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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.15	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
LESS OR EQU TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400		
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

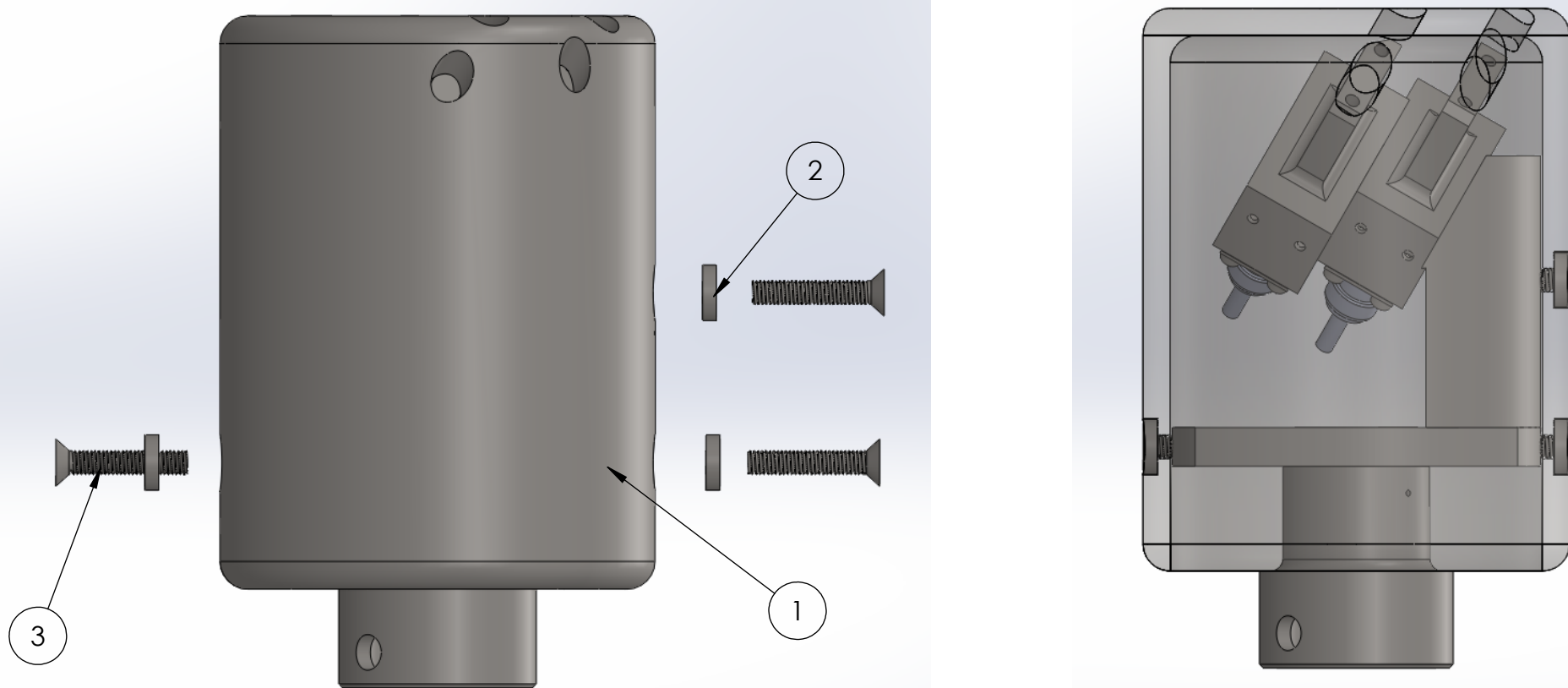
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DO NOT SCALE DRAWING



MATERIAL		PEEK 1000, SS316, BN CERAMIC GRADE XP	
DRAWN		NAME	DATE
CHECKED		RAMONA V PEREZ	06/13/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

TITLE: PROTON DETECTOR ASSEMBLED TOTAL		
SIZE A	DWG. NO. PD_22_TOTAL_VIEW	REV 1
		SHEET 1 OF 1



PARTS LIST			
ITEM NO.	TITLE	DWG. NO.	QUANTITY
1	PROTON DETECTOR SHIELD	PD_22_Shell	1
2	PROTON DETECTOR BRACKET	PD_22_Bracket	3
3	McMaster-Carr PN#93395A366		3

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

TOLERANCES ANGULAR DIMENSIONS				
LESS THAN 50	50 TO 120	120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

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MATERIAL: SS316 AND BN CERAMIC GRADE XP

DRAWN	RAMONA V PEREZ	DATE	06/13/13
CHECKED	RAMONA V PEREZ	DATE	06/28/13

UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM

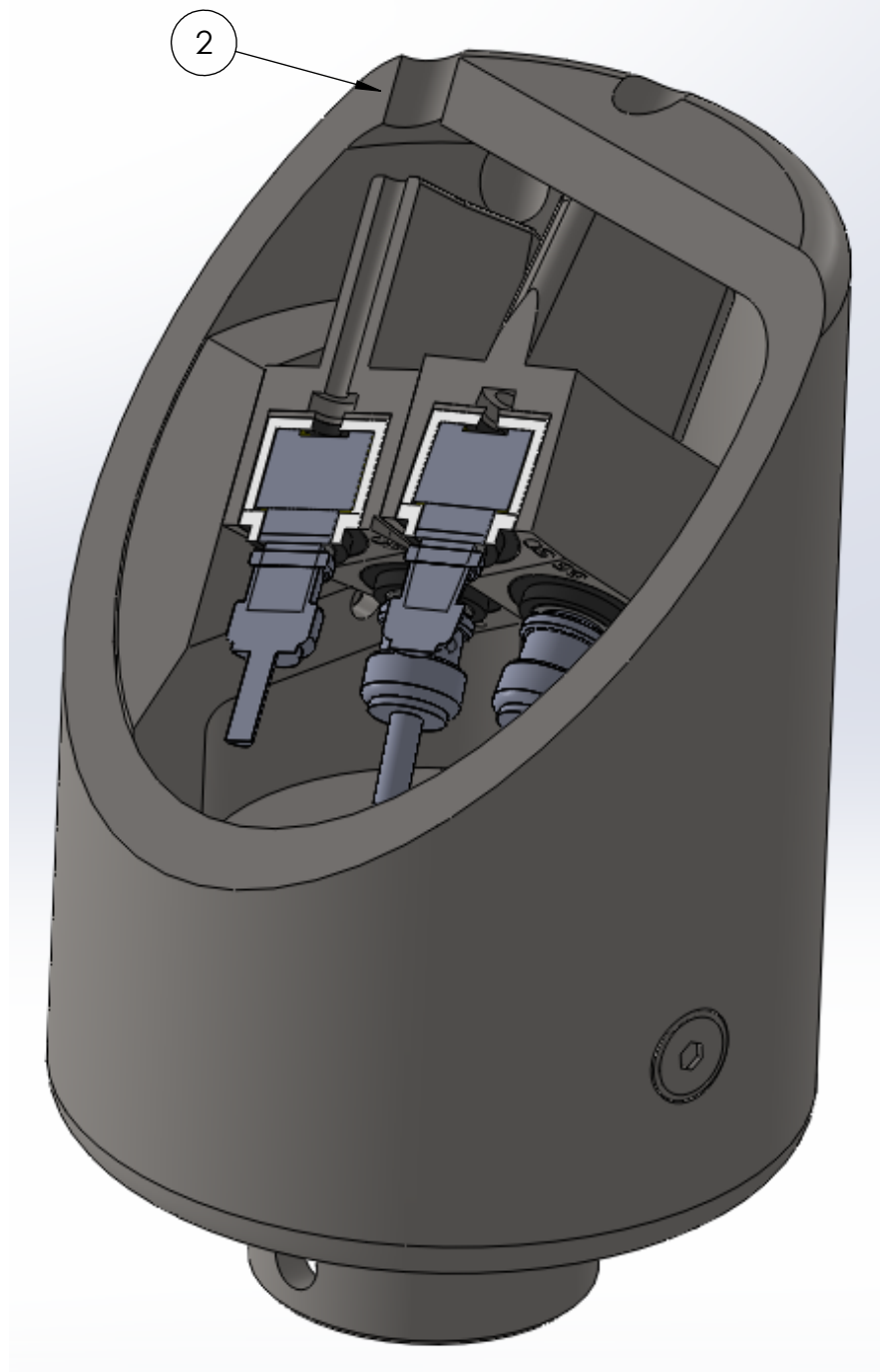
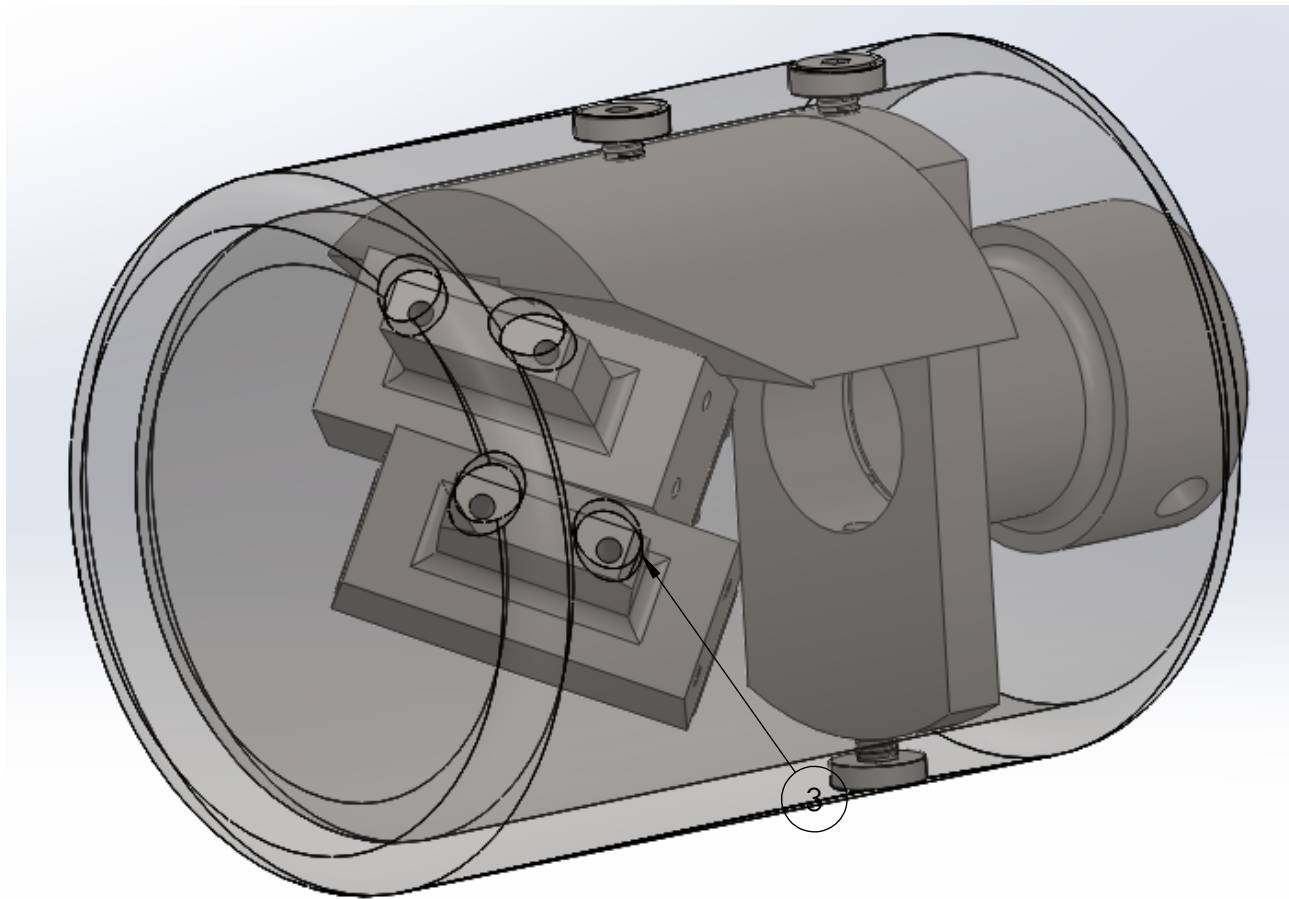
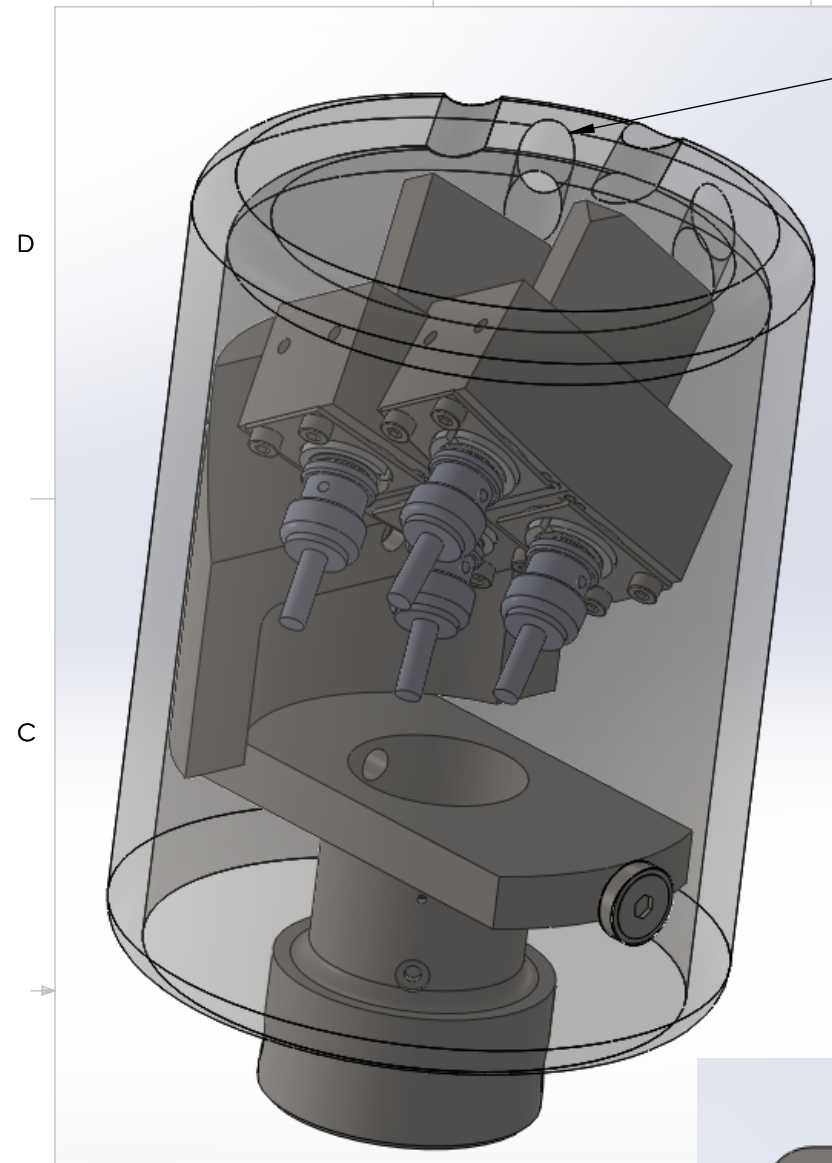
REMOVE ALL BURRS AND SHARP EDGES

