

DCA $\Lambda(\bar{\Lambda})$

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK_S^0 | 0-10% | 2.709e-04 | 1.940e-04 | No | -8.225e-03 | 5.836e-03 | Yes |
| | 10-30% | -6.759e-04 | 5.899e-04 | No | -4.508e-03 | 3.159e-02 | No |
| | 30-50% | -9.913e-02 | 4.282e-01 | No | -1.884e-01 | 7.004e-02 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 2.846e-04 | 4.418e-04 | Yes | 8.108e-05 | 1.071e-04 | No |
| | 10-30% | -3.324e-04 | 1.447e-03 | No | -1.329e-02 | 4.550e-02 | No |
| | 30-50% | -2.783e-03 | 2.179e-03 | Yes | -1.510e-02 | 3.137e-02 | No |

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

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK_S^0 | 0-10% | 2.744 e-04 | 2.494 e-04 | No | 9.579 e-05 | 4.939 e-05 | No |
| | 10-30% | 1.227 e-03 | 1.489 e-03 | No | 8.714 e-05 | 3.236 e-05 | Yes |
| | 30-50% | 1.269 e-03 | 1.740 e-03 | No | 1.878 e-01 | 0.699 e-01 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 7.551 e-05 | 5.648 e-05 | No | 6.570 e-05 | 1.593 e-05 | Yes |
| | 10-30% | 6.478 e-05 | 4.222 e-05 | No | 3.222 e-04 | 6.697 e-04 | No |
| | 30-50% | 2.055 e-02 | 2.563 e-02 | No | 3.299 e-03 | 2.714 e-03 | No |

Table 2: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA $\Lambda(\bar{\Lambda})$ captionDCA $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK_S^0 | 0-10% | 8.210e-04 | 4.776e-03 | No | -7.614e-03 | 5.701e-03 | No |
| | 10-30% | -8.845e-04 | 6.547e-04 | No | -4.438e-03 | 4.700e-03 | No |
| | 30-50% | -5.078e-02 | 3.550e-02 | No | -1.888e-01 | 7.061e-02 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 3.951e-04 | 3.069e-04 | No | -3.571e-02 | 2.149e-02 | No |
| | 10-30% | 3.360e-04 | 1.552e-03 | No | -3.442e-04 | 4.840e-04 | No |
| | 30-50% | -1.989e-02 | 2.590e-02 | No | -8.031e-03 | 8.382e-03 | No |

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

1 Systematic Errors

This study is currently ongoing. See Table 1.

1.1 Systematic Errors: ΛK_S^0

Talk about stuff

1.2 Systematic Errors: ΛK^\pm

DCA $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK_S^0 | 0-10% | 2.616e-04 | 2.840e-04 | No | -5.282e-03 | 4.887e-03 | No |
| | 10-30% | -1.236e-03 | 1.568e-03 | No | 6.110e-05 | 1.457e-04 | No |
| | 30-50% | -4.664e-02 | 3.295e-02 | No | -1.877e-01 | 7.037e-02 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | -6.093e-05 | 3.827e-05 | No | -9.599e-02 | 1.133e-01 | No |
| | 10-30% | -3.478e-05 | 1.983e-04 | No | -2.846e-04 | 6.743e-04 | No |
| | 30-50% | -2.054e-02 | 2.609e-02 | No | -3.701e-03 | 3.136e-03 | No |

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

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -5.098e-04 | 7.595e-03 | No | 1.734e-04 | 2.179e-04 | No |
| | 10-30% | -4.222e-03 | 5.512e-04 | Yes | -2.562e-03 | 2.121e-03 | Yes |
| | 30-50% | -8.888e-03 | 4.572e-03 | No | -1.701e-02 | 6.118e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | -6.442e-04 | 1.336e-04 | Yes | -5.795e-03 | 2.421e-02 | No |
| | 10-30% | -6.376e-04 | 2.764e-04 | Yes | -2.128e-03 | 4.345e-04 | Yes |
| | 30-50% | -2.418e-03 | 9.059e-04 | Yes | -1.175e-01 | 5.116e-01 | No |

Table 5: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 captionDCA K_S^0 SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 2.285 e-04 | 1.917 e-04 | No | 1.566 e-04 | 3.170 e-04 | No |
| | 10-30% | 3.336 e-04 | 0.407 e-04 | Yes | 6.280 e-05 | 3.057 e-05 | Yes |
| | 30-50% | 7.842 e-03 | 4.208 e-03 | No | 1.721 e-02 | 0.623 e-02 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 2.195 e-04 | 0.209 e-04 | Yes | 1.195 e-04 | 0.156 e-04 | Yes |
| | 10-30% | 6.398 e-04 | 2.905 e-04 | Yes | 5.440 e-04 | 3.639 e-04 | No |
| | 30-50% | 2.474 e-03 | 1.368 e-03 | No | 2.661 e-04 | 2.694 e-04 | No |

Table 6: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 captionDCA K_S^0 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -1.033e-04 | 5.689e-04 | No | 4.601e-02 | 1.295e-01 | No |
| | 10-30% | -3.256e-02 | 4.003e-01 | No | -2.569e-03 | 2.134e-03 | No |
| | 30-50% | -9.087e-03 | 4.729e-03 | No | -1.725e-02 | 6.276e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | -5.587e-02 | 2.478e-01 | No | -3.939e-04 | 8.073e-04 | No |
| | 10-30% | -4.325e-04 | 7.423e-04 | No | -2.972e-02 | 1.304e-01 | No |
| | 30-50% | -3.118e-01 | 9.701e-01 | No | -4.751e-04 | 1.773e-03 | No |

Table 7: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 caption

DCA K_S^0 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -1.149e-04 | 1.616e-04 | No | 1.495e-04 | 3.020e-04 | No |
| | 10-30% | 2.336e-04 | 7.234e-05 | Yes | -2.560e-03 | 2.270e-03 | No |
| | 30-50% | -7.966e-03 | 4.151e-03 | No | -1.721e-02 | 6.245e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 6.657e-05 | 5.808e-04 | No | 7.037e-05 | 2.753e-05 | Yes |
| | 10-30% | -4.373e-04 | 3.529e-04 | No | -4.653e-04 | 3.627e-04 | No |
| | 30-50% | -2.048e-03 | 1.296e-03 | No | -2.871e-04 | 8.150e-04 | No |

Table 8: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 captionDCA $\Lambda(\bar{\Lambda})$ Daughters

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK_S^0 | 0-10% | -2.521e-04 | 2.924e-04 | No | 1.855e-04 | 2.245e-04 | No |
| | 10-30% | -2.065e-02 | 2.251e-01 | No | -2.885e-04 | 2.460e-04 | No |
| | 30-50% | -9.063e-02 | 8.577e-02 | Yes | 8.807e-02 | 2.246e-01 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 1.291e-04 | 3.440e-04 | No | 1.180e-05 | 1.241e-04 | No |
| | 10-30% | -9.701e-03 | 9.174e-03 | Yes | -4.654e-02 | 3.200e-01 | No |
| | 30-50% | -1.187e-02 | 1.435e-02 | No | -1.513e-01 | 1.729e-01 | Yes |

