

DCA $\Lambda(\bar{\Lambda})$			
Pair Type	Centrality	p-value	
		0.4 vs 0.5 mm	0.5 vs 0.6 mm
$\Lambda K_S^0$	0-10%	0.36	0.05
	10-30%	0.10	0.37
	30-50%	0.27	6.7e-8
$\bar{\Lambda} K_S^0$	0-10%	0.08	3.2e-4
	10-30%	0.15	0.31
	30-50%	3.7e-3	7.1e-3

**Table 1:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA  $\Lambda(\bar{\Lambda})$  caption

DCA $K_S^0$			
Pair Type	Centrality	p-value	
		0.2 vs 0.3 mm	0.3 vs 0.4 mm
$\Lambda K_S^0$	0-10%	0.32	0.76
	10-30%	2.1e-3	0.13
	30-50%	0.04	0.06
$\bar{\Lambda} K_S^0$	0-10%	2.8e-7	1.3e-4
	10-30%	0.22	0.62
	30-50%	0.76	0.02

**Table 2:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA  $K_S^0$  caption

DCA $\Lambda(\bar{\Lambda})$ Daughters			
Pair Type	Centrality	p-value	
		0.3 vs 0.4 mm	0.4 vs 0.5 mm
$\Lambda K_S^0$	0-10%	0.39	0.51
	10-30%	0.30	0.84
	30-50%	1.3e-38	8.7e-3
$\bar{\Lambda} K_S^0$	0-10%	0.35	0.07
	10-30%	0.07	0.13
	30-50%	0.44	0.01

**Table 3:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA  $\Lambda(\bar{\Lambda})$  Daughters

## 1 Systematic Errors

This study is currently ongoing. See Table 1.

### 1.1 Systematic Errors: $\Lambda K_S^0$

Talk about stuff

### 1.2 Systematic Errors: $\Lambda K^\pm$

Talk about stuff

DCA $K_S^0$ Daughters			
Pair Type	Centrality	p-value	
		0.2 vs 0.3 mm	0.3 vs 0.4 mm
$\Lambda K_S^0$	0-10%	0.08	0.29
	10-30%	0.01	0.47
	30-50%	6.6e-3	0.82
$\bar{\Lambda} K_S^0$	0-10%	0.38	0.44
	10-30%	0.13	0.25
	30-50%	0.06	0.53

**Table 4:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA  $K_S^0$  Daughters

$\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle			
Pair Type	Centrality	p-value	
		0.9992 vs 0.9993 mm	0.9993 vs 0.9994 mm
$\Lambda K_S^0$	0-10%	0.17	0.50
	10-30%	1.2e-3	0.10
	30-50%	5.4e-3	5.6e-9
$\bar{\Lambda} K_S^0$	0-10%	0.87	0.77
	10-30%	0.09	0.13
	30-50%	9.8e-9	0.09

**Table 5:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses:  $\Lambda(\bar{\Lambda})$  Cosine of Pointing Angle

$K_S^0$ Cosine of Pointing Angle			
Pair Type	Centrality	p-value	
		0.9992 vs 0.9993 mm	0.9993 vs 0.9994 mm
$\Lambda K_S^0$	0-10%	0.02	0.01
	10-30%	0.34	0.63
	30-50%	0.55	1.8e-7
$\bar{\Lambda} K_S^0$	0-10%	0.30	0.18
	10-30%	2.2e-4	0.32
	30-50%	0.41	0.11

**Table 6:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses:  $K_S^0$  Cosine of Pointing Angle

DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$			
Pair Type	Centrality	p-value	
		0.05 vs 0.1 mm	0.1 vs 0.2 mm
$\Lambda K_S^0$	0-10%	1	0.33
	10-30%	1	0.68
	30-50%	1	0.05
$\bar{\Lambda} K_S^0$	0-10%	1	0.34
	10-30%	1	0.09
	30-50%	1	0.32

**Table 7:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA to Primary Vertex of  $p^+(\bar{p}^-)$  Daughter of  $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of  $\pi^- (\pi^+)$  Daughter of  $\Lambda(\bar{\Lambda})$ 

Pair Type	Centrality	p-value	
		0.2 vs 0.3 mm	0.3 vs 0.4 mm
$\Lambda K_S^0$	0-10%	0.07	0.44
	10-30%	0.03	0.20
	30-50%	9.0e-6	0.10
$\bar{\Lambda} K_S^0$	0-10%	1.4e-3	0.88
	10-30%	0.05	3.3e-3
	30-50%	0.03	1.4e-5

**Table 8:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA to Primary Vertex of  $\pi^- (\pi^+)$  Daughter of  $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of  $\pi^+$  Daughter of  $K_S^0$ 

Pair Type	Centrality	p-value	
		0.2 vs 0.3 mm	0.3 vs 0.4 mm
$\Lambda K_S^0$	0-10%	0.14	9.6e-4
	10-30%	0.07	0.86
	30-50%	0.93	0.11
$\bar{\Lambda} K_S^0$	0-10%	0.06	0.17
	10-30%	0.11	0.69
	30-50%	2.0e-14	0.51