TITLE: **PROTON DETECTOR ASSEMBLED SHIELD**

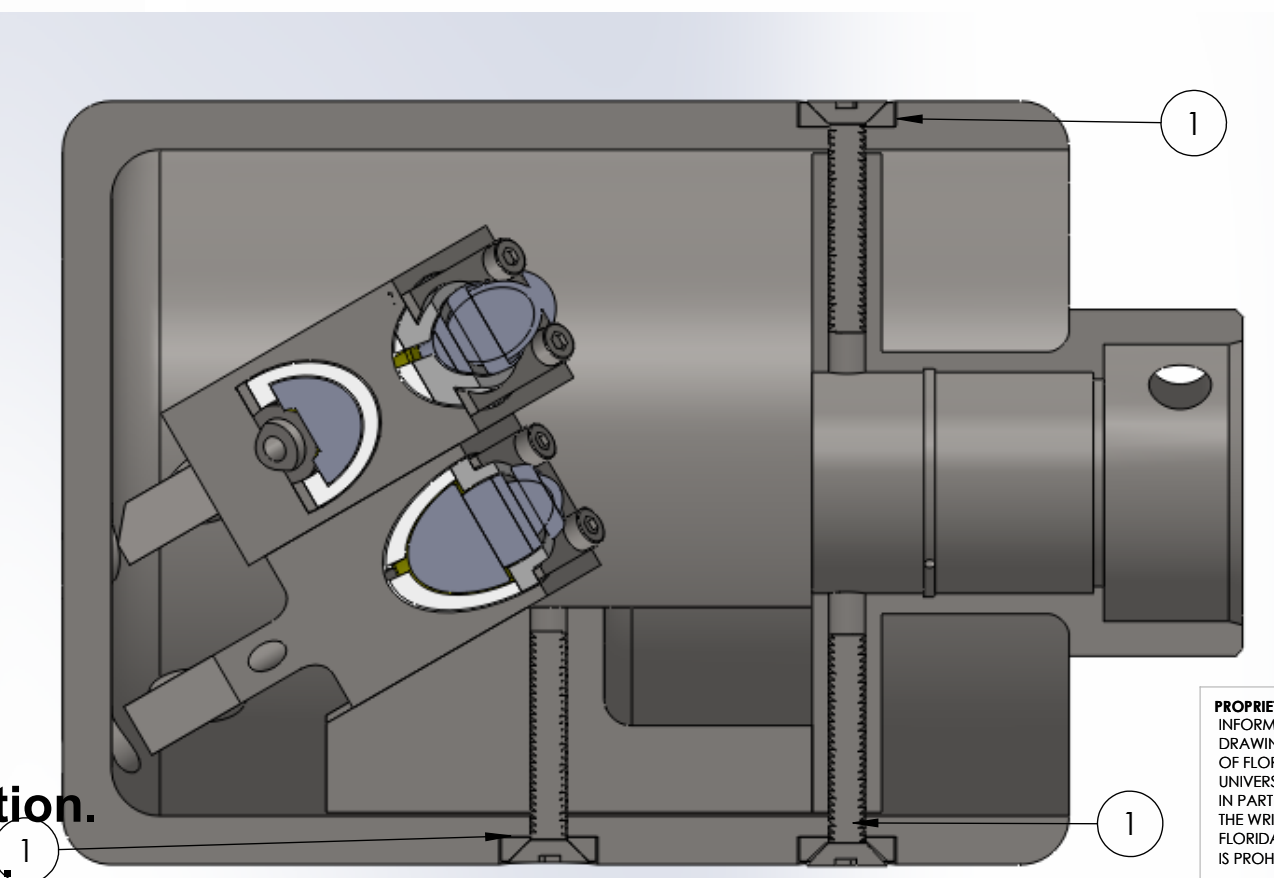
SIZE A	DWG. NO. PD_22_Shield_assembled	REV
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SHEET 1 OF 1

8 7 6 5 4 3 2 1



- NOTES:
1. SHIELD ATTACHED TO SS316 COMPONENTS WITH BRACKETS AND SCREWS.
 2. CROSS SECTIONAL VIEW OF 10mm DIAMETER COLLIMATOR HOLES IN SHIELD.
 3. VIEW OF ASSEMBLED INSTRUMENT WITH SHIELD HOLES (SHIELD IS TRANSPARENT).



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MATERIAL		BN CERAMIC GRADE XP	
NAME		DATE	
DRAWN	RAMONA V PEREZ	06/06/13	
CHECKED	RAMONA V PEREZ	06/28/13	
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

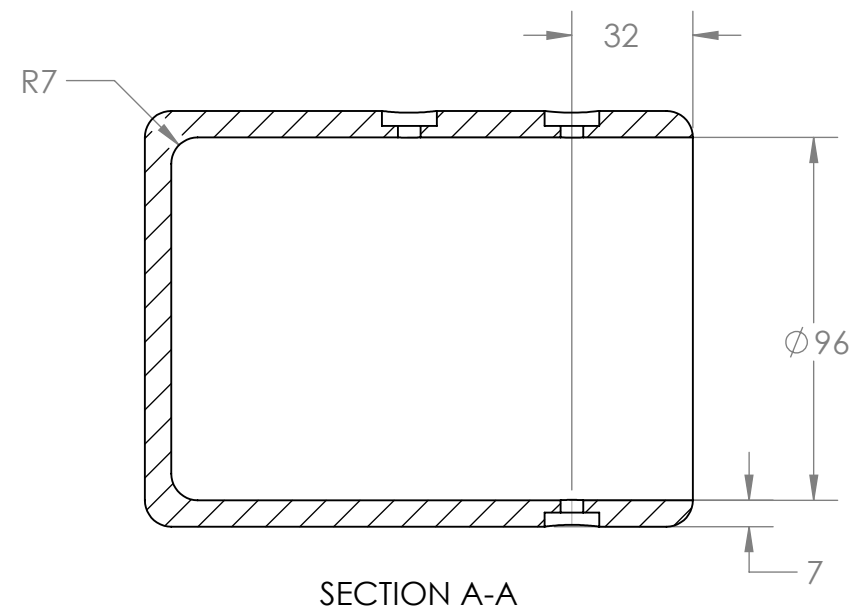
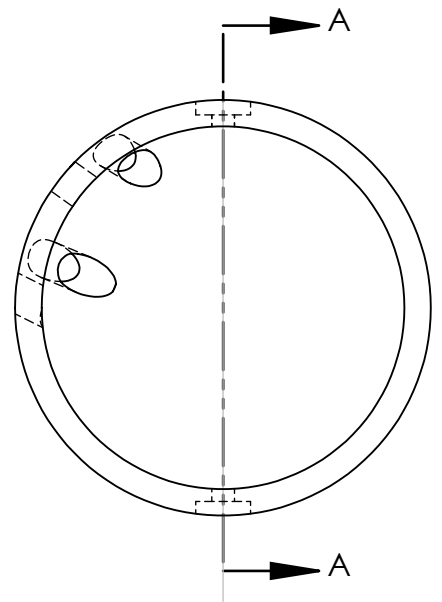
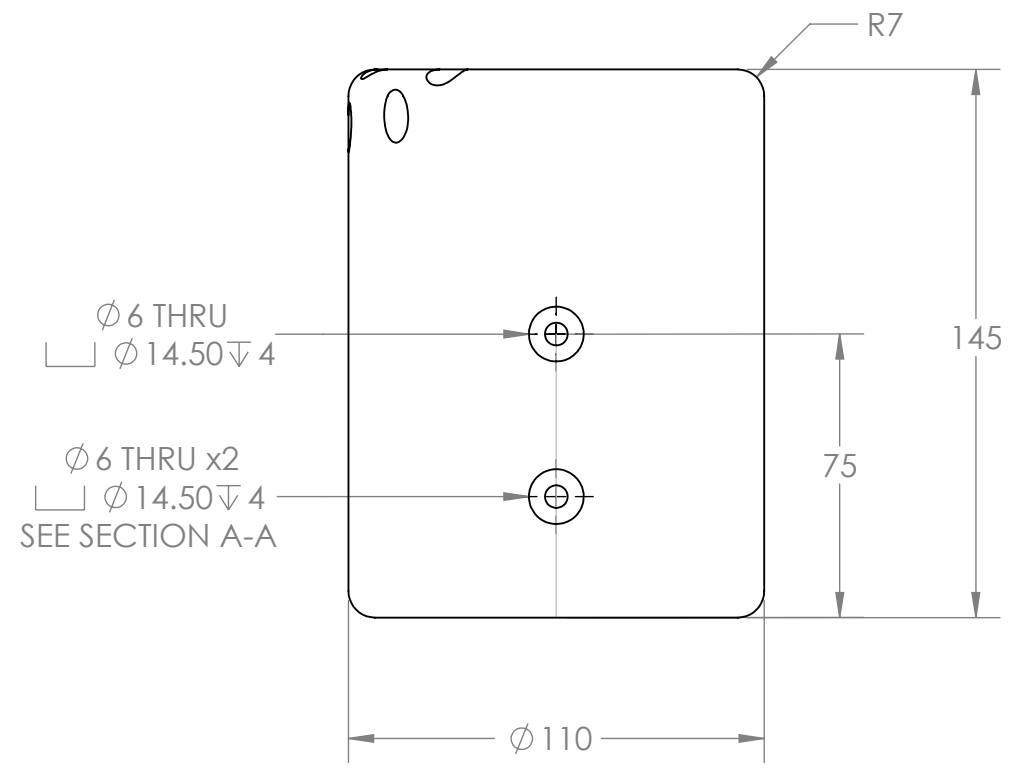
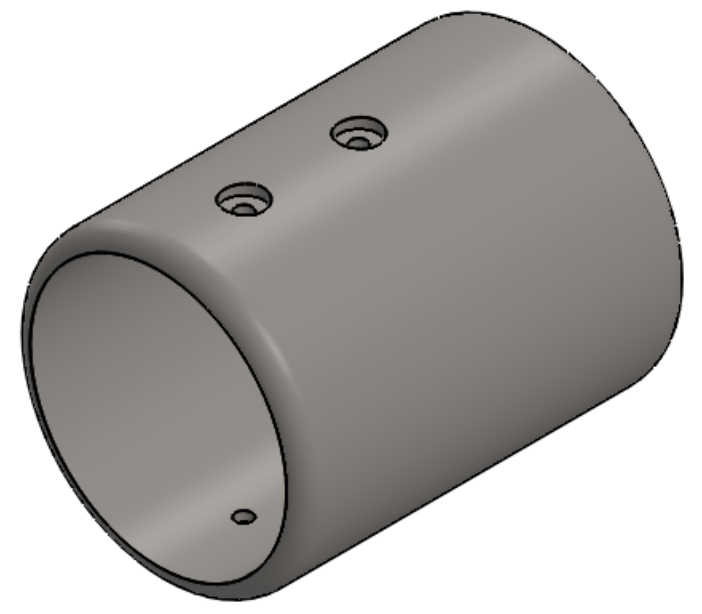
TITLE:
PROTON DETECTOR
SHIELD

SIZE DWG. NO. REV
B PD_22_Shell

SCALE: 1:1 WEIGHT: 1.2kg SHEET 1 OF 4

8 5 7 4 6 3 5 2 4 1 2 1

NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm AND +/- 0Degree 30' EXCEPT WHERE SHOWN OTHERWISE.



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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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MATERIAL		BN CERAMIC GRADE XP	
NAME		DATE	
DRAWN	RAMONA V PEREZ	06/06/13	
CHECKED	RAMONA V PEREZ	06/07/13	
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