Table 9: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DaughtersDCA $\Lambda(\bar{\Lambda})$ Daughters SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK_S^0 | 0-10% | 5.045 e-05 | 2.044 e-05 | Yes | 1.857 e-04 | 2.696 e-04 | No |
| | 10-30% | 1.623 e-04 | 0.417 e-04 | Yes | 4.511 e-05 | 3.336 e-05 | No |
| | 30-50% | 8.649 e-02 | 8.209 e-02 | No | 2.261 e-04 | 0.773 e-04 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 3.701 e-05 | 5.523 e-05 | No | 4.478 e-05 | 5.365 e-05 | No |
| | 10-30% | 1.721 e-04 | 0.430 e-04 | Yes | 3.055 e-04 | 1.227 e-04 | Yes |
| | 30-50% | 8.004 e-05 | 9.944 e-05 | No | 3.030 e-04 | 2.329 e-04 | No |

Table 10: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DaughtersDCA $\Lambda(\bar{\Lambda})$ Daughters 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK_S^0 | 0-10% | -2.026e-04 | 6.614e-04 | No | 2.292e-02 | 8.029e-02 | No |
| | 10-30% | 5.864e-05 | 7.232e-04 | No | 1.148e-03 | 1.704e-03 | No |
| | 30-50% | -8.853e-02 | 9.281e-02 | No | -4.432e-02 | 3.643e-02 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 6.097e-05 | 2.955e-04 | No | -1.036e-02 | 1.335e-02 | No |
| | 10-30% | -9.871e-03 | 9.501e-03 | No | -1.316e-03 | 2.197e-03 | Yes |
| | 30-50% | -2.936e-04 | 1.749e-03 | No | -1.496e-01 | 1.755e-01 | No |

Table 11: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA $\Lambda(\bar{\Lambda})$ Daughters

DCA $\Lambda(\bar{\Lambda})$ Daughters 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK_S^0 | 0-10% | 1.743e-05 | 3.776e-05 | No | 1.972e-04 | 2.813e-04 | No |
| | 10-30% | 1.293e-04 | 7.761e-05 | No | -8.925e-05 | 6.165e-05 | No |
| | 30-50% | -8.647e-02 | 9.120e-02 | No | -5.097e-02 | 5.611e-02 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -8.539e-06 | 3.914e-05 | No | 5.936e-05 | 3.128e-05 | No |
| | 10-30% | 1.001e-04 | 7.999e-05 | No | -2.452e-04 | 2.952e-04 | No |
| | 30-50% | 4.672e-05 | 1.859e-04 | No | -1.423e-01 | 1.753e-01 | No |

Table 12: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DaughtersDCA K_S^0 Daughters

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -1.776e-03 | 1.570e-03 | No | -2.483e-03 | 2.563e-03 | No |
| | 10-30% | -1.195e-01 | 6.027e-02 | Yes | -1.214e-03 | 1.265e-03 | No |
| | 30-50% | -1.394e-01 | 5.485e-02 | Yes | -1.196e-03 | 1.962e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -2.234e-03 | 1.729e-03 | Yes | -2.695e-03 | 5.304e+02 | No |
| | 10-30% | -5.343e-04 | 5.054e-04 | Yes | -1.431e-02 | 1.046e-01 | No |
| | 30-50% | -2.720e-02 | 1.860e-02 | No | -3.800e-03 | 2.364e-03 | Yes |

Table 13: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 DaughtersDCA K_S^0 Daughters SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 1.261 e-03 | 1.161 e-03 | No | 2.395 e-03 | 2.508 e-03 | No |
| | 10-30% | 1.361 e-04 | 0.461 e-04 | Yes | 1.640 e-03 | 1.581 e-03 | No |
| | 30-50% | 1.397 e-01 | 0.549 e-01 | Yes | 1.168 e+01 | 5.857 e+01 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 3.649 e-03 | 2.544 e-03 | No | 6.439 e-05 | 1.849 e-05 | Yes |
| | 10-30% | 2.648 e-04 | 0.475 e-04 | Yes | 5.477 e-04 | 8.515 e-04 | No |
| | 30-50% | 2.814 e-02 | 1.870 e-02 | No | 3.439 e-04 | 0.839 e-04 | Yes |

Table 14: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 DaughtersDCA K_S^0 Daughters 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -2.224e-03 | 1.964e-03 | No | -2.608e-03 | 2.700e-03 | No |
| | 10-30% | -1.196e-01 | 6.076e-02 | No | -1.712e-03 | 1.802e-03 | No |
| | 30-50% | -1.399e-01 | 5.516e-02 | Yes | -2.294e-03 | 3.122e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -3.090e-03 | 2.209e-03 | No | -5.637e-04 | 1.041e-03 | No |
| | 10-30% | -1.205e-01 | 1.280e+00 | No | -1.011e-03 | 3.690e-03 | No |
| | 30-50% | -2.501e-02 | 1.913e-02 | No | -1.227e-02 | 9.527e-03 | No |

Table 15: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 Daughters

DCA K_S^0 Daughters 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -1.383e-03 | 1.201e-03 | No | -2.394e-03 | 2.528e-03 | No |
| | 10-30% | -1.199e-01 | 6.112e-02 | No | -1.673e-03 | 1.620e-03 | No |
| | 30-50% | -1.397e-01 | 5.508e-02 | Yes | -2.249e-03 | 3.303e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -3.646e-03 | 2.561e-03 | No | -4.246e-04 | 5.171e-04 | No |
| | 10-30% | 1.800e-04 | 8.734e-05 | Yes | -7.128e-04 | 9.398e-04 | No |
| | 30-50% | -2.813e-02 | 1.883e-02 | No | -1.285e-02 | 9.463e-03 | No |

Table 16: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA K_S^0 Daughters $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | 4.736e-03 | 2.311e-03 | Yes | 1.700e-02 | 7.601e-02 | No |
| | 10-30% | 5.172e-03 | 2.253e-03 | Yes | 1.154e-04 | 1.586e+02 | No |
| | 30-50% | 3.862e-03 | 1.806e-03 | Yes | 5.883e-03 | 1.638e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 1.141e-03 | 1.203e-03 | Yes | -3.554e-03 | 1.875e-02 | No |
| | 10-30% | 3.518e-04 | 3.120e-04 | No | -9.358e-03 | 6.628e-02 | No |
| | 30-50% | 2.669e-03 | 1.312e-03 | Yes | -4.334e-04 | 9.528e-03 | No |

Table 17: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|------------|-----|------------------|--------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | 4.733 e-03 | 2.309 e-03 | Yes | 2.720 e-03 | 524.319 e-03 | No |
| | 10-30% | 5.201 e-03 | 2.269 e-03 | Yes | 6.453 e-05 | 5.364 e-05 | No |
| | 30-50% | 1.248 e-04 | 0.343 e-04 | Yes | 5.450 e-03 | 1.503 e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 2.318 e-05 | 0.778 e-05 | Yes | 6.065 e-05 | 6.332 e-05 | No |
| | 10-30% | 3.206 e-04 | 2.932 e-04 | No | 4.932 e-05 | 1.728 e-05 | Yes |
| | 30-50% | 4.297 e-04 | 1.609 e-04 | Yes | 1.165 e-04 | 0.402 e-04 | Yes |

