad 1.000 \\ \hline 25.520 \checkmark \\ 23.157 \\ \hline \boxed{-2.363} \checkmark \end{array}$$

$$\begin{array}{r} 2) 24.509 \\ \quad 1.000 \\ \hline 25.509 \checkmark \\ 23.157 \\ \hline \boxed{-2.352} \checkmark \end{array}$$

$$\begin{array}{r} 3) 23.157 \\ \quad 12.942 \text{ READ} \\ \hline 10.215 \checkmark \\ 12.528 \text{ FT} \\ \hline \boxed{-2.313} \checkmark \end{array}$$

$$\begin{array}{r} 4) 24.485 \\ \quad 1.000 \\ \hline 25.485 \checkmark \\ 23.157 \\ \hline \boxed{-2.328} \checkmark \end{array}$$

$$\begin{array}{r} 5) 14.041 \\ \quad 1.000 \\ \hline 15.041 \checkmark \\ 23.157 \\ \hline \boxed{+8.116} \checkmark \end{array}$$

$$\begin{array}{r} 6) 14.037 \\ \quad 1.000 \\ \hline 15.037 \checkmark \\ 23.157 \\ \hline \boxed{+8.120} \checkmark \end{array}$$

	TP
HI	23.157
RD	7.668 ✓
SIT	15.489 ✓
RD	57
VAL	-41.511 ✓

	New HI
RD	2.581
TP	-41.511
SIT	-38.930 ✓
RD	40
HI	1.070 ✓

	HI FOR UP POSITION
u/s)	2.236
	40
	42.236 ✓
	-41.511
HI	+0.725 ✓

o/s)	2.261
	40
	42.201 ✓
	-41.511
	+0.690 ✓ HI

SSRL B/LI STOPPER
RECHECK BLOCK IN "Y"

3/24/03
M.R., L.G.

(Y)

1) -2.363

24.564
556

23 193
562

24.562
1. —
25.562 ✓
- 2.363
23.199 ✓

2) -2.352

24.570
.544

23.192
546

24.548
1. —
25.548 ✓
- 2.352
23.196 ✓

4) -2.328

24.552

.530

24.529 READ
1. — FT
25.529 ✓
- 2.328
23.201 ✓

HI = 23.199

T/P GUN 1

GUN 2 UP POS
OUT

GUN 2 DOWN
IN POS.

3.737
57.000
60.737 ✓
23.199
-37.538 EL ✓

36.857 READ
1,000 FT
37.857 ✓ ST
-37.538 EL
+1.319 HI ✓

37.909
1.000
38.909 ✓
-37.538 EL
+1.371

1.371
1.000
0.371 S/R

UP POS. (OUT)

DOWN IN

11) 0.667
.319
+1.986

5) 0.708
319
+1.027

1) .400
-0.029

5) .340
+0.031

12) 0.660
319
+1.979

14) 0.654
319
+1.973

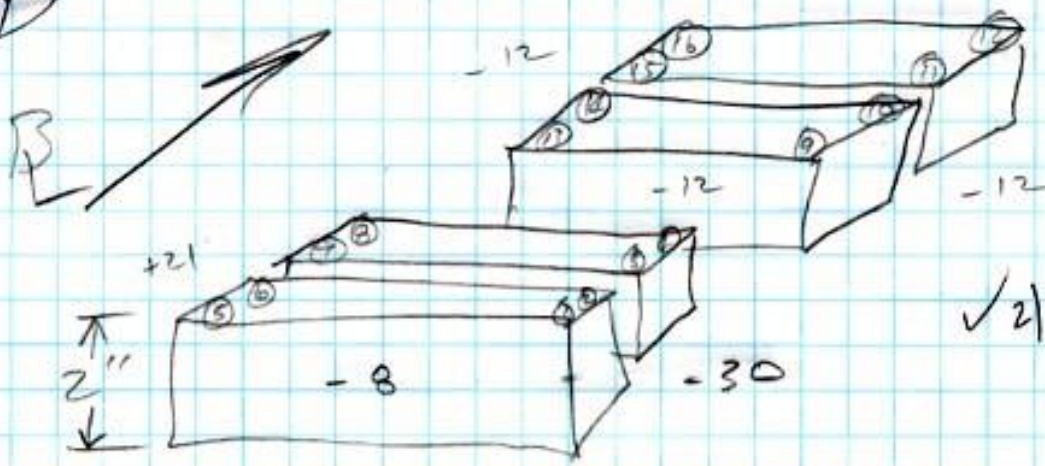
12) .399
-0.028

16) .389
-0.018

STOPPER B/L 1

2/19/03
J.M.S., HZ

(4)