TITLE:
 PROTON DETECTOR SHIELD

SIZE	DWG. NO.	REV
B	PD_22_Shell	

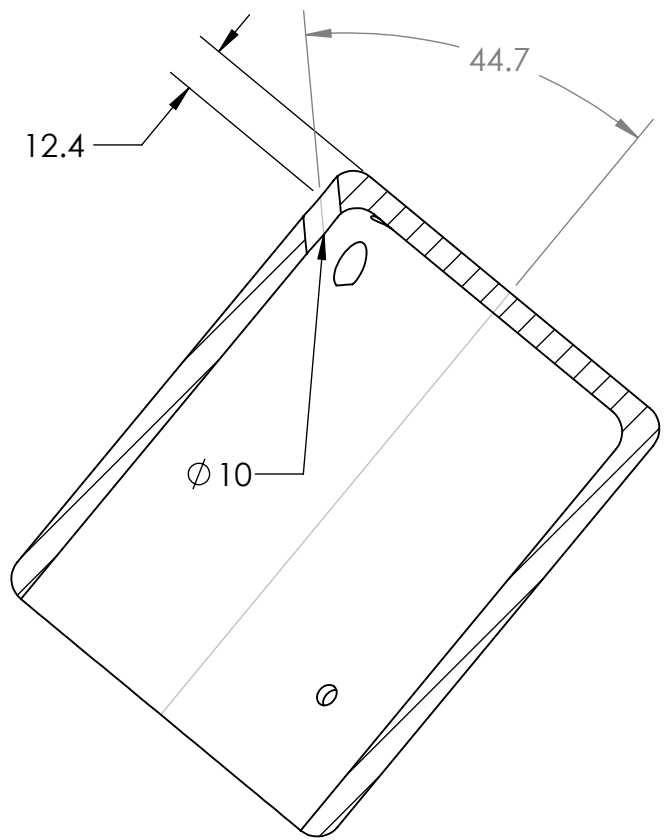
SCALE: 1:2 WEIGHT: 1.2kg SHEET 2 OF 4

D

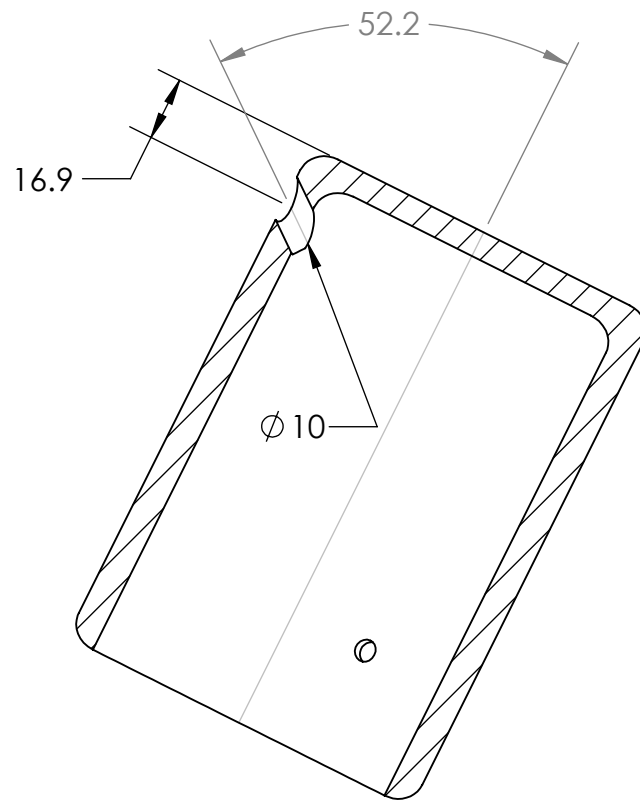
C

B

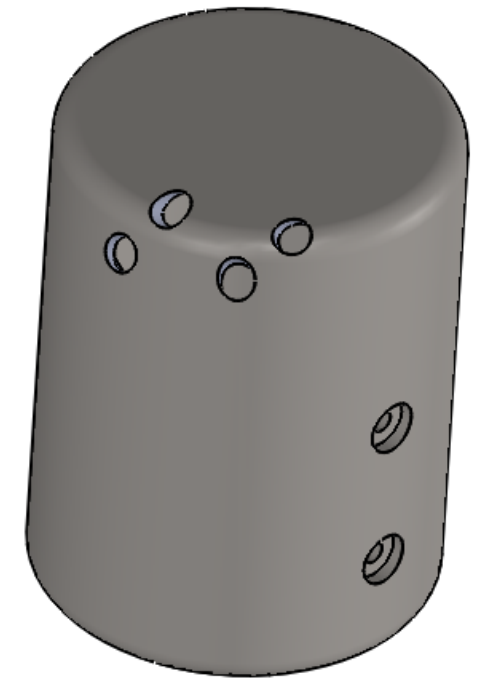
A



SECTION B-B



SECTION C-C

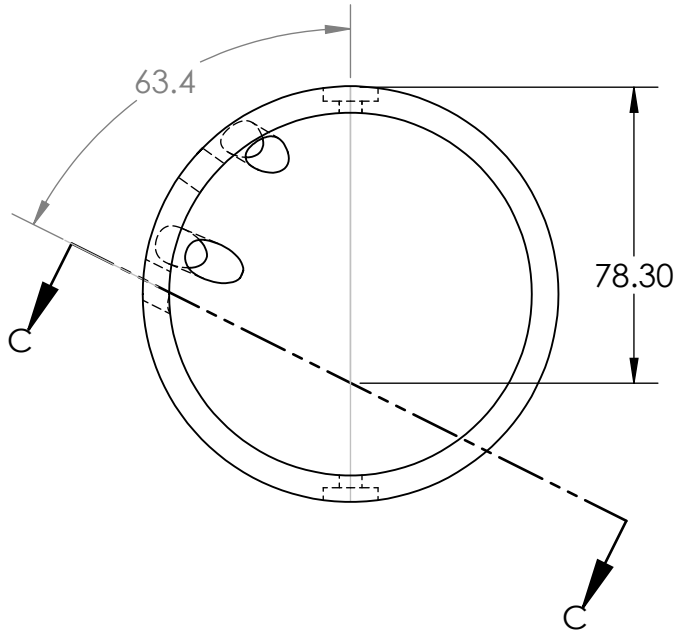
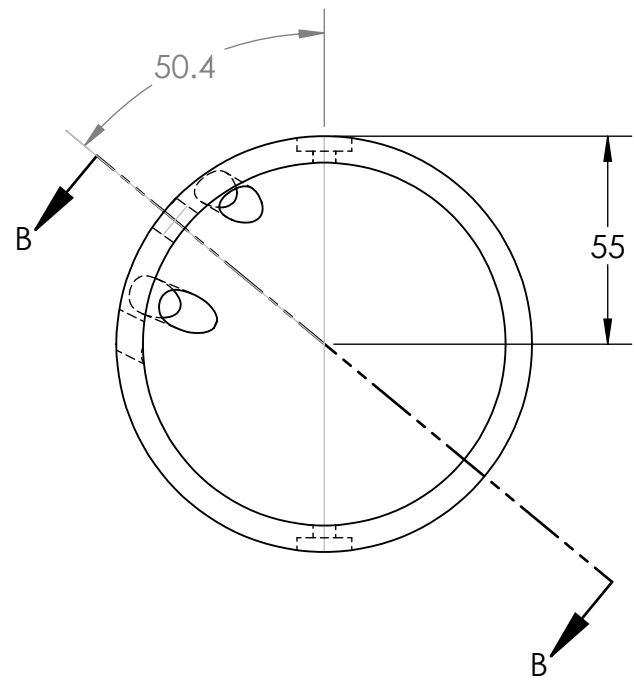


D

C

B

A



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm AND +/- 0Degree 30' EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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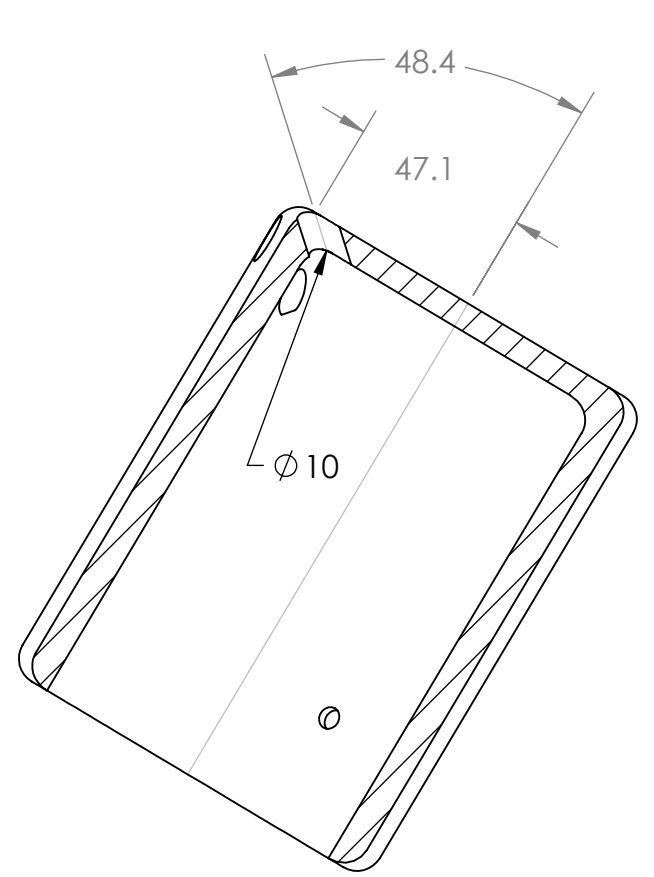
MATERIAL		BN CERAMIC GRADE XP	
DRAWN		RAMONA V PEREZ	06/06/13
CHECKED		RAMONA V PEREZ	06/07/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

DO NOT SCALE DRAWING

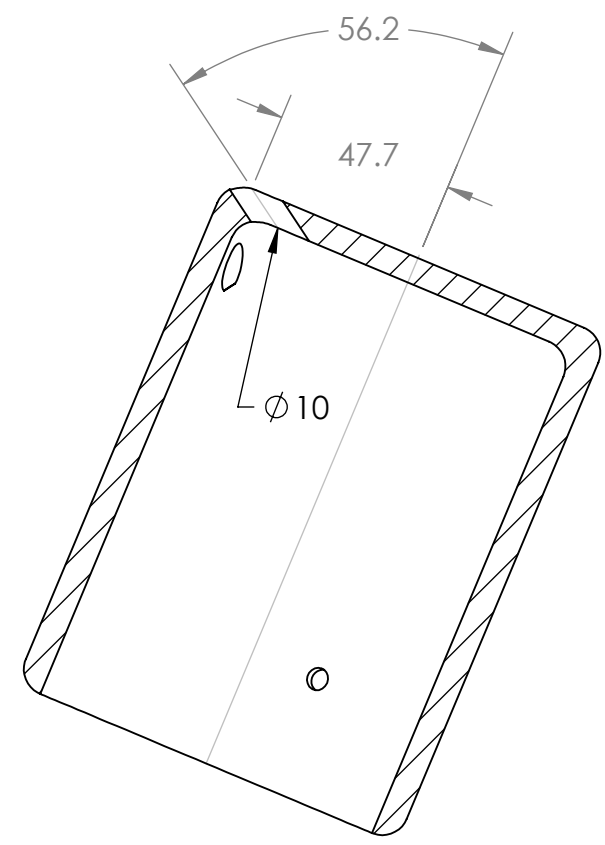
TITLE:
PROTON DETECTOR SHIELD

SIZE DWG. NO. REV
B PD_22_Shell

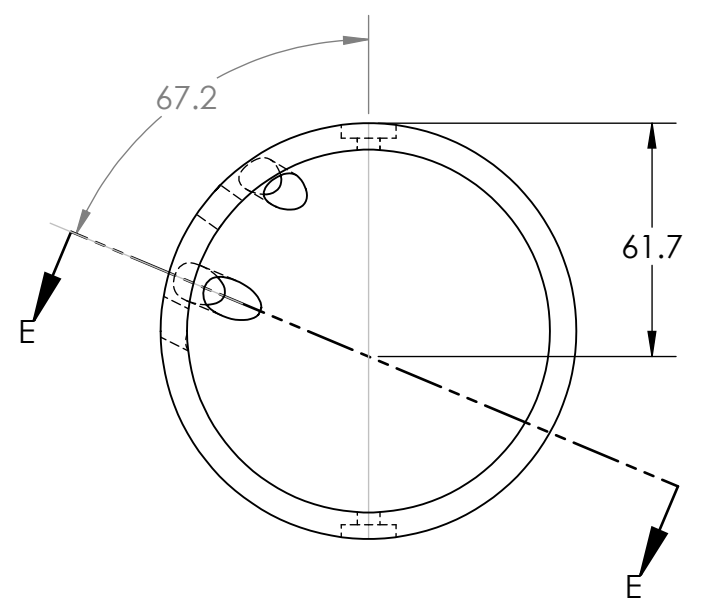
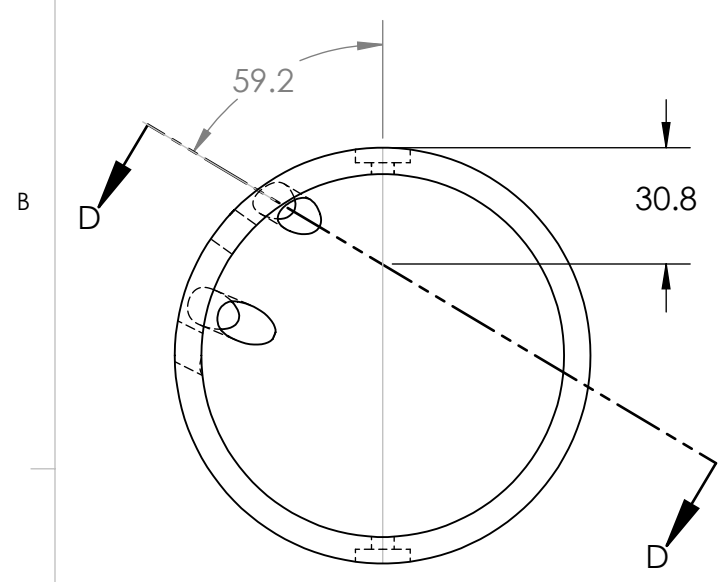
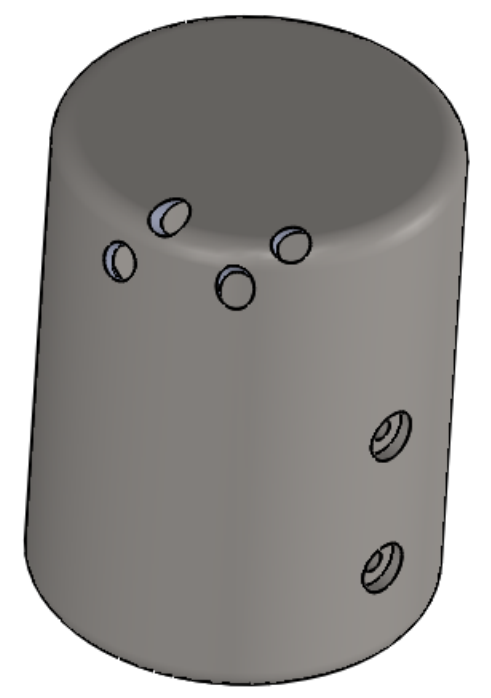
SCALE: 1:2 WEIGHT: 1.2kg SHEET 3 OF 4



SECTION D-D



SECTION E-E



NOTES:
 1. ALL MACHINING TOLERANCES TO $\pm 0.2\text{mm}$ AND $\pm 0^\circ 30'$ EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
$\pm 1^\circ$	$\pm 0^\circ 30'$	$\pm 0^\circ 20'$	$\pm 0^\circ 10'$	$\pm 0^\circ 5'$	

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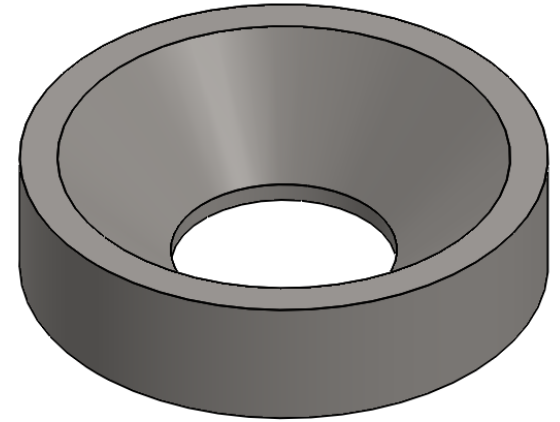
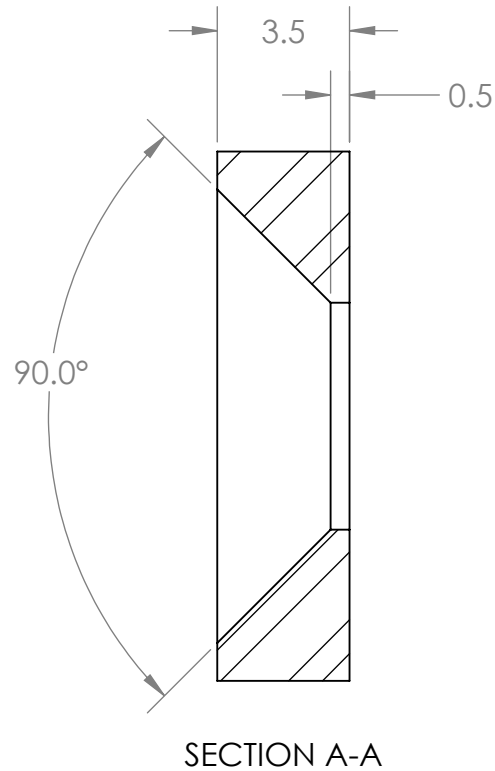
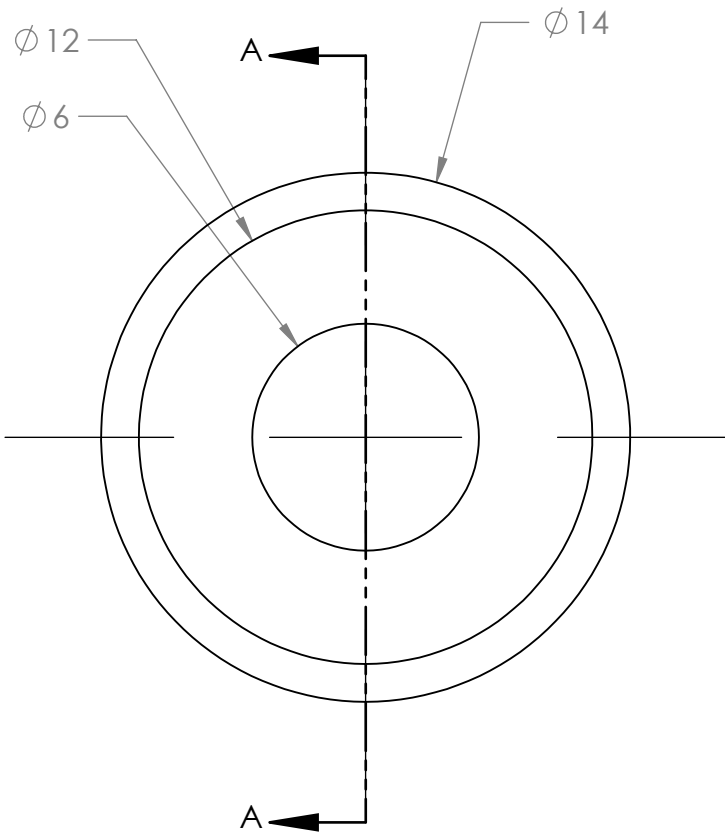