Table 18: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | 4.739e-03 | 2.319e-03 | Yes | -1.139e-02 | 4.924e-02 | No |
| | 10-30% | 5.190e-03 | 2.265e-03 | Yes | 1.970e-02 | 1.534e-02 | No |
| | 30-50% | 3.717e-03 | 1.848e-03 | Yes | 5.557e-03 | 1.618e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 1.146e-03 | 1.219e-03 | No | -1.535e-02 | 9.010e-02 | No |
| | 10-30% | 3.266e-02 | 1.168e-01 | No | 1.117e-02 | 6.354e-02 | No |
| | 30-50% | 2.072e-03 | 1.019e-03 | Yes | -9.320e-02 | 5.512e-01 | No |

Table 19: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle

$\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | 4.733e-03 | 2.311e-03 | Yes | -7.459e-05 | 1.768e-04 | No |
| | 10-30% | 5.201e-03 | 2.270e-03 | Yes | -2.253e-05 | 7.593e-05 | No |
| | 30-50% | -6.078e-05 | 6.309e-05 | No | 5.494e-03 | 1.496e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | -2.031e-05 | 8.438e-07 | Yes | -4.978e-05 | 6.433e-05 | No |
| | 10-30% | 3.929e-04 | 2.778e-04 | No | 1.333e-04 | 2.362e-04 | No |
| | 30-50% | 1.770e-03 | 6.120e-04 | Yes | 1.169e-04 | 7.436e-05 | No |

Table 20: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle K_S^0 Cosine of Pointing Angle

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | -3.192e-04 | 4.037e-04 | No | 7.957e-04 | 5.050e-04 | Yes |
| | 10-30% | -2.184e-02 | 1.354e-01 | No | -5.937e-03 | 4.484e-02 | No |
| | 30-50% | -3.489e-04 | 3.645e-04 | No | -1.182e-01 | 2.429e-01 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 5.974e-04 | 4.142e-04 | No | 6.145e-04 | 4.107e-04 | Yes |
| | 10-30% | 4.988e-03 | 2.080e-03 | Yes | 1.610e-03 | 1.412e-03 | Yes |
| | 30-50% | -5.806e-02 | 1.270e-01 | No | -9.421e-04 | 4.946e-04 | No |

Table 21: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: K_S^0 Cosine of Pointing Angle K_S^0 Cosine of Pointing Angle SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|------------|-----|------------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | 3.209 e-04 | 4.053 e-04 | No | 2.184 e-04 | 2.188 e-04 | No |
| | 10-30% | 1.491 e-03 | 2.069 e-03 | No | 5.593 e-05 | 2.241 e-05 | Yes |
| | 30-50% | 3.328 e-04 | 6.564 e-04 | No | 3.971 e-04 | 0.502 e-04 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 6.409 e-04 | 4.583 e-04 | No | 2.956 e-05 | 1.153 e-05 | Yes |
| | 10-30% | 1.662 e-04 | 0.201 e-04 | Yes | 6.241 e-05 | 2.570 e-05 | Yes |
| | 30-50% | 1.302 e-04 | 3.166 e-04 | No | 2.182 e-04 | 0.515 e-04 | Yes |

Table 22: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: K_S^0 Cosine of Pointing Angle K_S^0 Cosine of Pointing Angle 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | -2.748e-04 | 2.327e-04 | No | 5.633e-04 | 1.743e-04 | Yes |
| | 10-30% | 1.283e-03 | 1.818e-03 | No | 8.058e-03 | 3.959e-03 | Yes |
| | 30-50% | 1.622e-04 | 1.393e-03 | No | 5.106e-03 | 2.875e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 4.427e-04 | 3.762e-04 | No | 6.478e-04 | 6.512e-04 | No |
| | 10-30% | 4.230e-03 | 1.702e-03 | Yes | 1.217e-03 | 1.138e-03 | No |
| | 30-50% | 7.326e-03 | 4.745e-03 | Yes | 5.373e-04 | 1.605e-03 | No |

Table 23: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: K_S^0 Cosine of Pointing Angle

K_S^0 Cosine of Pointing Angle 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK_S^0 | 0-10% | -3.282e-04 | 4.102e-04 | No | 7.088e-04 | 3.667e-04 | No |
| | 10-30% | 1.476e-03 | 2.082e-03 | No | 8.069e-03 | 3.961e-03 | Yes |
| | 30-50% | -3.150e-04 | 6.895e-04 | No | 5.057e-03 | 2.639e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 5.986e-04 | 4.487e-04 | No | 7.197e-04 | 7.865e-04 | No |
| | 10-30% | 3.562e-03 | 1.378e-03 | Yes | 1.303e-03 | 1.067e-03 | No |
| | 30-50% | 5.878e-02 | 8.703e-02 | No | 1.493e-04 | 1.017e-04 | No |

Table 24: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: K_S^0 Cosine of Pointing AngleDCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK_S^0 | 0-10% | 0.000e+00 | 0.000e+00 | No | -1.197e-03 | 9.873e-04 | Yes |
| | 10-30% | 1.567e-07 | 1.894e-06 | No | -8.125e-04 | 1.282e-03 | Yes |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 5.361e-03 | 6.412e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.369e-04 | 4.189e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | 6.808e-02 | 5.327e-01 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -5.296e-03 | 2.603e-03 | Yes |

Table 25: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|-------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK_S^0 | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 2.627 e-03 | 2.488 e-03 | No |
| | 10-30% | 1.542 e-07 | 3.999 e-07 | No | 1.947 e-04 | 0.737 e-04 | Yes |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 5.955 e-03 | 7.515 e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 2.431 e-04 | 4.365 e-04 | No |
| | 10-30% | 0.000 e-00 | 0.000 e-00 | No | 3.454 e-04 | 0.750 e-04 | Yes |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 8.376 e-04 | 17.096 e-04 | No |

Table 26: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK_S^0 | 0-10% | 0.000e+00 | 0.000e+00 | No | -1.795e-03 | 1.945e-03 | No |
| | 10-30% | 3.865e-06 | 2.831e-06 | No | -6.617e-02 | 3.318e-01 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 5.453e-03 | 6.819e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -8.382e-02 | 3.424e-01 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | 7.522e-02 | 4.435e-01 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 9.370e-02 | 8.096e-02 | No |

Table 27: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK_S^0 | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.602e-03 | 2.525e-03 | No |
| | 10-30% | 2.964e-07 | 1.165e-06 | No | 1.702e-04 | 9.110e-05 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 5.775e-03 | 7.524e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.584e-04 | 4.464e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | -3.469e-04 | 1.403e-04 | Yes |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -6.689e-04 | 1.232e-03 | No |