**Table 9:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA to Primary Vertex of  $\pi^+$  Daughter of  $K_S^0$ DCA to Primary Vertex of  $\pi^-$  Daughter of  $K_S^0$ 

Pair Type	Centrality	p-value	
		0.2 vs 0.3 mm	0.3 vs 0.4 mm
$\Lambda K_S^0$	0-10%	0.15	0.16
	10-30%	0.31	0.12
	30-50%	0.66	0.22
$\bar{\Lambda} K_S^0$	0-10%	1.1e-4	1.7e-14
	10-30%	0.01	0.82
	30-50%	0.44	0.05

**Table 10:**  $\Lambda(\bar{\Lambda})K_S^0$  Analyses: DCA to Primary Vertex of  $\pi^-$  Daughter of  $K_S^0$

DCA $\Lambda(\bar{\Lambda})$			
Pair Type	Centrality	p-value	
		0.4 vs 0.5 mm	0.5 vs 0.6 mm
$\Lambda K^+$	0-10%	0.01	3.2e-5
	10-30%	5.9e-3	0.22
	30-50%	0.85	0.84
$\bar{\Lambda} K^-$	0-10%	0.15	0.03
	10-30%	3.1e-4	0.42
	30-50%	7.2e-3	0.42
$\Lambda K^-$	0-10%	0.35	0.05
	10-30%	1.4e-5	5.6e-3
	30-50%	0.05	0.70
$\bar{\Lambda} K^+$	0-10%	0.84	0.16
	10-30%	0.16	3.3e-3
	30-50%	2.5e-4	0.20

**Table 11:**  $\Lambda(\bar{\Lambda})K^\pm$  Analyses: DCA  $\Lambda(\bar{\Lambda})$

DCA $\Lambda(\bar{\Lambda})$ Daughters			
Pair Type	Centrality	p-value	
		0.3 vs 0.4 mm	0.4 vs 0.5 mm
$\Lambda K^+$	0-10%	0.79	0.06
	10-30%	0.10	0.60
	30-50%	8.4e-3	0.25
$\bar{\Lambda} K^-$	0-10%	2.4e-4	0.63
	10-30%	0.06	3.3e-4
	30-50%	0.03	0.04
$\Lambda K^-$	0-10%	0.70	0.40
	10-30%	0.94	0.04
	30-50%	0.05	9.5e-5
$\bar{\Lambda} K^+$	0-10%	0.09	0.04
	10-30%	0.10	0.17
	30-50%	0.10	0.43

**Table 12:**  $\Lambda(\bar{\Lambda})K^\pm$  Analyses: DCA  $\Lambda(\bar{\Lambda})$  Daughters

$\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle			
Pair Type	Centrality	p-value	
		0.9992 vs 0.9993 mm	0.9993 vs 0.9994 mm
$\Lambda K^+$	0-10%	0.08	6.2e-3
	10-30%	8.7e-4	0.06
	30-50%	0.31	1.1e-3
$\bar{\Lambda} K^-$	0-10%	0.98	0.92
	10-30%	0.06	1.4e-16
	30-50%	0.47	0.40
$\Lambda K^-$	0-10%	1.0e-4	6.3e-3
	10-30%	5.7e-5	2.3e-3
	30-50%	1.9e-3	6.5e-3
$\bar{\Lambda} K^+$	0-10%	0.08	0.01
	10-30%	0.09	0.04
	30-50%	0.39	0.34

**Table 13:**  $\Lambda(\bar{\Lambda})K^\pm$  Analyses:  $\Lambda(\bar{\Lambda})$  Cosine of Pointing Angle

DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$			
$\Lambda K^+$	0-10%	1	5.5e-3
	10-30%	1	0.15
	30-50%	1	0.13
$\bar{\Lambda} K^-$	0-10%	1	0.16
	10-30%	1	0.55
	30-50%	1	0.03
$\Lambda K^-$	0-10%	1	0.30
	10-30%	1	0.70
	30-50%	1	0.44
$\bar{\Lambda} K^+$	0-10%	1	0.40
	10-30%	1	0.67
	30-50%	1	0.03

**Table 14:**  $\Lambda(\bar{\Lambda})K^\pm$  Analyses: DCA to Primary Vertex of  $p^+(\bar{p}^-)$  Daughter of  $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$			
$\Lambda K^+$	0-10%	0.01	0.15
	10-30%	0.28	0.08
	30-50%	1.9e-8	6.1e-4
$\bar{\Lambda} K^-$	0-10%	0.55	0.36
	10-30%	0.38	0.31
	30-50%	8.4e-4	0.03
$\Lambda K^-$	0-10%	7.7e-3	0.35
	10-30%	0.01	4.0e-3
	30-50%	0.02	0.06
$\bar{\Lambda} K^+$	0-10%	0.12	0.01
	10-30%	0.63	4.1e-3
	30-50%	6.2e-11	0.44

**Table 15:**  $\Lambda(\bar{\Lambda})K^\pm$  Analyses: DCA to Primary Vertex of  $\pi^-(\pi^+)$  Daughter of  $\Lambda(\bar{\Lambda})$