MATERIAL		BN CERAMIC GRADE XP	
NAME		DATE	
DRAWN	RAMONA V PEREZ	06/06/13	
CHECKED	RAMONA V PEREZ	06/07/13	
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

TITLE:
PROTON DETECTOR SHIELD

SIZE **B** DWG. NO. **PD_22_Shell** REV

SCALE: 1:2 WEIGHT: 1.2kg SHEET 4 OF 4



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

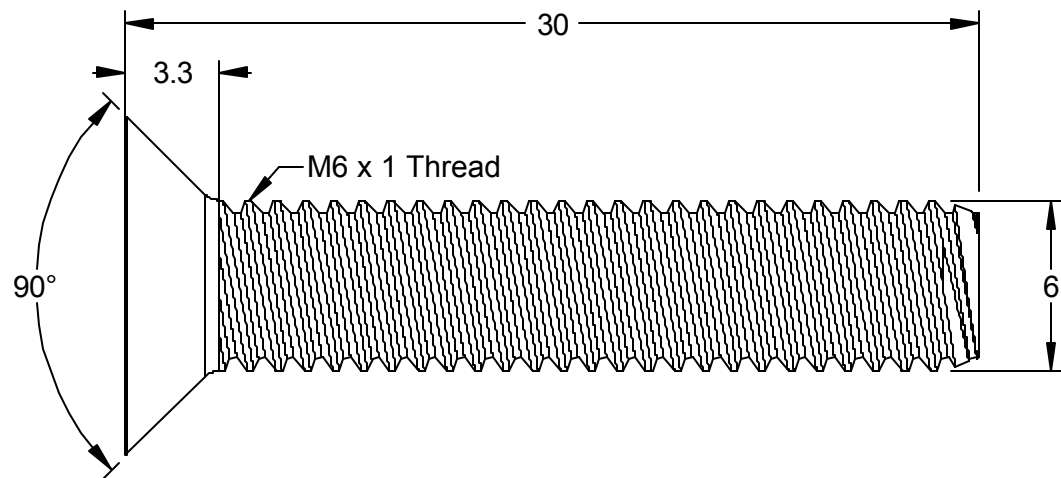
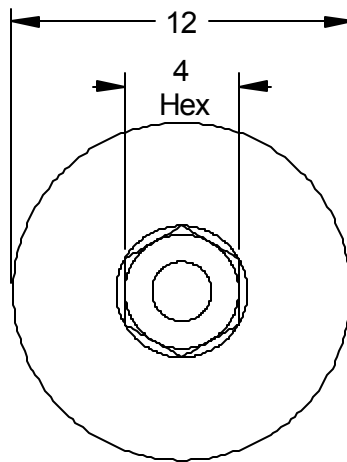
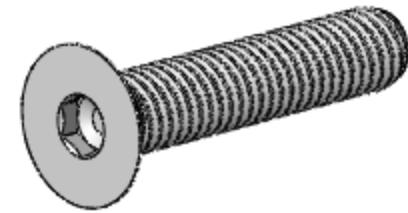
TOLERANCES ANGULAR DIMENSIONS				
LESS THAN 50	50 TO 120	120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

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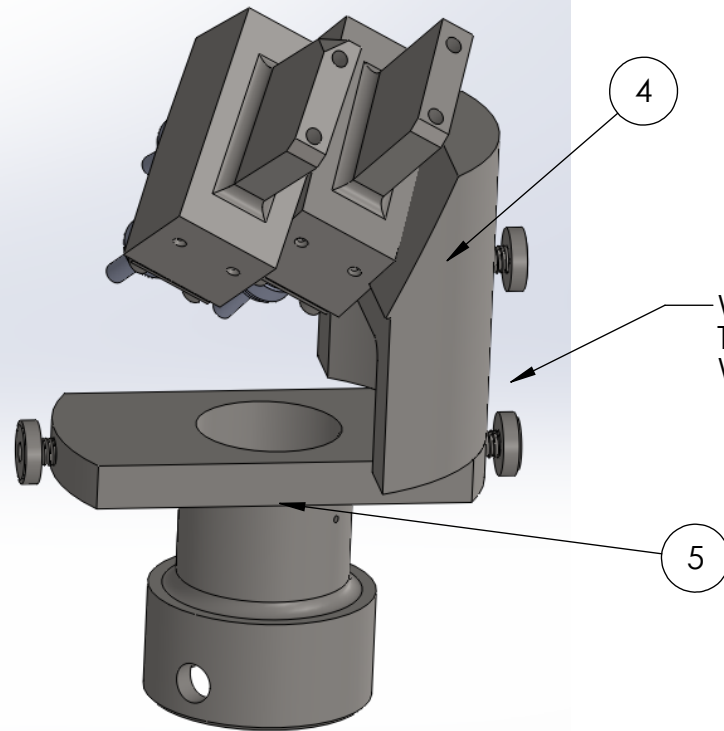


MATERIAL		SS316
NAME		DATE
DRAWN	RAMONA V PEREZ	05/01/13
CHECKED	RAMONA V PEREZ	06/19/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR SHIELD BRACKET		
SIZE A	DWG. NO. PD_22_Bracket	REV
SCALE: 5:1	WEIGHT: .003KG	SHEET 1 OF 1



McMASTER-CARR CAD	PART NUMBER 93395A366
http://www.mcmaster.com (c) 2004 McMaster-Carr Supply Company	Type 316 Stainless Steel DIN 7991-A4 Flat Socket Head Cap Screw
Unless otherwise specified, dimensions are in millimeters. Information in this drawing is provided for reference only.	



WELD PROTON DETECTOR CONNECTOR TO PROTON DETECTOR MAST CONNECTOR; WELD FOR ULTRA HIGH VACUUM

PARTS LIST			
ITEM NO.	TITLE	DWG. NO.	QUANTITY
4	PROTON DETECTOR CONNECTOR	PD_22_connector	1
5	PROTON DETECTOR MAST CONNECTOR	MAST_connector_1	1

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

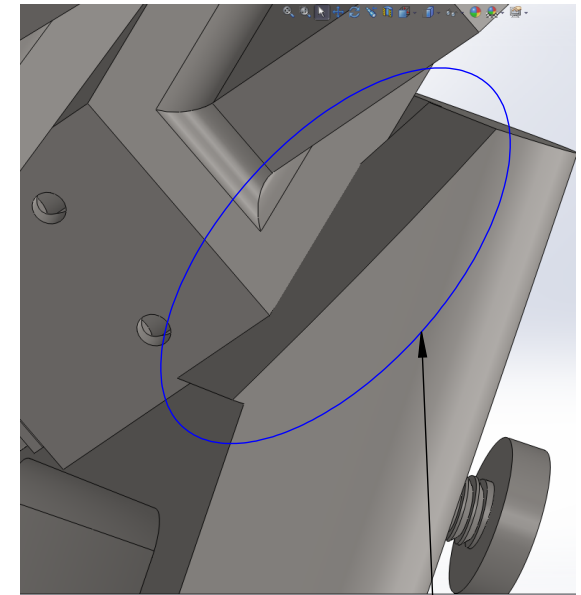
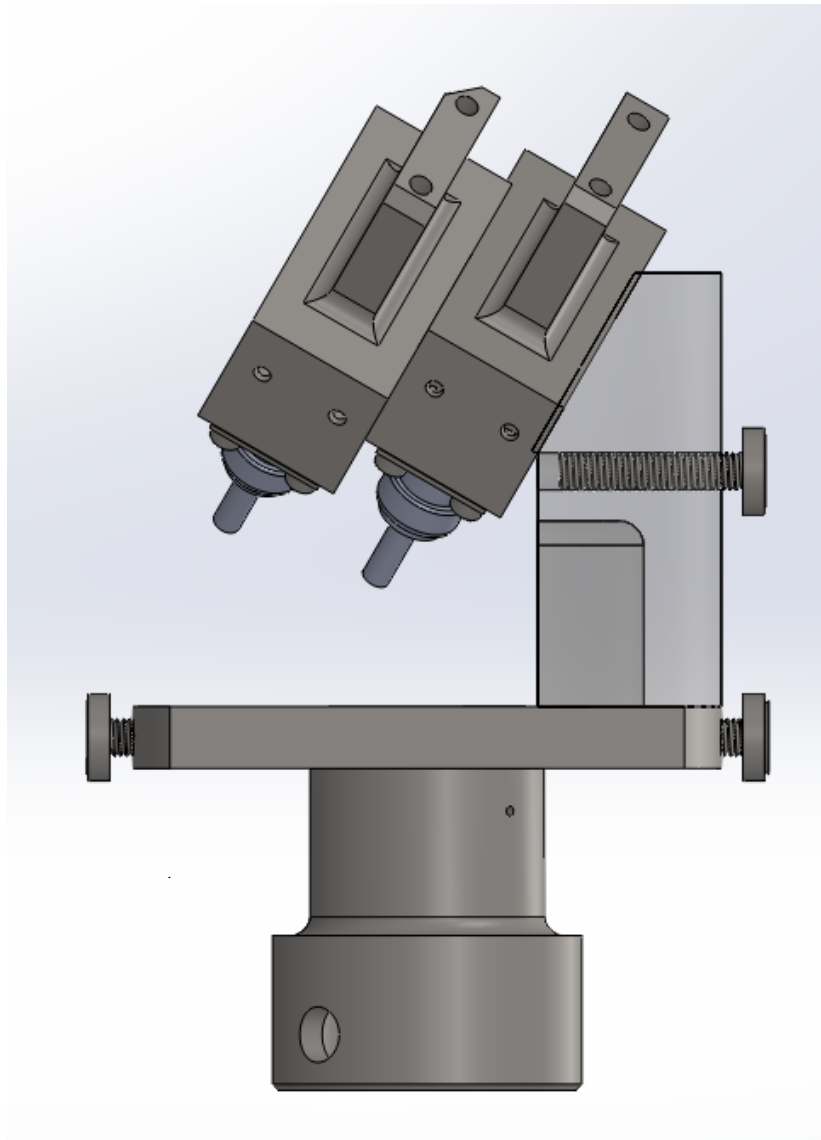
TOLERANCES ANGULAR DIMENSIONS				
LESS THAN 50	50 TO 120	120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

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MATERIAL		SS316
	NAME	DATE
DRAWN	RAMONA V PEREZ	05/28/13
CHECKED	RAMONA V PEREZ	06/28/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE:		
PROTON DETECTOR ASSEMBLED CONNECTOR		
SIZE	DWG. NO.	REV
A	PD_22_connector_assembled	
		SHEET 1 OF 2



NOTES:

1. WELD PROTON DETECTOR MODULE A TO PROTON DETECTOR CONNECTOR
2. WELD FOR ULTRA HIGH VACUUM
3. NOTE STEP ON CONNECTOR IS TO CORRECTLY POSITION PROTON DETECTOR MODULE A

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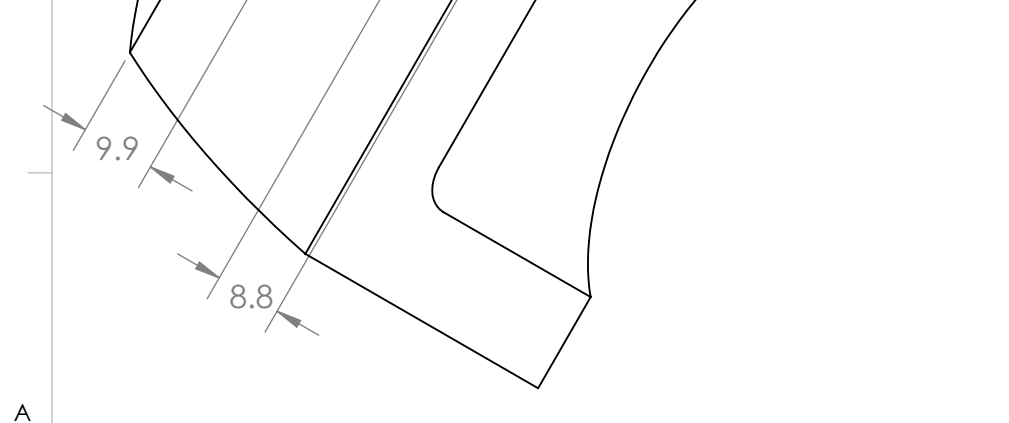
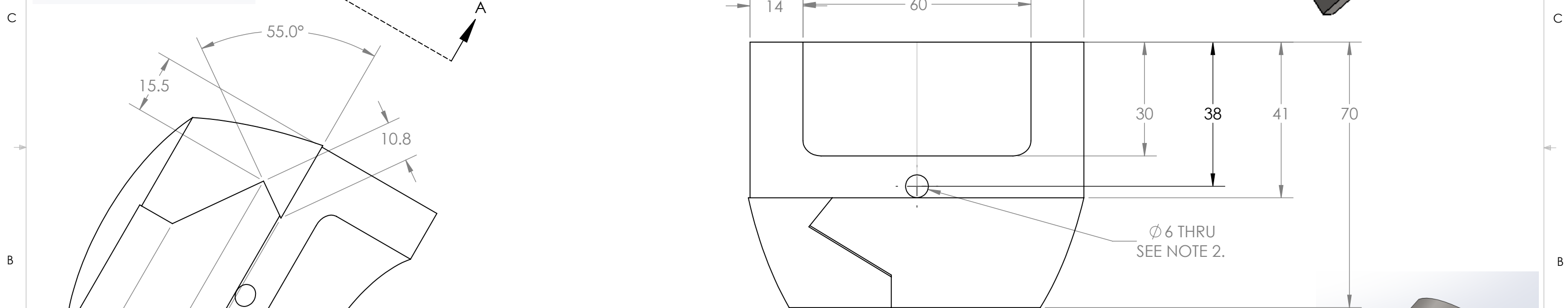
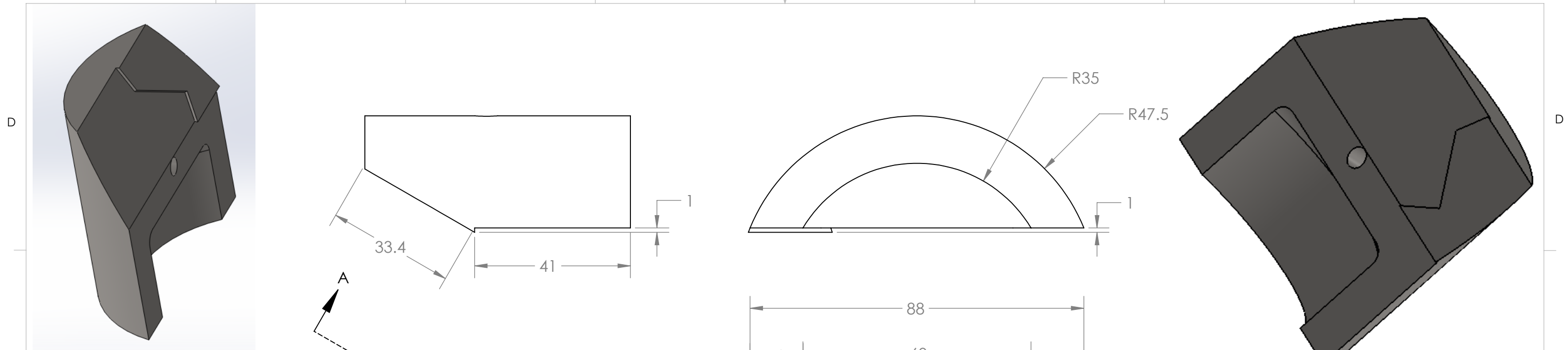
TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
LESS THAN 50	50 TO 120	120 TO 400	OVER 400		
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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MATERIAL	SS316
DRAWN	RAMONA V PEREZ 06/13/13
CHECKED	RAMONA V PEREZ 06/28/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM	REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR ASSEMBLED CONNECTOR		
SIZE A	DWG. NO. PD_22_connector_assembled	REV
		SHEET 2 OF 2

8 7 6 5 4 3 2 1



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.
 2. THREAD FOR M6 X1 MACHINE SCREW.