Table 28: $\Lambda(\bar{\Lambda})K_S^0$ 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 | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -8.432e-04 | 9.717e-04 | Yes | -7.591e-05 | 1.155e-04 | No |
| | 10-30% | -1.287e-04 | 1.797e-04 | No | -3.352e-04 | 3.326e-04 | No |
| | 30-50% | 1.345e-02 | 9.502e-03 | Yes | 6.001e-03 | 4.808e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -1.051e-04 | 9.449e-05 | Yes | -7.565e-05 | 9.354e-05 | No |
| | 10-30% | 2.201e-02 | 1.242e-02 | Yes | -2.012e-04 | 1.922e-03 | No |
| | 30-50% | -1.652e-02 | 2.324e-01 | No | -1.348e-01 | 8.053e-01 | No |

Table 29: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 4.071 e-05 | 1.292 e-05 | Yes | 7.267 e-05 | 9.759 e-05 | No |
| | 10-30% | 3.802 e-05 | 1.986 e-05 | No | 7.270 e-05 | 2.580 e-05 | Yes |
| | 30-50% | 7.601 e-04 | 4.585 e-04 | No | 6.004 e-03 | 4.800 e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 7.057 e-05 | 0.993 e-05 | Yes | 6.916 e-05 | 8.861 e-05 | No |
| | 10-30% | 7.893 e-05 | 2.044 e-05 | Yes | 1.626 e-04 | 1.068 e-04 | No |
| | 30-50% | 2.229 e-04 | 0.489 e-04 | Yes | 2.199 e-04 | 2.354 e-04 | No |

Table 30: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -6.500e-03 | 9.251e-02 | No | -8.742e-04 | 2.949e-04 | Yes |
| | 10-30% | -3.754e-05 | 6.477e-04 | No | 1.724e-02 | 1.047e-01 | No |
| | 30-50% | 1.467e-02 | 1.035e-02 | Yes | 5.984e-03 | 4.845e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -2.913e-02 | 1.043e-01 | No | 9.866e-04 | 3.005e-04 | Yes |
| | 10-30% | 2.197e-02 | 1.242e-02 | No | 3.265e-02 | 1.604e-01 | No |
| | 30-50% | 1.840e-03 | 2.010e-03 | No | 4.275e-02 | 1.307e-02 | Yes |

Table 31: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 3.829e-05 | 1.846e-05 | Yes | -4.781e-05 | 8.826e-05 | No |
| | 10-30% | 1.498e-03 | 2.398e-03 | No | 4.245e+00 | 4.457e+01 | No |
| | 30-50% | 3.751e-03 | 2.567e-03 | No | 6.001e-03 | 4.805e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 5.680e-05 | 1.816e-05 | Yes | -3.516e-05 | 2.272e-05 | No |
| | 10-30% | 1.539e-04 | 2.857e-04 | No | -1.311e-04 | 4.871e-05 | Yes |
| | 30-50% | 1.410e-03 | 1.734e-03 | No | 4.401e-02 | 1.349e-02 | Yes |

Table 32: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of π^+ Daughter of K_S^0

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 6.388e-03 | 2.637e-02 | No | 4.199e-02 | 6.327e-02 | No |
| | 10-30% | 4.661e-02 | 2.184e-01 | No | 2.701e-02 | 9.611e-02 | No |
| | 30-50% | 1.780e-03 | 2.167e-03 | No | 9.225e-02 | 5.533e-02 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 4.010e-04 | 4.972e-04 | No | 1.898e-02 | 8.318e-02 | No |
| | 10-30% | 2.010e-04 | 2.337e-04 | Yes | 2.234e-02 | 1.094e-01 | No |
| | 30-50% | 5.327e-02 | 1.493e-01 | No | -3.745e-04 | 1.374e-03 | No |

Table 33: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^+ Daughter of K_S^0 DCA to Primary Vertex of π^+ Daughter of K_S^0 SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 9.442 e-05 | 1.482 e-05 | Yes | 1.579 e-04 | 0.168 e-04 | Yes |
| | 10-30% | 1.162 e-04 | 0.312 e-04 | Yes | 8.443 e-05 | 3.562 e-05 | Yes |
| | 30-50% | 1.475 e-03 | 1.223 e-03 | No | 3.713 e-04 | 3.997 e-04 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 8.044 e-04 | 12.068 e-04 | No | 2.189 e-04 | 1.488 e-04 | No |
| | 10-30% | 1.292 e-04 | 0.317 e-04 | Yes | 8.393 e-05 | 3.616 e-05 | Yes |
| | 30-50% | 9.851 e-04 | 0.776 e-04 | Yes | 2.054 e-04 | 0.875 e-04 | Yes |

Table 34: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^+ Daughter of K_S^0 DCA to Primary Vertex of π^+ Daughter of K_S^0 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -2.608e-02 | 4.971e-02 | No | -7.864e-03 | 7.668e-03 | Yes |
| | 10-30% | -8.553e-03 | 7.190e-03 | No | -5.121e-04 | 6.840e-04 | No |
| | 30-50% | 2.406e-03 | 2.064e-03 | No | 6.805e-03 | 2.133e-03 | Yes |
| $\bar{\Lambda} K_S^0$ | 0-10% | 5.941e-04 | 1.172e-03 | No | 4.175e-04 | 4.092e-04 | No |
| | 10-30% | 4.652e-02 | 3.458e-01 | No | -7.284e-03 | 1.660e-02 | No |
| | 30-50% | 2.016e-01 | 3.865e+00 | No | -5.308e-05 | 2.336e-03 | No |

Table 35: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^+ Daughter of K_S^0

DCA to Primary Vertex of π^+ Daughter of K_S^0 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -4.519e-05 | 2.636e-05 | No | -8.563e-05 | 3.040e-05 | Yes |
| | 10-30% | -8.408e-03 | 7.107e-03 | No | -4.274e-04 | 9.735e-04 | No |
| | 30-50% | 2.064e-03 | 1.619e-03 | No | 1.274e-03 | 1.270e-03 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 8.474e-04 | 1.271e-03 | No | 3.787e-04 | 3.383e-04 | No |
| | 10-30% | -7.583e-05 | 5.660e-05 | No | -7.112e-03 | 1.605e-02 | No |
| | 30-50% | -6.532e-04 | 1.388e-04 | Yes | 3.770e-02 | 1.629e-02 | Yes |

Table 36: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^+ Daughter of K_S^0 DCA to Primary Vertex of π^- Daughter of K_S^0

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|-----------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 2.544e-02 | 1.012e-01 | No | 3.537e-04 | 3.539e-04 | Yes |
| | 10-30% | 3.565e-04 | 1.986e-04 | No | 1.305e-03 | 2.713e-03 | No |
| | 30-50% | 4.448e-02 | 2.572e-02 | No | 1.089e-01 | 3.232e-01 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -7.581e-04 | 4.856e-04 | Yes | 9.319e-02 | 2.536e-01 | No |
| | 10-30% | 2.354e-02 | 9.667e-02 | No | 6.463e-04 | 2.477e-04 | Yes |
| | 30-50% | 1.611e-01 | 5.981e-01 | No | 6.695e-02 | 2.650e-01 | No |

