

**Beam direction - Z axis, Reaction plane - X axis, Vertical plane - Y axis**

Cartesian Coordinates			Spherical coordinates			Detector marking
X	Y	Z	r	$\theta$	$\Phi$	
<b>Ring 1</b>						
0	1750	0	1750	90	90	100
<b>Ring 2</b>						
135.82	1693.61	418		76.18	85.41	218
-355.57	1693.61	258.34		81.52	101.9	2306
-355.57	1693.61	-258.34		98.48	101.9	2234
135.82	1693.61	-418		103.8	85.41	2162
439.51	1693.61	0		90	75.45	290
<b>Ring 3</b>						
284.3	1488.64	875		60	79.19	318
-241.84	1565.25	744.32		64.83	98.78	342
-744.32	1488.64	540.78		72	116.6	3306
-782.62	1565.25	0		90	116.6	3270
-744.32	1488.64	-540.78		108	116.6	3234
-241.84	1565.25	-744.32		115.2	98.78	3198
284.3	1488.64	-875		120	79.19	3162
633.16	1565.25	-460.01		105.2	67.98	3126
920.03	1488.64	0		90	58.28	390
633.16	1565.25	460.01		74.76	67.98	354
<b>Ring 4</b>						
407.45	1150.65	1253.99		44.23	70.5	418
-92.38	1266.31	1204.33		46.51	94.17	4354
-633.16	1266.31	1028.62		54	116.6	4330
-1066.71	1150.65	775.01		63.71	132.8	4306
-1173.94	1266.31	284.3		80.65	132.8	4282

-1173.94	1266.31	-284.3		99.35	132.8	4258
-1066.71	1150.65	-775.01		116.3	132.8	4234
-633.16	1266.31	-1028.62		126	116.6	4210
-92.38	1266.31	-1204.33		133.5	94.17	4186
407.45	1150.65	-1253.99		135.8	70.5	4162
782.62	1266.31	-920.03		121.7	58.28	4138
1116.84	1266.31	-460.01		105.2	48.59	4114
1318.53	1150.65	0		90	41.11	490
782.62	1266.31	920.03		58.28	58.28	442
1116.84	1266.31	460.01		74.76	48.59	466
<b>Ring 5</b>						
483.69	782.62	1488.64		31.72	58.28	518
51.88	879.02	1512.33		30.21	86.62	5360
-460.01	920.03	1415.78		36	116.6	5342
-930.89	879.02	1193.01		47.02	136.6	5324
-1266.31	782.62	920.03		58.28	148.3	5306
-1422.28	879.02	516.67		72.83	148.3	5288
-1488.64	920.03	0		90	148.3	5270
-1422.28	879.02	-516.67		107.2	148.3	5252
-1266.31	782.62	-920.03		121.7	148.3	5234
-930.89	879.02	-1193.01		133	136.6	5216
-460.01	920.03	-1415.78		144	116.6	5198
51.88	879.02	-1512.33		149.8	86.62	5180
483.69	782.62	-1488.64		148.3	58.28	5162
846.96	879.02	-1253.99		135.8	46.06	5144
1204.33	920.03	-875		120	37.38	5126
1454.34	879.02	-418		103.8	31.15	5108
1565.25	782.62	0		90	26.56	590
1454.34	879.02	418		76.18	31.15	572

1204.33	920.03	875		60	37.38	554
846.96	879.02	1253.99		44.23	46.06	536
<b>Ring 6</b>						
271.63	439.5	1671.99		17.17	58.28	69
-241.84	483.69	1664.35		18	116.6	6351
-782.62	483.69	1488.64		31.72	148.3	6333
-1202.53	439.51	1193.01		47.02	159.9	6315
-1506.22	439.51	775.01		63.71	163.7	6297
-1657.62	483.69	284.3		80.65	163.7	6279
-1657.62	483.69	-284.3		99.35	163.7	6261
-1506.22	439.51	-775.01		116.3	163.7	6243
-1202.53	439.51	-1193.01		133	159.9	6225
-782.62	483.69	-1488.64		148.3	148.3	6207
-241.84	483.69	-1664.35		162	116.6	6189
271.63	439.5	-1671.99		162.8	58.28	6171
763.02	439.5	-1512.33		149.8	29.94	6153
1173.94	483.69	-1204.33		133.5	22.39	6135
1508.16	483.69	-744.32		115.2	17.78	6117
1674.1	439.51	-258.34		98.49	14.71	699
1674.1	439.51	258.34		81.51	14.71	681
1508.16	483.69	744.32		64.83	17.78	663
1173.94	483.69	1204.33		46.51	22.39	645
763.02	439.5	1512.33		30.21	29.94	627
<b>Ring 7</b>						
540.78	0	1664.35		18	0	718
0	0	1750		0	0	700
-540.78	0	1664.35		18	180	7342
-1028.62	0	1415.78		36	180	7324
-1415.78	0	1028.62		54	180	7306

-1664.35	0	540.78		72	180	7288
-1750	0	0		90	180	7270
-1664.35	0	-540.78		108	180	7252
-1415.78	0	-1028.62		126	180	7234
-1028.62	0	-1415.78		144	180	7216
-540.78	0	-1664.35		162	180	7198
0	0	-1750		180	0	7180
540.78	0	-1664.35		162	0	7162
1028.62	0	-1415.78		144	0	7144
1415.78	0	-1028.62		126	0	7126
1664.35	0	-540.78		108	0	7108
1750	0	0		90	0	790
1664.35	0	540.78		72	0	772
1415.78	0	1028.62		54	0	754
1028.62	0	1415.78		36	0	736
<b>Ring 8</b>						
782.62	-483.69	1488.64		31.72	-31.72	827
241.84	-483.69	1664.35		18	-63.44	89
-271.63	-439.5	1671.99		17.17	-121.7	8351
-763.02	-439.5	1512.33		30.21	-150.1	8333
-1173.94	-483.69	1204.33		46.51	-157.6	8315
-1508.16	-483.69	744.32		64.83	-162.2	8297
-1674.1	-439.51	258.34		81.51	-165.3	8279
-1674.1	-439.51	-258.34		98.49	-165.3	8261
-1508.16	-483.69	-744.32		115.2	-162.2	8243
-1173.94	-483.69	-1204.33		133.5	-157.6	8225
-763.02	-439.5	-1512.33		149.8	-150.1	8207
-271.63	-439.5	-1671.99		162.8	-121.7	8189
241.84	-483.69	-1664.35		162	-63.44	8171

782.62	-483.69	-1488.64		148.3	-31.72	8153
1202.53	-439.51	-1193.01		133	-20.08	8135
1506.22	-439.51	-775.01		116.3	-16.27	8117
1657.62	-483.69	-284.3		99.35	-16.27	899
1657.62	-483.69	284.3		80.65	-16.27	881
1506.22	-439.51	775.01		63.71	-16.27	863
1202.53	-439.51	1193.01		47.02	-20.08	845