VIEW A-A
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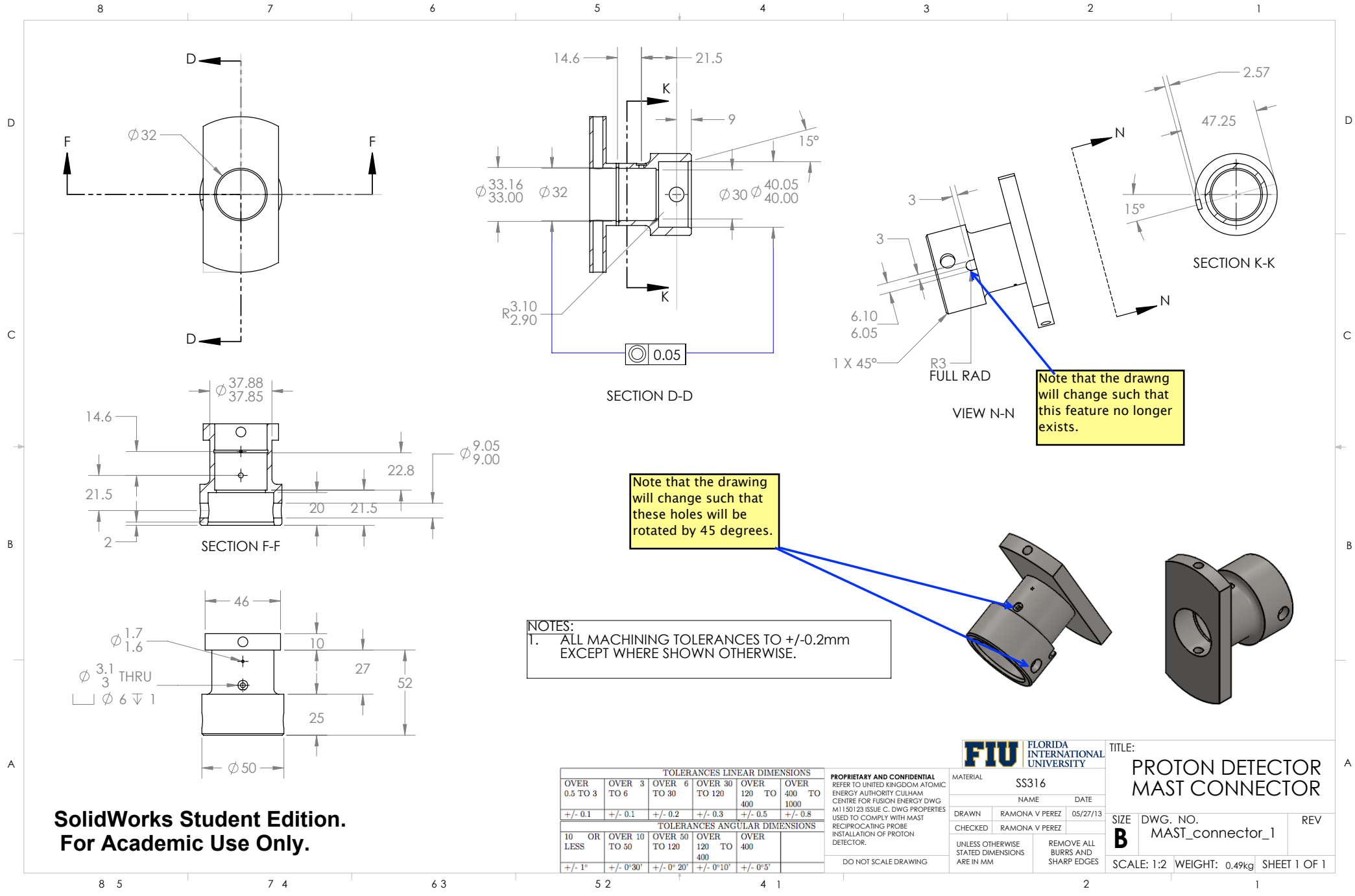
TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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MATERIAL	SS316
NAME	DATE
DRAWN	RAMONA V PEREZ 06/13/13
CHECKED	RAMONA V PEREZ 06/19/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM	REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR CONNECTOR		
SIZE	DWG. NO.	REV
B	PD_22_connector	
SCALE: 1:1	WEIGHT: .72kg	SHEET 1 OF 1

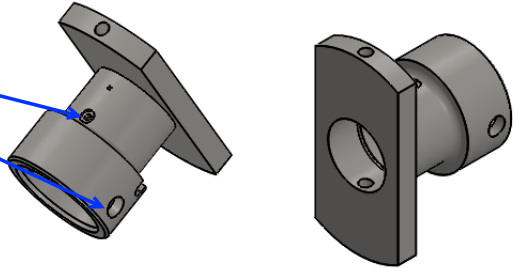
8 5 7 4 6 3 5 2 4 1 2 1



Note that the drawing will change such that this feature no longer exists.

Note that the drawing will change such that these holes will be rotated by 45 degrees.

NOTES:
1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.



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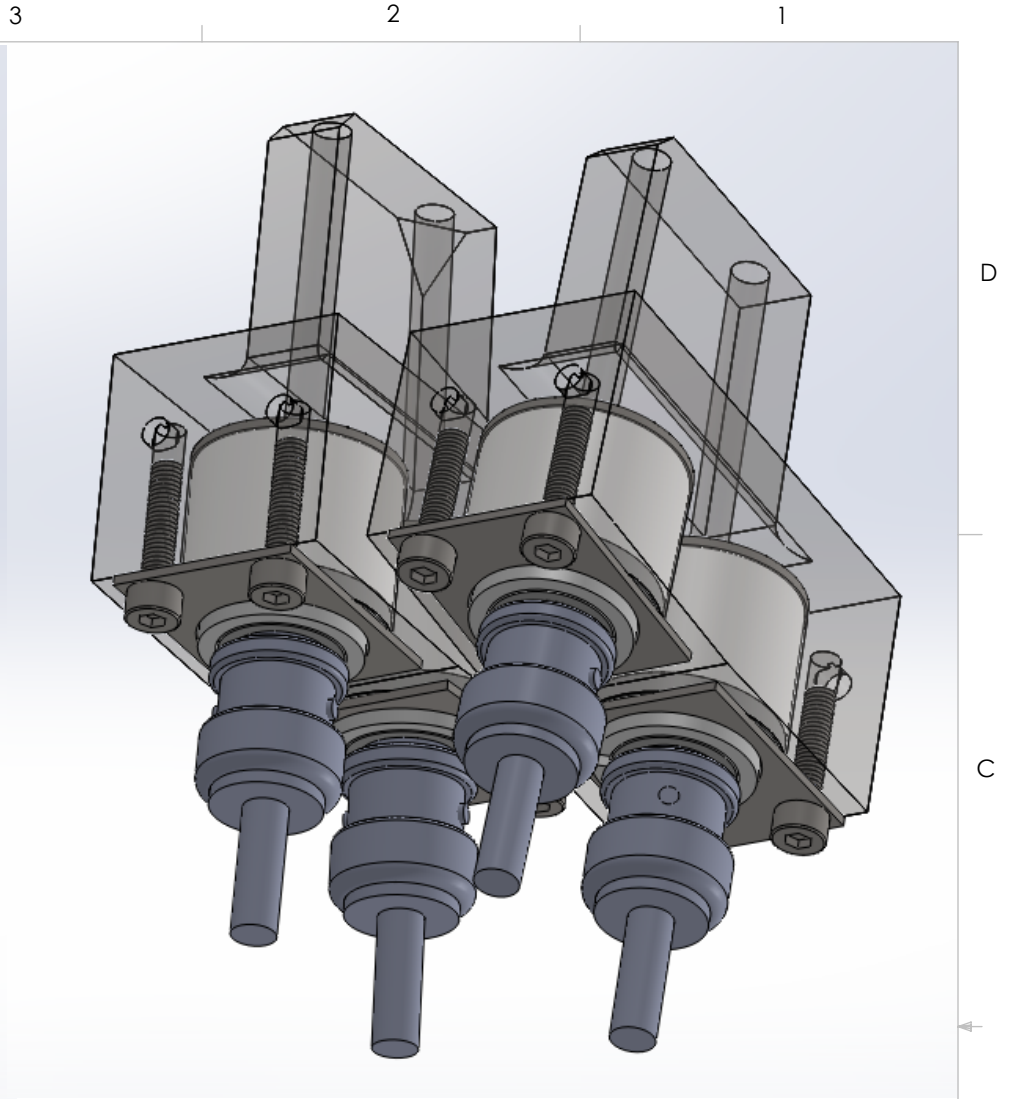
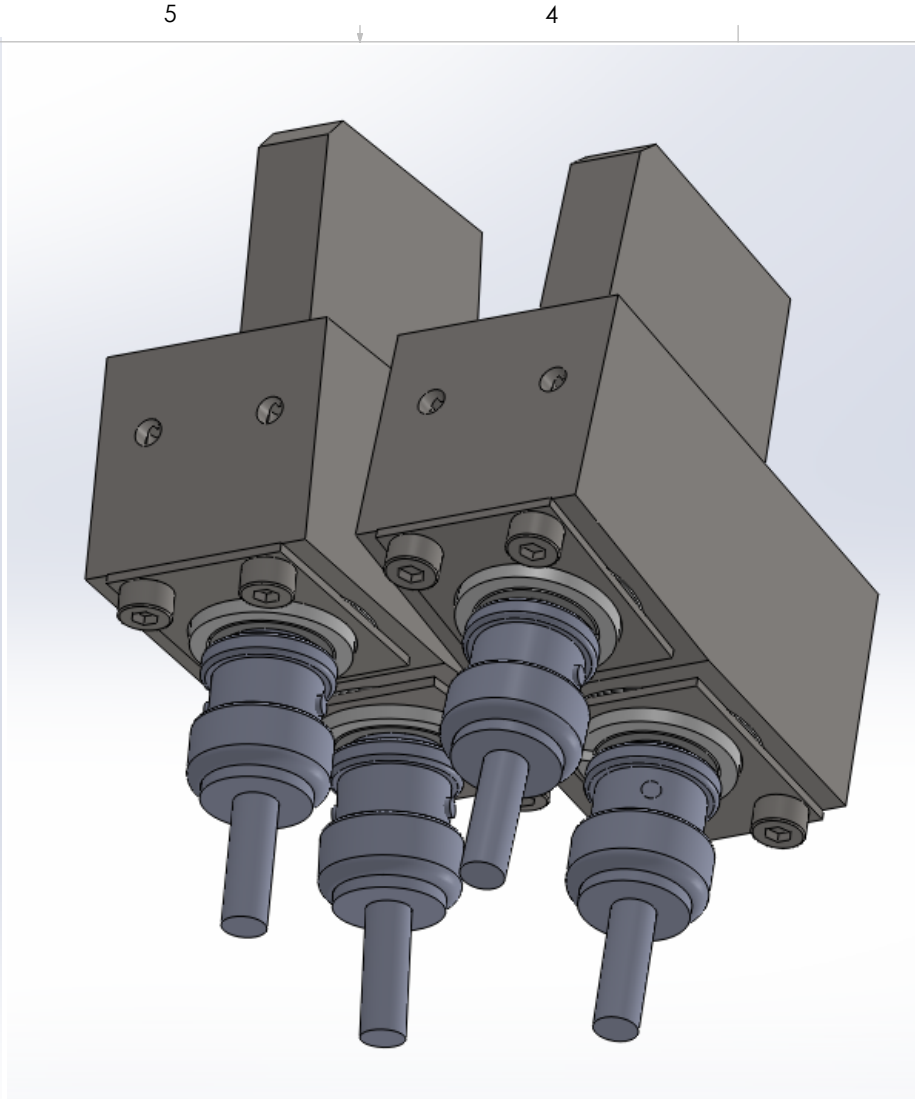
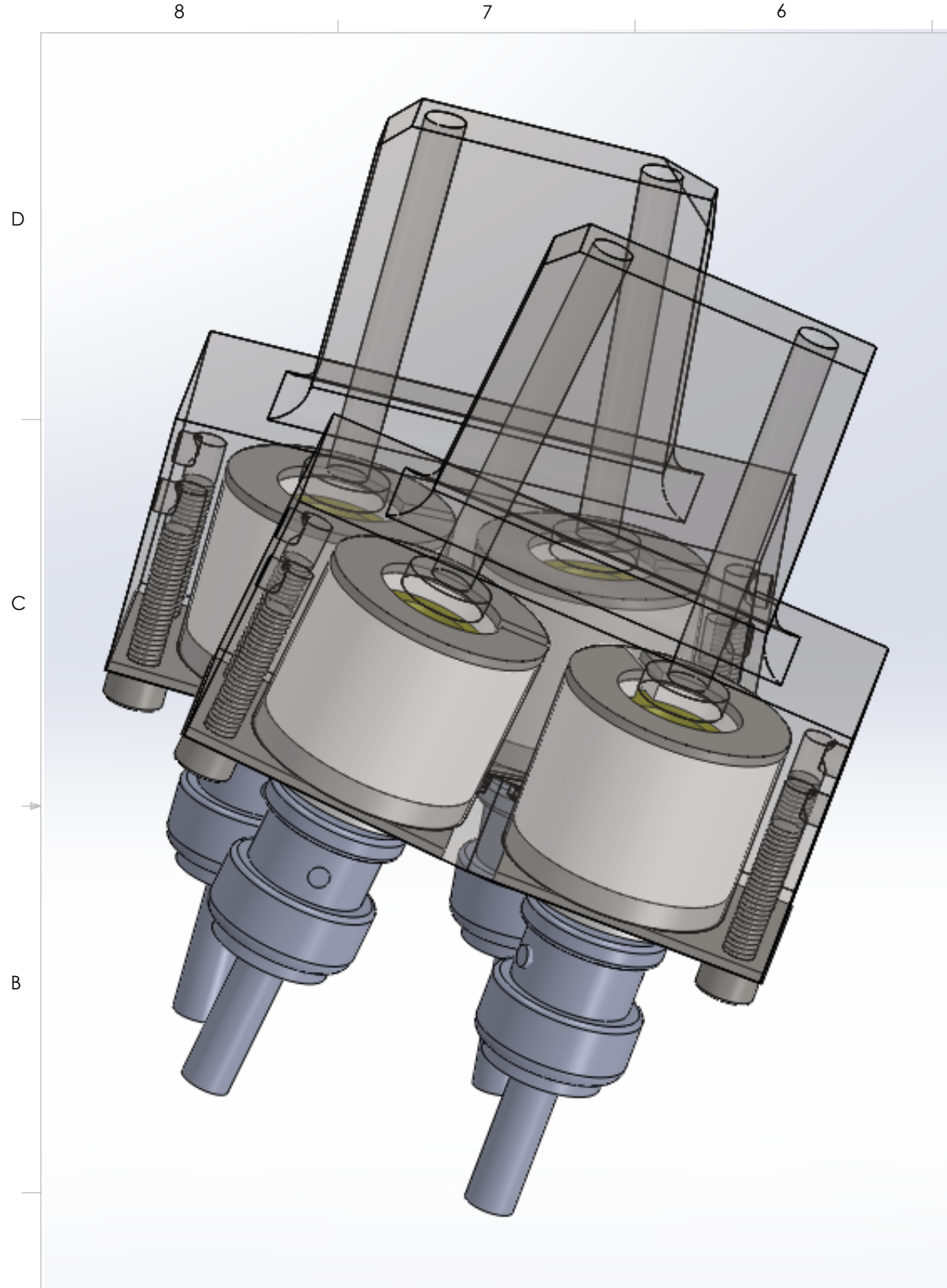
TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