Table 37: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^- Daughter of K_S^0 DCA to Primary Vertex of π^- Daughter of K_S^0 SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|------------|-----|------------|-------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | 3.295 e-04 | 4.180 e-04 | No | 1.465 e-04 | 0.810 e-04 | No |
| | 10-30% | 1.043 e-04 | 0.317 e-04 | Yes | 1.487 e-04 | 0.361 e-04 | Yes |
| | 30-50% | 4.433 e-02 | 2.571 e-02 | No | 7.637 e-04 | 8.309 e-04 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 1.107 e-04 | 0.423 e-04 | Yes | 9.278 e-02 | 10.901 e-02 | No |
| | 10-30% | 3.453 e-04 | 2.179 e-04 | No | 1.411 e-03 | 1.914 e-03 | No |
| | 30-50% | 3.505 e-04 | 3.077 e-04 | No | 3.244 e-04 | 0.886 e-04 | Yes |

Table 38: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^- Daughter of K_S^0 DCA to Primary Vertex of π^- Daughter of K_S^0 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -3.737e-04 | 2.921e-04 | No | 3.329e-04 | 3.135e-04 | No |
| | 10-30% | 4.062e-04 | 7.856e-04 | No | 5.080e-02 | 3.015e-01 | No |
| | 30-50% | 4.471e-02 | 2.576e-02 | No | -1.367e-01 | 1.684e+00 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | -6.888e-04 | 4.034e-04 | Yes | 9.217e-02 | 1.088e-01 | No |
| | 10-30% | -6.684e-02 | 6.573e-01 | No | 1.507e-03 | 2.286e-03 | No |
| | 30-50% | -5.625e-03 | 7.924e-02 | No | 2.084e-05 | 1.285e-03 | No |

Table 39: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^- Daughter of K_S^0

DCA to Primary Vertex of π^- Daughter of K_S^0 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|-----------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK_S^0 | 0-10% | -3.283e-04 | 4.184e-04 | No | 3.117e-04 | 2.151e-04 | No |
| | 10-30% | -7.208e-07 | 3.153e-04 | No | 2.858e-04 | 6.697e-04 | No |
| | 30-50% | 4.434e-02 | 2.574e-02 | No | 2.761e-04 | 1.565e-04 | No |
| $\bar{\Lambda} K_S^0$ | 0-10% | 8.823e-05 | 2.701e-05 | Yes | 9.286e-02 | 1.113e-01 | No |
| | 10-30% | 1.778e-04 | 5.686e-05 | Yes | 1.343e-03 | 1.986e-03 | No |
| | 30-50% | 1.449e-04 | 1.368e-04 | No | -1.887e-04 | 1.605e-04 | No |

Table 40: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: DCA to Primary Vertex of π^- Daughter of K_S^0

Avgerage Separation of Like-Charge Daughters

| Pair Type | Daughters | | Centrality | Fit Amplitude | | | | | |
|-----------------------|----------------------------|----------------|------------|---------------|-----------|-----|---------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 5.0 vs 6.0 cm | | | 6.0 vs 7.0 cm | | |
| ΛK_S^0 | $p(\Lambda)$ | $\pi^+(K_S^0)$ | 0-10% | 1.411e-05 | 4.698e-07 | Yes | 2.585e-06 | 8.713e-06 | Yes |
| | | | 10-30% | 7.573e-04 | 1.805e-04 | Yes | -1.845e-05 | 1.834e-05 | No |
| | | | 30-50% | 4.158e-04 | 5.709e-05 | Yes | 7.731e-04 | 1.416e-04 | Yes |
| ΛK_S^0 | $\pi^-(\Lambda)$ | $\pi^-(K_S^0)$ | 0-10% | 1.353e-05 | 6.116e-06 | Yes | -5.059e-06 | 1.011e-06 | Yes |
| | | | 10-30% | -2.665e-06 | 8.444e-06 | No | -1.157e-05 | 1.549e-05 | No |
| | | | 30-50% | 4.096e-04 | 7.522e-05 | Yes | 9.083e-04 | 4.578e-05 | Yes |
| $\bar{\Lambda} K_S^0$ | $\pi^+(\bar{\Lambda})$ | $\pi^+(K_S^0)$ | 0-10% | 2.020e-05 | 5.991e-06 | Yes | -1.200e-06 | 3.157e-06 | No |
| | | | 10-30% | 7.702e-04 | 7.002e-04 | No | 2.173e-04 | 1.205e-04 | Yes |
| | | | 30-50% | -9.212e-07 | 4.247e-05 | No | 6.443e-04 | 8.313e-05 | Yes |
| $\bar{\Lambda} K_S^0$ | $\bar{p}^-(\bar{\Lambda})$ | $\pi^-(K_S^0)$ | 0-10% | 7.047e-05 | 6.696e-06 | Yes | 1.671e-05 | 4.885e-06 | Yes |
| | | | 10-30% | 2.769e-05 | 5.334e-07 | Yes | 1.010e-03 | 3.667e-04 | Yes |
| | | | 30-50% | 1.414e-03 | 1.135e-04 | Yes | -2.984e-05 | 5.983e-05 | No |

Table 41: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Avgerage Separation of Positive Daughters

Avgerage Separation of Like-Charge Daughters SimpleExp

| Pair Type | Daughters | | Centrality | Fit Amplitude | | | | | |
|-----------------------|----------------------------|----------------|------------|---------------|------------|-----|---------------|------------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 5.0 vs 6.0 cm | | | 6.0 vs 7.0 cm | | |
| ΛK_S^0 | $p(\Lambda)$ | $\pi^+(K_S^0)$ | 0-10% | 1.470 e-05 | 0.077 e-05 | Yes | 1.106 e-05 | 0.028 e-05 | Yes |
| | | | 10-30% | 3.301 e-05 | 1.005 e-05 | Yes | 1.738 e-05 | 0.121 e-05 | Yes |
| | | | 30-50% | 5.385 e-04 | 0.839 e-04 | Yes | 3.867 e-04 | 0.997 e-04 | Yes |
| ΛK_S^0 | $\pi^-(\Lambda)$ | $\pi^-(K_S^0)$ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| | | | 10-30% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| | | | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| $\bar{\Lambda} K_S^0$ | $\pi^+(\bar{\Lambda})$ | $\pi^+(K_S^0)$ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| | | | 10-30% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| | | | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 0.000 e-00 | 0.000 e-00 | No |
| $\bar{\Lambda} K_S^0$ | $\bar{p}^-(\bar{\Lambda})$ | $\pi^-(K_S^0)$ | 0-10% | 2.079 e-04 | 0.163 e-04 | Yes | 1.040 e-05 | 0.638 e-05 | No |
| | | | 10-30% | 4.176 e-05 | 0.070 e-05 | Yes | 7.918 e-05 | 2.449 e-05 | Yes |
| | | | 30-50% | 1.225 e-03 | 0.092 e-03 | Yes | 2.495 e-05 | 0.380 e-05 | Yes |

Table 42: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Avgerage Separation of Positive Daughters