✓ 2/24/03
mz

BELOW #

(To Top)

	1	2	3	4	5	6
HI	1.070	1.070	1.070	1.070	1.070	1.070
RD	.079 085	.103 105	.106 108	.118 116	.071 028	.096 051
FND	-009 ✓	-033 ✓	-036 ✓	-048 ✓	-001 ✓	-026 ✓
	-015	-035	-038	-046	+042	+019
HI	0.725	.725	.725	.725	.725	.725
RD	+1.251	+1.239	+1.236	+1.223	+1.307	+1.293
FND	+1.976 ✓	+1.964 ✓	+1.961 ✓	+1.948 ✓	+1.032 ✓	+1.018 ✓

(To form)

ABOVE #

	7	8	9	10	11	12
HI	1.070	1.070	1.070	1.070	1.070	1.070 087
RD	.104 058	.119 064	.089 079	.097 085	.101 088	.104 086
FND	-032 ✓	-049 ✓	-019 ✓	-027 ✓	-031 ✓	-34 ✓
	+012	+001	-004 -5	-015	-018	-016 -17
HI	.725	.725	.690	.690	.690	.690
RD	+1.290	+1.266	+1.291	+1.288	+1.287	+1.289
FND	+1.005 ✓	+1.991 ✓	+1.981 ✓	+1.978 ✓	+1.977 ✓	+1.979 ✓

OUT

	13	14	15	16
HI	1.070 070	1.070	1.070	1.070 082
RD	.085 073	.095 078	.107 085	.107 091
FND	-015 ✓	-025 ✓	-087 ✓	-037 ✓
	-003 0	-008	-015	-021 -12
HI	.690	.690	.690	.690
RD	+1.298	+1.294	+1.281	+1.280
FND	+1.988 ✓	+1.984 ✓	+1.971 ✓	+1.970 ✓

(To Bottom)

AVG. u/s out
= +.987

AVG. DK out
= +.979

ADD 1" TO GET
TO CENTER OF
STOPPER.

②

Length of con

18.655

18.971

18.967

18.962

18.956

Aug. 18.962

2-27-03

	<u>5</u>	<u>3</u>	<u>2</u>
US Flange	-9.481	-9.481	-9.481
READ	<u>.195</u>	<u>4.771</u>	<u>4.762</u>
SIT	-8.486 ✓	-4.710 ✓	-4.719 ✓
Bushing	<u>.375</u>	<u>.375</u>	<u>.375</u>
SIT	-8.861 ✓	-5.085 ✓	-5.094 ✓
Plunger Blade	<u>.050</u>	<u>.375</u>	<u>.375</u>
	-8.911 ✓	-5.460 ✓	-5.469 ✓

	<u>1</u>	<u>4</u>	<u>6</u>
US Flange	9.481	9.481	9.481
READ	<u>4.690</u>	<u>4.755</u>	<u>1.315</u>
SIT	4.791 ✓	4.726 ✓	8.166 ✓
Bushing	<u>.375</u>	<u>.375</u>	<u>.375</u>
SIT	5.166 ✓	5.101 ✓	8.541 ✓
Arm	<u>.375</u>	<u>.375</u>	<u>.375</u>
	5.541 ✓	5.476 ✓	8.916 ✓

	<u>1-2</u>	<u>3-4</u>
READ	11.726	11.665
Bushing	<u>.750</u>	<u>.750</u>
FND	10.976 ✓	10.915 ✓
S/R	11.010 ✓	10.936 ✓

	<u>5-6</u>
	18.599
	<u>.750</u>
FND	17.849 ✓
S/R	17.827 ✓