TOLERANCES ANGULAR DIMENSIONS				
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

PROPRIETARY AND CONFIDENTIAL
REFER TO UNITED KINGDOM ATOMIC ENERGY AUTHORITY CULHAM CENTRE FOR FUSION ENERGY DWG M1150123 ISSUE C. DWG PROPERTIES USED TO COMPLY WITH MAST RECIPROCATING PROBE INSTALLATION OF PROTON DETECTOR.

FIU FLORIDA INTERNATIONAL UNIVERSITY	
MATERIAL	SS316
NAME	DATE
DRAWN	RAMONA V PEREZ 05/27/13
CHECKED	RAMONA V PEREZ
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM	REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR MAST CONNECTOR	
SIZE	DWG. NO. MAST_connector_1
SCALE: 1:2	WEIGHT: 0.49kg
SHEET 1 OF 1	REV



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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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DO NOT SCALE DRAWING



MATERIAL: SS316, PEEK 1000

NAME: DATE:

DRAWN: RAMONA V PEREZ 06/13/13

CHECKED: RAMONA V PEREZ 06/19/13

UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM

REMOVE ALL BURRS AND SHARP EDGES

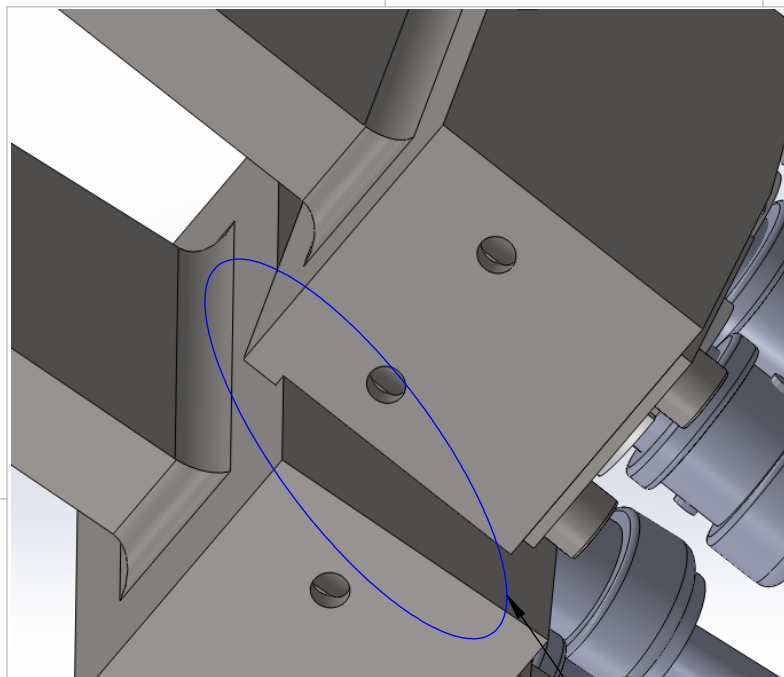
TITLE: **PROTON DETECTOR ASSEMBLED MODULE**

SIZE: **B** DWG. NO. PD_22_Module_assembled REV

SHEET 1 OF 2

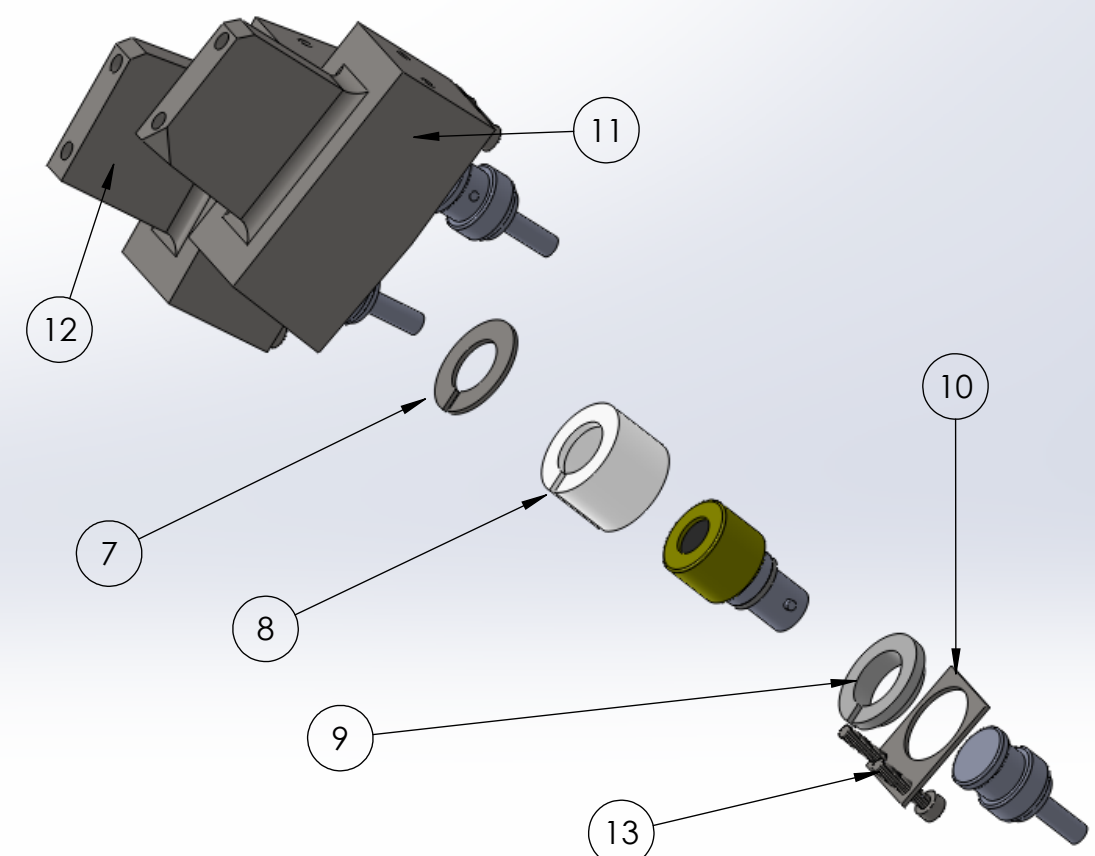
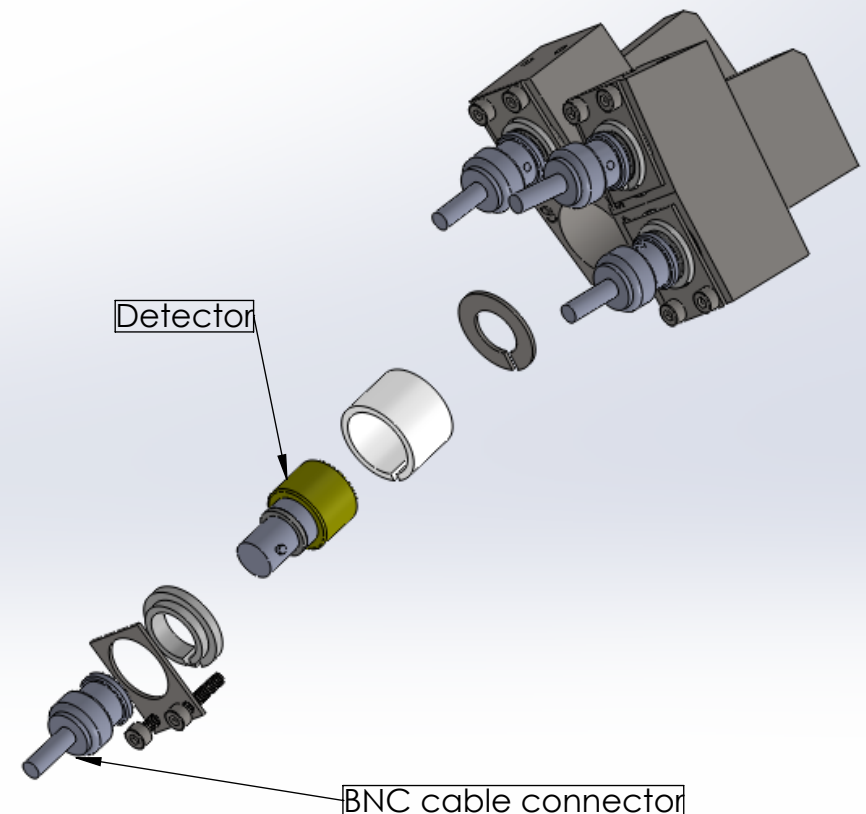
8 7 6 5 4 3 2 1

8 5 7 4 6 3 5 2 4 1 2 1



NOTES:

1. WELD PROTON DETECTOR MODULE B TO PROTON DETECTOR MODULE A
2. WELD FOR ULTRA HIGH VACUUM
3. NOTE STEP ON PROTON MODULE A TO CORRECTLY POSITION PROTON DETECTOR MODULE B



PARTS LIST			
ITEM	TITLE	DWG. NO.	QUANTITY
6	NO ITEM 6	N/A	N/A
7	PROTON DETECTOR WASHER	PD_22_Washer	4
8	PROTON DETECTOR PEEK SLEEVE	PD_22_Peek_sleeve	4
9	PROTON DETECTOR PEEK BOTTOM	PD_22_Peek_bottom	4
10	PROTON DETECTOR MODULE BASE	PD_22_base	4
11	PROTON DETECTOR MODULE A	PD_22_b	1
12	PROTON DETECTOR MODULE B	PD_22_a	1
13	McMaster-Carr PN#92290A118		8

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

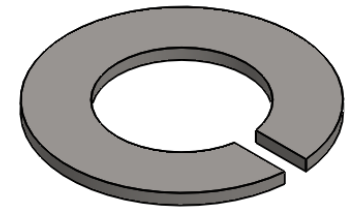
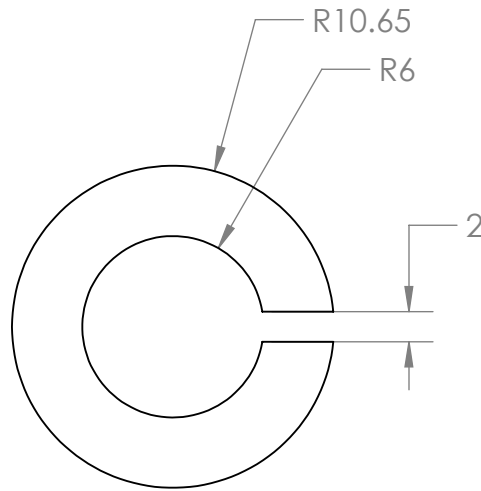
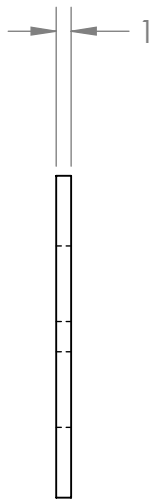
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MATERIAL		SS316, PEEK 1000
NAME		DATE
DRAWN	RAMONA V PEREZ	06/13/13
CHECKED	RAMONA V PEREZ	06/19/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE:
PROTON DETECTOR ASSEMBLED MODULE

SIZE	DWG. NO.	REV
B	PD_22_Module_assembled	



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

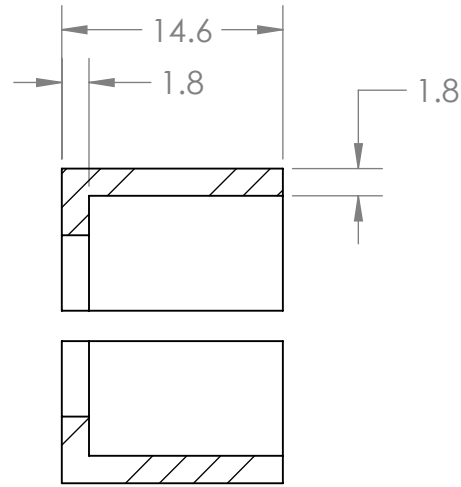
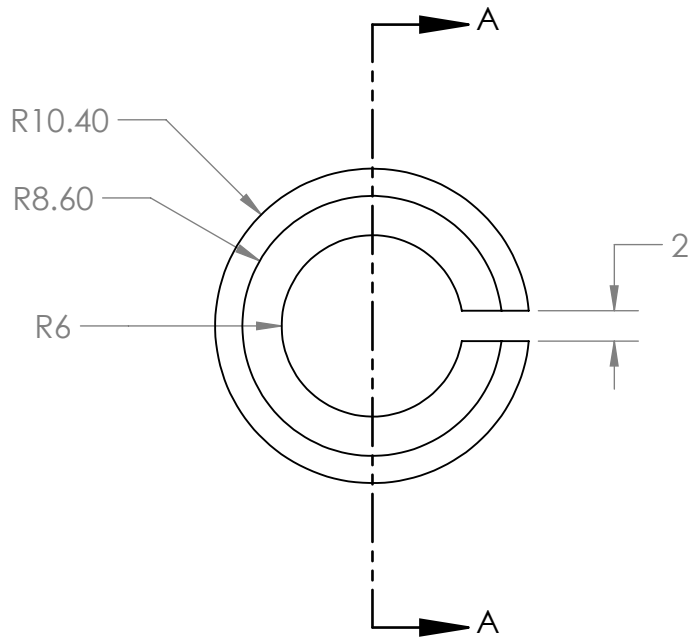
TOLERANCES ANGULAR DIMENSIONS				
LESS THAN 50	50 TO 120	120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

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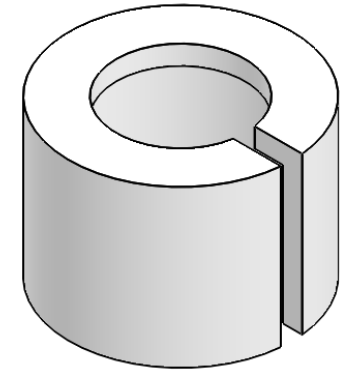
DO NOT SCALE DRAWING

FIU	FLORIDA INTERNATIONAL UNIVERSITY	
	MATERIAL SS316	
DRAWN	RAMONA V PEREZ	DATE 06/13/13
CHECKED	RAMONA V PEREZ	DATE 06/14/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR WASHER		
SIZE A	DWG. NO. PD_22_Washer	REV
SCALE: 2:1	WEIGHT:0.002kg	SHEET 1 OF 1



SECTION A-A



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.