Avgerage Separation of Like-Charge Daughters 500MeVMaxFit

| Pair Type | Daughters | | Centrality | Fit Amplitude | | | | | |
|-----------------------|----------------------------|----------------|------------|---------------|-----------|-----|---------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 5.0 vs 6.0 cm | | | 6.0 vs 7.0 cm | | |
| ΛK_S^0 | $p(\Lambda)$ | $\pi^+(K_S^0)$ | 0-10% | 1.509e-05 | 3.300e-05 | No | 5.692e-04 | 3.758e-04 | No |
| | | | 10-30% | 1.981e-05 | 2.897e-05 | No | 5.948e-02 | 7.965e-05 | Yes |
| | | | 30-50% | 6.630e-04 | 6.601e-04 | No | 7.122e-04 | 1.322e-04 | Yes |
| ΛK_S^0 | $\pi^-(\Lambda)$ | $\pi^-(K_S^0)$ | 0-10% | 5.113e-04 | 2.177e-04 | Yes | -5.775e-05 | 3.737e-05 | No |
| | | | 10-30% | 5.405e-03 | 1.317e-02 | No | 7.111e-04 | 1.293e-04 | Yes |
| | | | 30-50% | 4.522e-05 | 4.113e-05 | No | 7.746e-05 | 6.301e-06 | Yes |
| $\bar{\Lambda} K_S^0$ | $\pi^+(\bar{\Lambda})$ | $\pi^+(K_S^0)$ | 0-10% | 8.959e-04 | 2.124e-04 | Yes | -3.231e-06 | 3.802e-05 | No |
| | | | 10-30% | 8.833e-04 | 2.599e-04 | Yes | 1.588e-05 | 4.047e-05 | No |
| | | | 30-50% | 2.309e-02 | 3.156e-02 | No | 6.364e-05 | 5.192e-05 | No |
| $\bar{\Lambda} K_S^0$ | $\bar{p}^-(\bar{\Lambda})$ | $\pi^-(K_S^0)$ | 0-10% | 1.677e-04 | 1.092e-04 | No | -3.992e-05 | 3.184e-05 | No |
| | | | 10-30% | 1.470e-05 | 3.656e-05 | No | -2.323e-06 | 9.305e-05 | No |
| | | | 30-50% | 7.334e-05 | 2.896e-05 | Yes | 5.538e-04 | 3.085e-04 | No |

Table 43: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Avgerage Separation of Positive Daughters

Avgerage Separation of Like-Charge Daughters 500MeVMaxFit SimpleExp

| Pair Type | Daughters | | Centrality | Fit Amplitude | | | | | |
|-----------------------|----------------------------|----------------|------------|---------------|-----------|-----|---------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 5.0 vs 6.0 cm | | | 6.0 vs 7.0 cm | | |
| ΛK_S^0 | $p(\Lambda)$ | $\pi^+(K_S^0)$ | 0-10% | 1.665e-05 | 2.087e-06 | Yes | 2.653e-04 | 1.739e-04 | No |
| | | | 10-30% | 2.331e-05 | 4.563e-05 | No | -1.713e-05 | 6.046e-06 | Yes |
| | | | 30-50% | 4.333e-04 | 1.155e-04 | Yes | 7.198e-04 | 1.244e-04 | Yes |
| ΛK_S^0 | $\pi^-(\Lambda)$ | $\pi^-(K_S^0)$ | 0-10% | 7.361e-06 | 2.047e-06 | Yes | -2.548e-05 | 2.467e-05 | No |
| | | | 10-30% | 4.421e-05 | 3.105e-05 | No | 7.315e-04 | 1.322e-04 | Yes |
| | | | 30-50% | 6.366e-05 | 5.813e-05 | No | 1.154e-04 | 8.695e-06 | Yes |
| $\bar{\Lambda} K_S^0$ | $\pi^+(\bar{\Lambda})$ | $\pi^+(K_S^0)$ | 0-10% | 8.888e-04 | 2.082e-04 | Yes | -5.316e-06 | 3.826e-05 | No |
| | | | 10-30% | 9.162e-04 | 2.614e-04 | Yes | 1.925e-05 | 6.041e-05 | No |
| | | | 30-50% | 1.478e-04 | 4.676e-05 | Yes | 9.973e-05 | 6.549e-05 | No |
| $\bar{\Lambda} K_S^0$ | $\bar{p}^-(\bar{\Lambda})$ | $\pi^-(K_S^0)$ | 0-10% | 1.730e-04 | 1.161e-04 | No | -2.798e-05 | 4.725e-05 | No |
| | | | 10-30% | 1.579e-05 | 5.734e-05 | No | -3.884e-07 | 6.028e-06 | No |
| | | | 30-50% | 1.074e-04 | 3.781e-05 | Yes | 4.932e-04 | 2.440e-04 | Yes |

Table 44: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Avgerage Separation of Positive Daughters

| DCA $\Lambda(\bar{\Lambda})$ | | | | | | | |
|------------------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| Pair Type | Centrality | Fit Amplitudes | | | | | |
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK^+ | 0-10% | -6.666e-03 | 2.086e-02 | No | -1.019e-02 | 6.227e-02 | No |
| | 10-30% | -6.310e-03 | 2.986e-02 | No | -2.460e-02 | 4.712e-02 | No |
| | 30-50% | -5.296e-02 | 6.016e-02 | No | -7.354e-04 | 4.393e-04 | No |
| $\bar{\Lambda} K^-$ | 0-10% | -1.678e-04 | 8.219e-05 | Yes | -2.776e-04 | 1.373e-04 | Yes |
| | 10-30% | -7.670e-04 | 2.620e-04 | Yes | -4.637e-03 | 3.803e-02 | No |
| | 30-50% | -2.464e-02 | 1.694e-01 | No | -5.859e-04 | 5.850e-03 | No |
| ΛK^- | 0-10% | -3.957e-04 | 9.414e-04 | No | -1.755e-04 | 1.311e-04 | No |
| | 10-30% | -8.918e-04 | 4.324e-04 | Yes | -3.992e-04 | 2.014e-04 | No |
| | 30-50% | -1.631e-03 | 1.318e-03 | Yes | -8.526e-04 | 7.790e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -1.581e-04 | 2.243e-04 | No | -1.169e-02 | 1.167e-01 | No |
| | 10-30% | -5.592e-04 | 2.294e-04 | Yes | -1.115e-03 | 1.203e-03 | No |
| | 30-50% | -3.128e-03 | 2.911e-03 | Yes | -5.595e-05 | 8.072e-04 | Yes |

Table 45: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$

| DCA $\Lambda(\bar{\Lambda})$ SimpleExp | | | | | | | |
|--|------------|----------------|------------|-----|------------|-------------|-----|
| Pair Type | Centrality | Fit Amplitudes | | | | | |
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK^+ | 0-10% | 1.859 e-04 | 1.047 e-04 | No | 7.312 e-05 | 0.911 e-05 | Yes |
| | 10-30% | 8.104 e-05 | 2.477 e-05 | Yes | 8.514 e-05 | 1.935 e-05 | Yes |
| | 30-50% | 5.386 e-02 | 6.149 e-02 | No | 6.569 e-04 | 6.850 e-04 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 1.679 e-04 | 0.978 e-04 | No | 7.168 e-05 | 0.964 e-05 | Yes |
| | 10-30% | 9.280 e-04 | 4.156 e-04 | Yes | 2.773 e-05 | 2.045 e-05 | No |
| | 30-50% | 2.969 e-04 | 0.615 e-04 | Yes | 7.119 e-05 | 4.811 e-05 | No |
| ΛK^- | 0-10% | 4.973 e-05 | 1.210 e-05 | Yes | 3.881 e-05 | 0.941 e-05 | Yes |
| | 10-30% | 1.648 e-04 | 0.256 e-04 | Yes | 4.941 e-40 | 2.904 e-04 | No |
| | 30-50% | 5.229 e-04 | 3.738 e-04 | No | 8.450 e-04 | 11.134 e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 1.792 e-04 | 2.976 e-04 | No | 3.290 e-05 | 3.245 e-05 | No |
| | 10-30% | 4.729 e-04 | 4.270 e-04 | No | 7.453 e-04 | 7.346 e-04 | No |
| | 30-50% | 8.736 e-04 | 4.348 e-04 | Yes | 2.936 e-04 | 0.474 e-04 | Yes |