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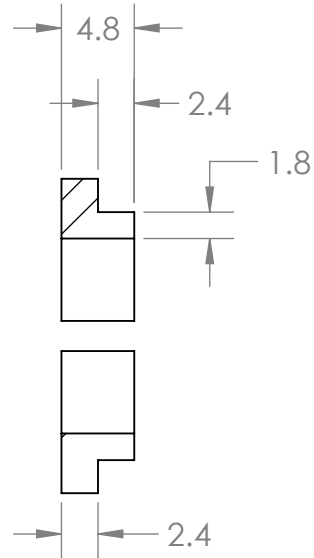
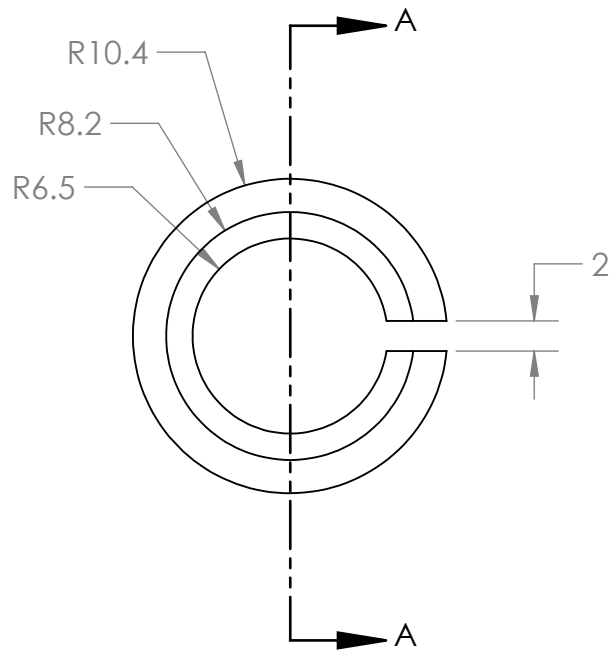
TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
LESS THAN 90°	90° TO 120°	120° TO 180°	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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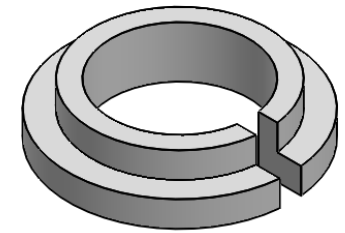


MATERIAL		PEEK 1000	
	NAME	DATE	
DRAWN	RAMONA V PEREZ	06/13/13	
CHECKED	RAMONA V PEREZ	06/14/13	
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES	

TITLE: PROTON DETECTOR PEEK SLEEVE		
SIZE A	DWG. NO. PD_22_Peek_sleeve	REV
SCALE: 2:1	WEIGHT: 0.002kg	SHEET 1 OF 1



SECTION A-A



NOTES:

- ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
OVER 120 TO 400	OVER 400 TO 1000	OVER 120 TO 400	OVER 400 TO 1000	OVER 120 TO 400	OVER 400 TO 1000
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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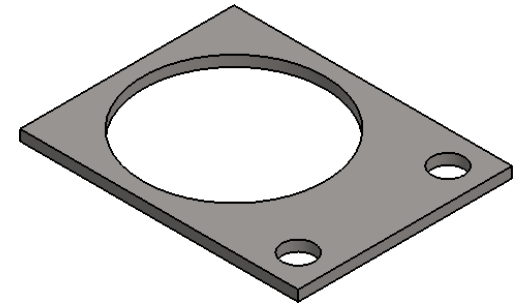
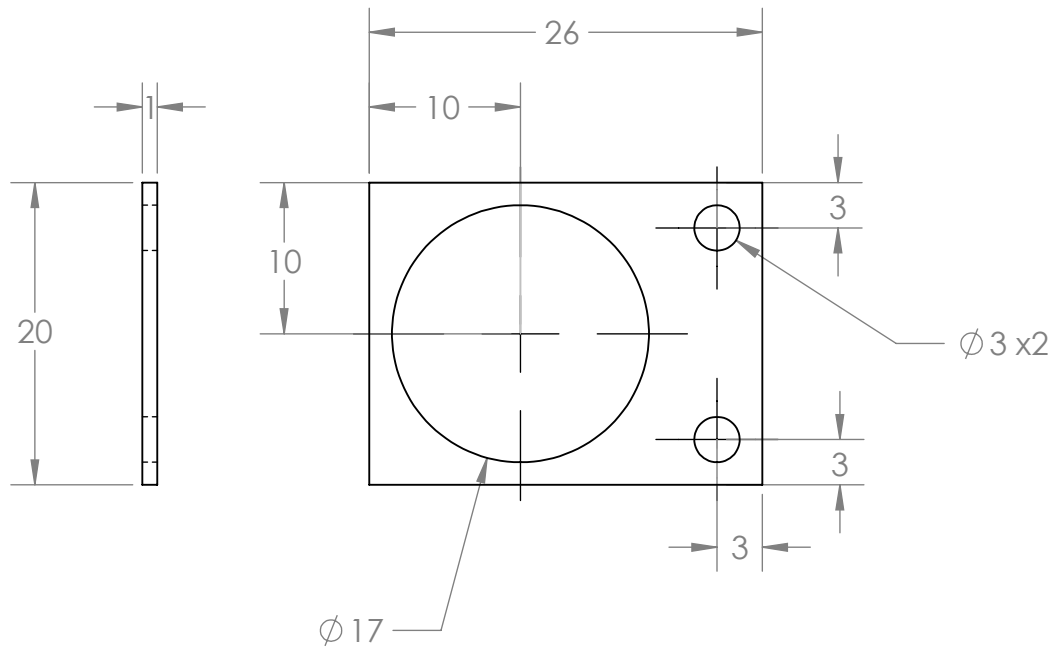


MATERIAL		PEEK 1000
NAME		DATE
DRAWN	RAMONA V PEREZ	06/13/13
CHECKED	RAMONA V PEREZ	06/14/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE:
**PROTON DETECTOR
PEEK BOTTOM**

SIZE **A** DWG. NO. PD_22_Peek_bottom REV

SCALE: 2:1 WEIGHT: 0.001kg SHEET 1 OF 1



NOTES:
 1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.15	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8

TOLERANCES ANGULAR DIMENSIONS				
LESS THAN 50	50 TO 120	120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'

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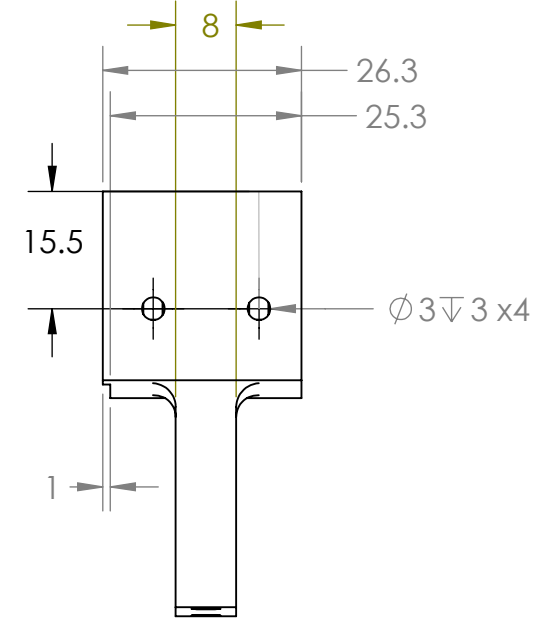
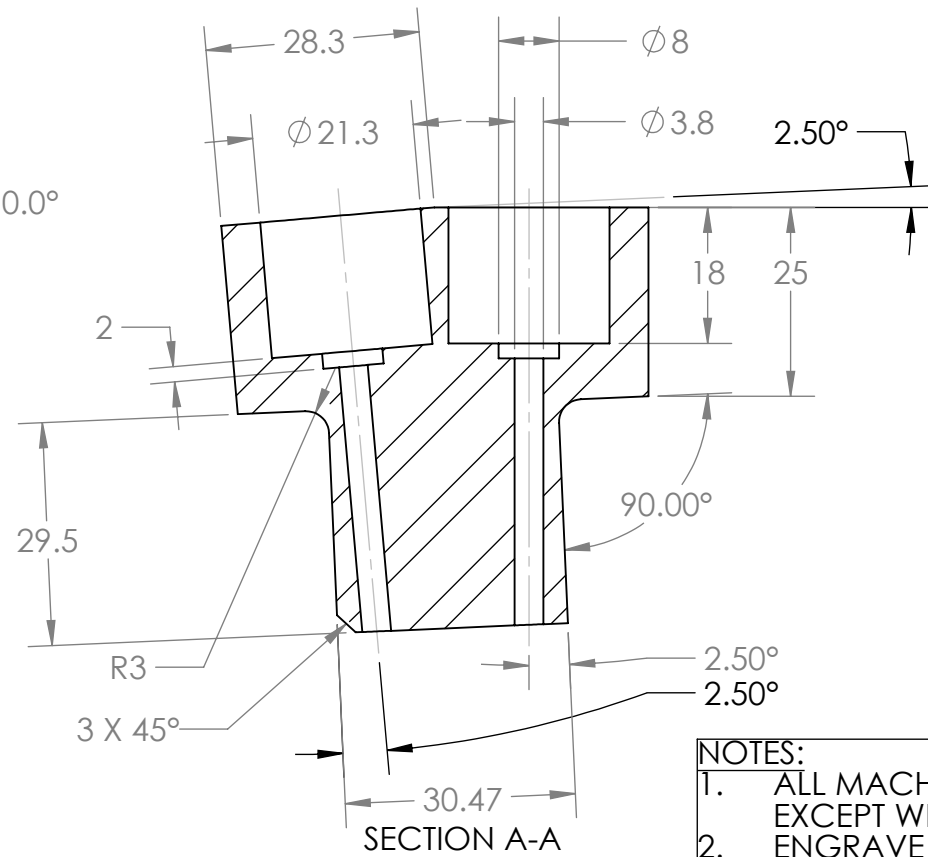
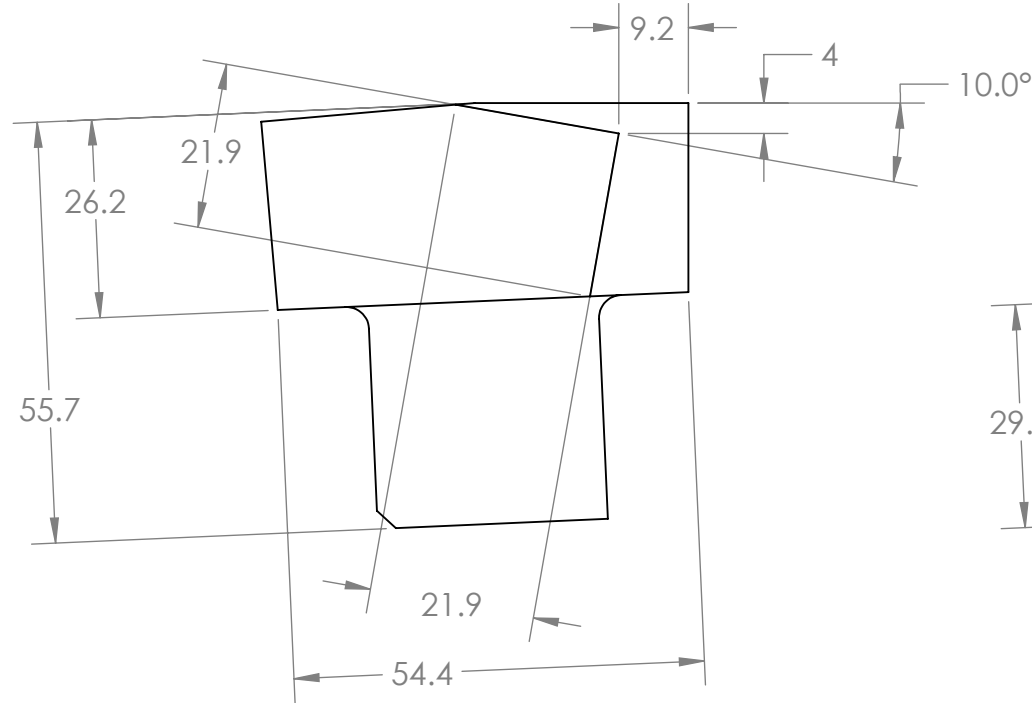
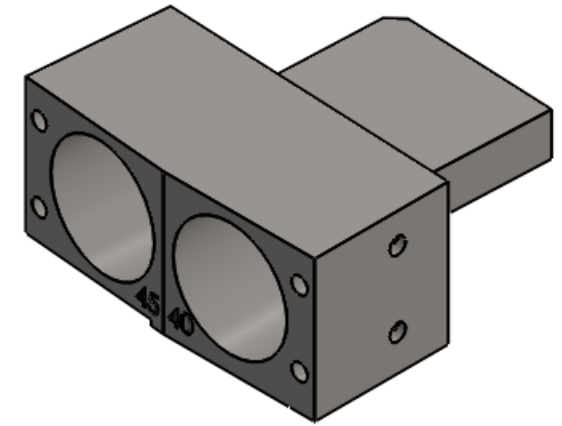
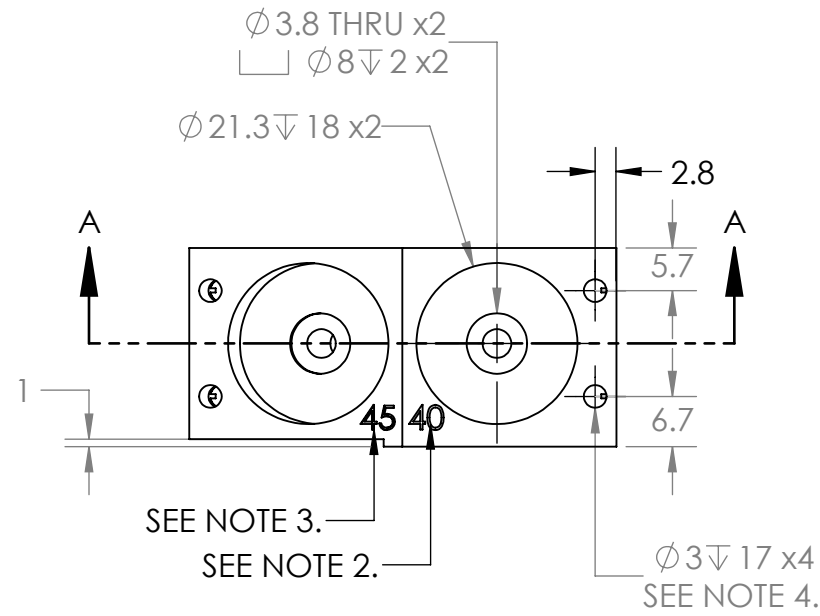
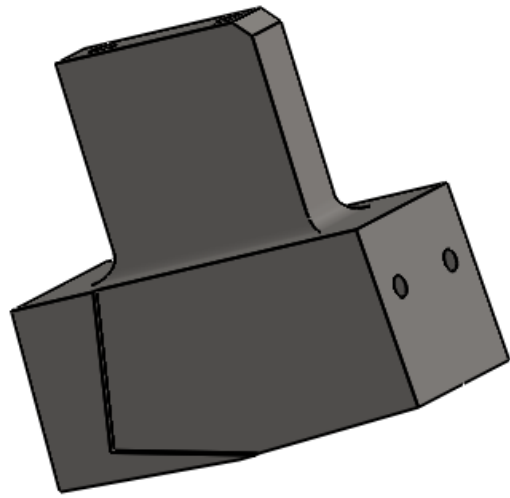
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MATERIAL		SS316
	NAME	DATE
DRAWN	RAMONA V PEREZ	06/13/13
CHECKED	RAMONA V PEREZ	06/14/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM		REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR MODULE BASE

SIZE	DWG. NO.	REV
A	PD_22_base	
SCALE: 2:1	WEIGHT: 0.002kg	SHEET 1 OF 1

8 7 6 5 4 3 2 1



- NOTES:**
1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.
 2. ENGRAVE "40."
 3. ENGRAVE "45."
 4. THREAD FOR M3X0.5 MACHINE SCREW.