Table 46: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$

Talk about stuff

DCA $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK^+ | 0-10% | -2.986e-02 | 1.645e-01 | No | 2.006e-03 | 2.090e-03 | Yes |
| | 10-30% | -8.643e-03 | 1.603e-01 | No | 7.363e-04 | 1.788e-03 | No |
| | 30-50% | -5.216e-02 | 5.994e-02 | No | -3.451e-02 | 2.743e-01 | No |
| $\bar{\Lambda} K^-$ | 0-10% | -3.432e-03 | 2.215e-02 | No | -3.703e-02 | 2.614e-01 | No |
| | 10-30% | -9.909e-04 | 1.418e-03 | No | -3.485e-02 | 1.963e-01 | No |
| | 30-50% | 1.579e-03 | 1.199e-03 | No | 3.059e-04 | 1.149e-03 | No |
| ΛK^- | 0-10% | -1.968e-02 | 1.487e-01 | No | 2.004e-03 | 1.465e-03 | No |
| | 10-30% | -1.394e-03 | 1.794e-03 | No | -4.588e-04 | 3.685e-04 | No |
| | 30-50% | -1.516e-03 | 1.011e-03 | No | -8.272e-04 | 7.739e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -1.016e-02 | 5.231e-02 | No | 8.251e-04 | 1.290e-03 | No |
| | 10-30% | -1.407e-02 | 5.320e-02 | No | -7.610e-04 | 6.160e-04 | No |
| | 30-50% | -4.230e-03 | 4.236e-03 | Yes | -2.218e-04 | 5.994e-04 | No |

Table 47: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DCA $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 4 vs 5 mm | | | 5 vs 6 mm | | |
| ΛK^+ | 0-10% | -1.200e-04 | 8.688e-05 | No | 2.534e-04 | 1.983e-04 | No |
| | 10-30% | -3.714e-05 | 1.986e-04 | No | 6.806e-02 | 7.932e-02 | No |
| | 30-50% | -5.383e-02 | 6.237e-02 | No | -3.545e-04 | 4.265e-04 | No |
| $\bar{\Lambda} K^-$ | 0-10% | -1.388e-04 | 1.057e-04 | No | 4.615e-05 | 1.693e-05 | Yes |
| | 10-30% | -7.745e-04 | 4.039e-04 | No | -3.957e-05 | 5.462e-04 | No |
| | 30-50% | 1.601e-03 | 1.398e-03 | No | 2.435e-04 | 1.118e-03 | No |
| ΛK^- | 0-10% | -6.034e-05 | 1.158e-04 | No | 1.924e-03 | 1.398e-03 | No |
| | 10-30% | 4.468e-05 | 4.450e-05 | No | -4.520e-04 | 3.092e-04 | No |
| | 30-50% | -1.496e-03 | 9.168e-04 | No | -7.476e-04 | 1.012e-03 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -1.777e-04 | 2.999e-04 | No | -2.152e-05 | 1.639e-05 | No |
| | 10-30% | -3.655e-04 | 3.734e-04 | No | -8.857e-04 | 7.247e-04 | No |
| | 30-50% | -1.650e-03 | 1.124e-03 | No | -3.706e-04 | 3.366e-04 | No |

Table 48: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$

DCA $\Lambda(\bar{\Lambda})$ Daughters

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK^+ | 0-10% | -1.077e-02 | 9.329e-03 | Yes | -2.477e-03 | 1.215e-03 | Yes |
| | 10-30% | 4.819e-02 | 3.967e-01 | No | -3.668e-04 | 2.075e-03 | No |
| | 30-50% | 1.002e-03 | 1.848e-03 | Yes | 2.652e-02 | 2.201e-01 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 3.447e-05 | 1.124e-04 | No | -3.323e-03 | 1.714e-02 | No |
| | 10-30% | 3.139e-02 | 1.527e-01 | No | 1.054e-03 | 1.199e-03 | Yes |
| | 30-50% | -8.406e-04 | 1.337e-03 | No | 2.359e-03 | 2.918e-03 | Yes |
| ΛK^- | 0-10% | -2.908e-03 | 1.380e-02 | No | -5.250e-04 | 6.241e-04 | No |
| | 10-30% | -2.643e-04 | 2.386e-04 | No | -4.442e-04 | 2.721e-04 | No |
| | 30-50% | -1.134e-02 | 7.345e-03 | Yes | 4.163e-02 | 1.631e-01 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -5.184e-05 | 1.830e-04 | No | 4.305e-05 | 8.483e-05 | No |
| | 10-30% | 6.008e-02 | 2.167e-01 | No | -3.188e-02 | 2.276e-02 | No |
| | 30-50% | 4.338e-04 | 6.151e-04 | No | 1.003e-02 | 1.077e-01 | No |

Table 49: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DaughtersDCA $\Lambda(\bar{\Lambda})$ Daughters SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK^+ | 0-10% | 2.617 e-05 | 1.188 e-05 | Yes | 2.349 e-03 | 1.137 e-03 | Yes |
| | 10-30% | 5.998 e-05 | 2.475 e-05 | Yes | 1.743 e-05 | 5.739 e-05 | No |
| | 30-50% | 1.434 e-04 | 0.586 e-04 | Yes | 7.623 e-02 | 3.691 e-01 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | 7.637 e-05 | 1.267 e-05 | Yes | 4.164 e-04 | 5.566 e-04 | No |
| | 10-30% | 6.623 e-04 | 9.620 e-04 | No | 8.930 e-05 | 6.244 e-05 | No |
| | 30-50% | 8.433 e-04 | 12.475 e-04 | No | 2.463 e-04 | 1.298 e-04 | No |
| ΛK^- | 0-10% | 1.475 e-04 | 1.052 e-04 | No | 5.810 e-04 | 6.690 e-04 | No |
| | 10-30% | 7.090 e-05 | 2.563 e-05 | Yes | 6.331 e-05 | 6.231 e-05 | No |
| | 30-50% | 3.588 e-04 | 2.293 e-04 | No | 1.727 e-04 | 0.480 e-04 | Yes |
| $\bar{\Lambda} K^+$ | 0-10% | 3.829 e-05 | 1.228 e-05 | Yes | 4.312 e-05 | 4.801 e-05 | No |
| | 10-30% | 2.107 e-04 | 1.323 e-04 | No | 4.100 e-05 | 2.120 e-05 | No |
| | 30-50% | 1.219 e-04 | 0.598 e-04 | Yes | 2.723 e-04 | 1.877 e-04 | No |