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TOLERANCES LINEAR DIMENSIONS					
OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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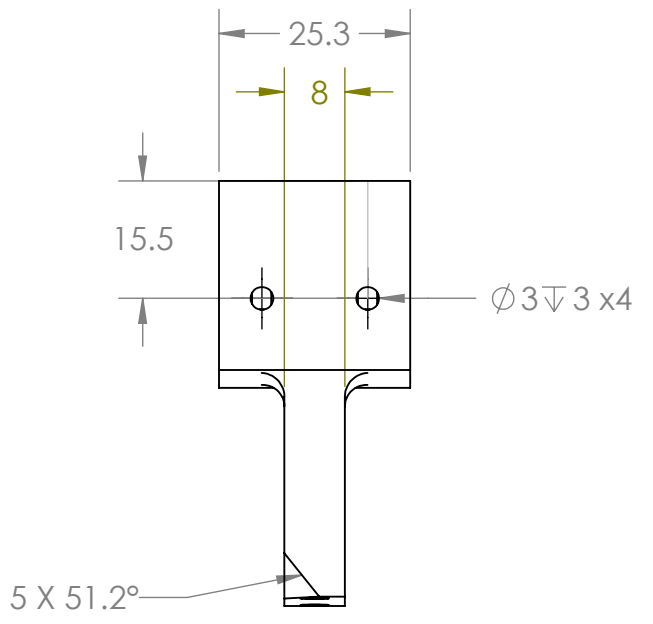
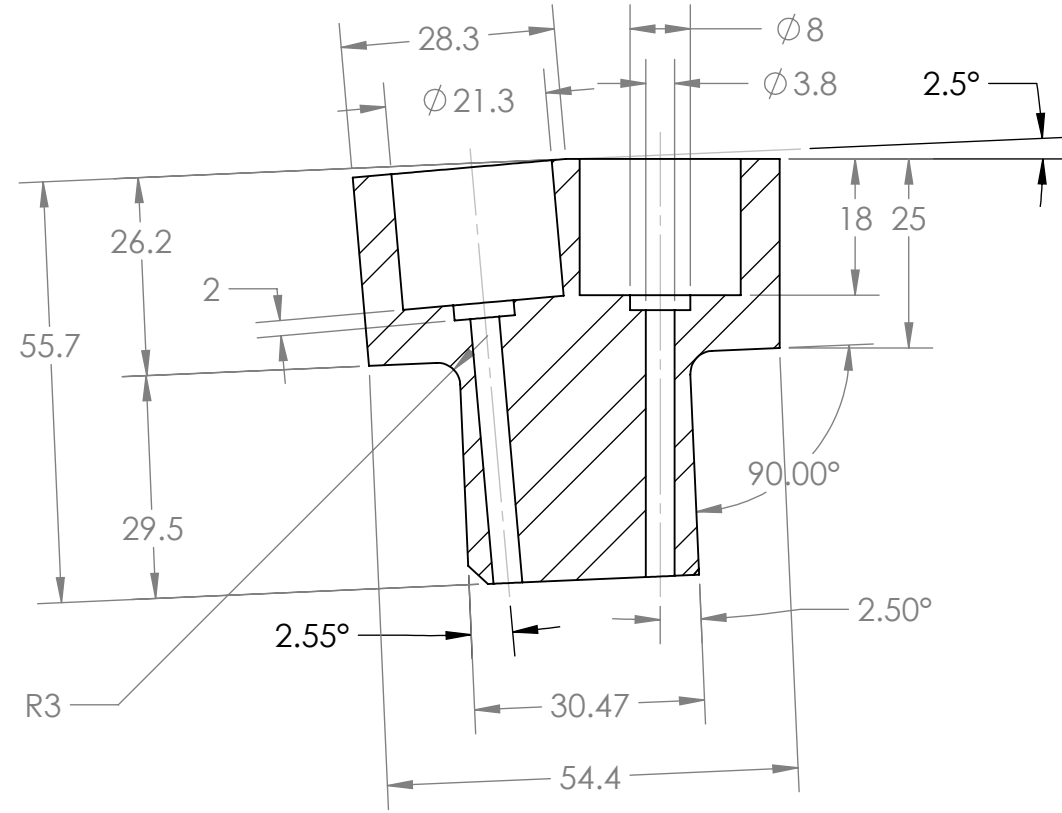
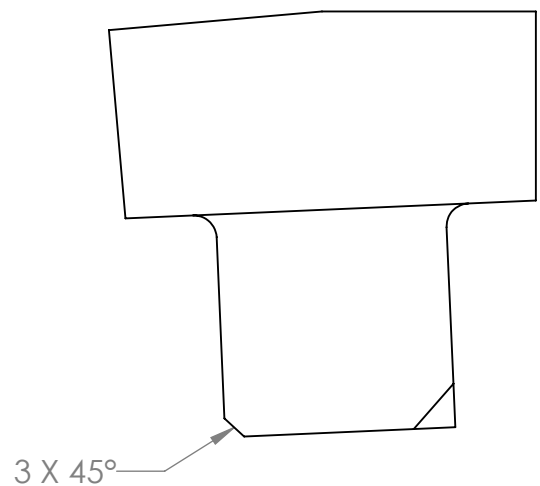
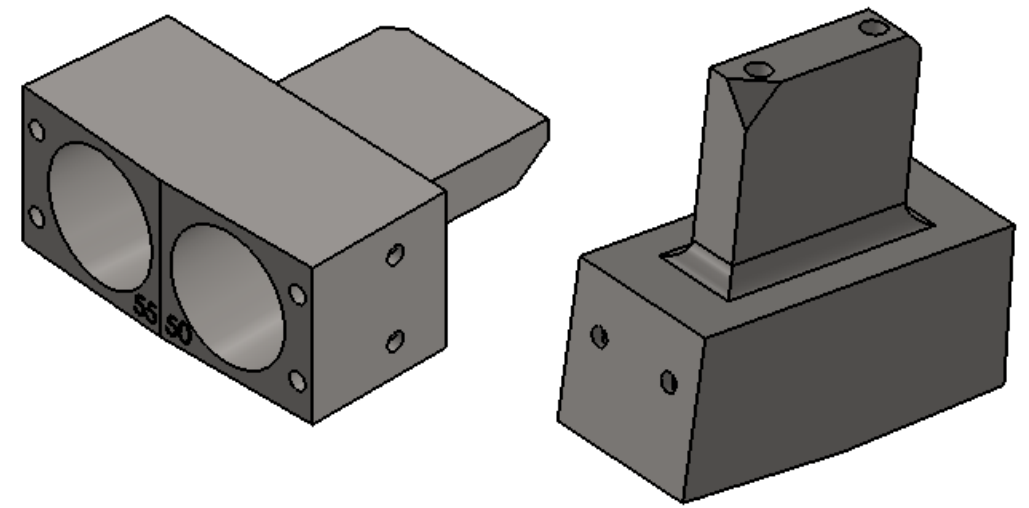
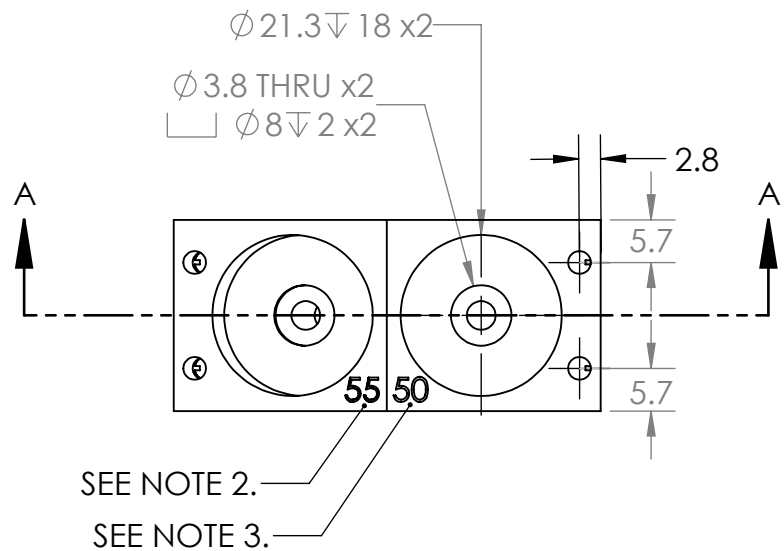
FIU FLORIDA INTERNATIONAL UNIVERSITY	
MATERIAL	SS316
NAME	DATE
DRAWN	RAMONA V PEREZ 06/13/13
CHECKED	RAMONA V PEREZ 06/28/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM	REMOVE ALL BURRS AND SHARP EDGES

TITLE:	PROTON DETECTOR MODULE A	
SIZE	DWG. NO.	REV
B	PD_22_a	
SCALE: 1:1	WEIGHT: .24kg	SHEET 1 OF 1

8 5 7 4 6 3 5 2 4 1 2 1

D
C
B
A

D
C
B
A



- NOTES:**
1. ALL MACHINING TOLERANCES TO +/-0.2mm EXCEPT WHERE SHOWN OTHERWISE.
 2. ENGRAVE "55."
 3. ENGRAVE "50."
 4. THREAD FOR M3X0.5 MACHINE SCREW.

SECTION A-A

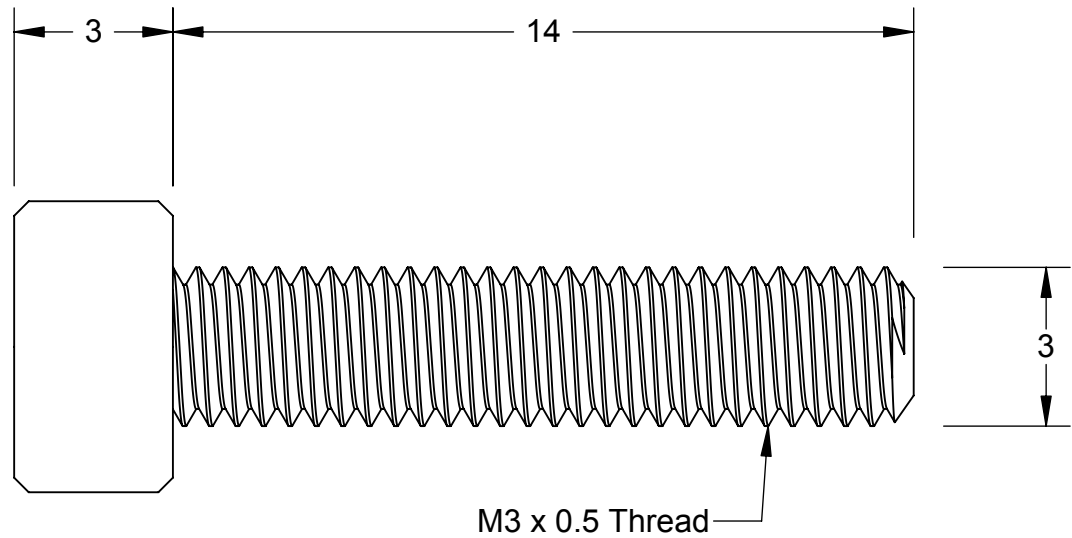
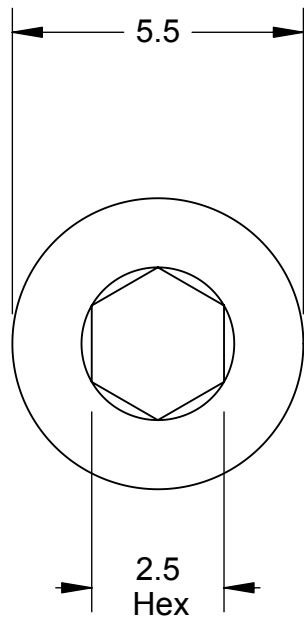
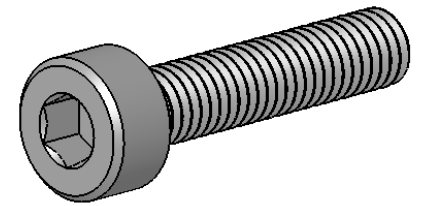
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OVER 0.5 TO 3	OVER 3 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
+/- 0.1	+/- 0.1	+/- 0.2	+/- 0.3	+/- 0.5	+/- 0.8
TOLERANCES ANGULAR DIMENSIONS					
10 OR LESS	OVER 10 TO 50	OVER 50 TO 120	OVER 120 TO 400	OVER 400	
+/- 1°	+/- 0°30'	+/- 0°20'	+/- 0°10'	+/- 0°5'	

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FIU FLORIDA INTERNATIONAL UNIVERSITY	
MATERIAL	SS316
NAME	DATE
DRAWN	RAMONA V PEREZ 06/13/13
CHECKED	RAMONA V PEREZ 06/19/13
UNLESS OTHERWISE STATED DIMENSIONS ARE IN MM	REMOVE ALL BURRS AND SHARP EDGES

TITLE: PROTON DETECTOR MODULE B		
SIZE	DWG. NO.	REV
B	PD_22_b	
SCALE: 1:1	WEIGHT: 0.23kg	SHEET 1 OF 1



McMASTER-CARR <small>CAD</small>	PART NUMBER	92290A118
http://www.mcmaster.com	Type 316 Stainless Steel Socket Head Cap Screw	
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