Table 50: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$ Daughters

DCA $\Lambda(\bar{\Lambda})$ Daughters 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK^+ | 0-10% | -1.136e-02 | 9.416e-03 | No | -2.395e-03 | 1.173e-03 | Yes |
| | 10-30% | -2.773e-02 | 1.091e-01 | No | -2.962e-04 | 1.524e-03 | No |
| | 30-50% | 1.057e-03 | 1.241e-03 | No | -7.586e-02 | 3.692e-02 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | -7.829e-03 | 6.509e-03 | Yes | -5.710e-04 | 5.934e-04 | No |
| | 10-30% | 7.443e-04 | 8.673e-04 | No | 1.088e-03 | 1.168e-03 | No |
| | 30-50% | -1.225e-01 | 4.522e-01 | No | 2.278e-03 | 2.851e-03 | Yes |
| ΛK^- | 0-10% | -1.527e-04 | 1.883e-04 | No | -5.835e-04 | 6.913e-04 | No |
| | 10-30% | -5.726e-02 | 1.965e-01 | No | -4.351e-02 | 2.713e-01 | No |
| | 30-50% | -1.140e-02 | 7.375e-03 | Yes | 2.958e-02 | 2.476e-01 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -3.676e-04 | 2.325e-04 | No | 6.753e-03 | 8.862e-02 | No |
| | 10-30% | 2.291e-04 | 3.914e-04 | No | -9.527e-04 | 1.492e-03 | No |
| | 30-50% | 1.108e-01 | 6.299e-01 | No | 4.620e-03 | 5.502e-03 | No |

Table 51: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$ DaughtersDCA $\Lambda(\bar{\Lambda})$ Daughters 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 3 vs 4 mm | | | 4 vs 5 mm | | |
| ΛK^+ | 0-10% | -1.170e-02 | 9.437e-03 | No | -2.349e-03 | 1.142e-03 | Yes |
| | 10-30% | -3.522e-04 | 3.863e-04 | No | 1.359e-05 | 3.543e-05 | No |
| | 30-50% | 1.090e-03 | 1.354e-03 | No | -7.623e-02 | 3.708e-02 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | -1.306e-04 | 1.486e-04 | No | -4.771e-04 | 5.081e-04 | No |
| | 10-30% | 7.482e-04 | 8.811e-04 | No | 8.166e-05 | 3.779e-05 | Yes |
| | 30-50% | -7.928e-04 | 1.146e-03 | No | -2.568e-04 | 8.664e-05 | Yes |
| ΛK^- | 0-10% | -1.498e-04 | 1.562e-04 | No | -5.849e-04 | 6.665e-04 | No |
| | 10-30% | 1.204e-05 | 2.583e-04 | No | -9.794e-05 | 1.314e-04 | No |
| | 30-50% | -9.314e-03 | 6.614e-03 | No | -1.264e-04 | 8.487e-05 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -4.149e-04 | 3.296e-04 | No | 5.288e-05 | 7.505e-05 | No |
| | 10-30% | 2.293e-04 | 3.396e-04 | No | -8.853e-04 | 1.196e-03 | No |
| | 30-50% | -6.129e-05 | 7.969e-04 | No | 1.735e-04 | 8.784e-05 | No |

Table 52: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA $\Lambda(\bar{\Lambda})$ Daughters

| $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle | | | | | | | |
|---|------------|------------------|-----------|-----|------------------|-----------|-----|
| Pair Type | Centrality | Fit Amplitudes | | | | | |
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK^+ | 0-10% | 8.394e-05 | 1.017e-04 | Yes | 6.421e-04 | 5.369e-04 | No |
| | 10-30% | 3.348e-02 | 2.067e-02 | No | 7.091e-04 | 9.065e-04 | No |
| | 30-50% | 6.816e-03 | 3.887e-02 | No | -4.748e-04 | 7.771e-04 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | 4.503e-05 | 5.867e-05 | No | 3.207e-04 | 8.431e-05 | Yes |
| | 10-30% | 4.920e-04 | 1.040e-03 | Yes | 3.091e-02 | 6.230e-03 | Yes |
| | 30-50% | 2.214e-03 | 1.278e-03 | No | 4.164e-05 | 2.152e-04 | No |
| ΛK^- | 0-10% | -9.043e-05 | 7.387e-05 | Yes | 1.788e-04 | 2.381e-04 | No |
| | 10-30% | -1.058e-04 | 8.066e-05 | Yes | 5.921e-03 | 2.927e-03 | Yes |
| | 30-50% | 5.142e-04 | 1.477e-03 | No | -7.095e-03 | 5.420e-02 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -5.468e-05 | 2.705e-04 | No | 9.797e-05 | 7.333e-05 | Yes |
| | 10-30% | -1.028e-03 | 1.270e-02 | No | -1.389e-02 | 7.163e-02 | No |
| | 30-50% | -3.528e-02 | 1.199e-01 | No | -3.424e-02 | 1.862e-01 | No |

Table 53: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle

| $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle SimpleExp | | | | | | | |
|---|------------|------------------|------------|-----|------------------|-------------|-----|
| Pair Type | Centrality | Fit Amplitudes | | | | | |
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK^+ | 0-10% | 2.922 e-05 | 0.509 e-05 | Yes | 6.171 e-04 | 4.981 e-04 | No |
| | 10-30% | 3.356 e-02 | 2.061 e-02 | No | 7.164 e-05 | 15.654 e-05 | No |
| | 30-50% | 4.609 e-03 | 5.399 e-03 | No | 1.521 e-04 | 0.269 e-04 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | 1.210 e-05 | 0.552 e-05 | Yes | 4.543 e-05 | 7.800 e-05 | No |
| | 10-30% | 4.859 e-05 | 3.910 e-05 | No | 2.357 e-05 | 1.279 e-05 | No |
| | 30-50% | 2.231 e-03 | 1.295 e-03 | No | 7.357 e-05 | 3.041 e-05 | Yes |
| ΛK^- | 0-10% | 5.210 e-05 | 0.521 e-05 | Yes | 1.525 e-04 | 1.447 e-04 | No |
| | 10-30% | 8.230 e-05 | 1.066 e-05 | Yes | 9.685 e-05 | 5.080 e-05 | No |
| | 30-50% | 1.086 e-04 | 0.253 e-04 | Yes | 1.269 e-04 | 0.280 e-04 | Yes |
| $\bar{\Lambda} K^+$ | 0-10% | 4.122 e-05 | 3.995 e-05 | No | 3.550 e-05 | 0.600 e-05 | Yes |
| | 10-30% | 1.043 e-04 | 0.542 e-04 | No | 4.208 e-05 | 1.228 e-05 | Yes |
| | 30-50% | 5.300 e-05 | 2.548 e-05 | Yes | 1.027 e-04 | 0.287 e-04 | Yes |

Table 54: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle

$\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK^+ | 0-10% | 2.564e-05 | 7.148e-05 | No | 5.203e-04 | 3.676e-04 | No |
| | 10-30% | 3.322e-02 | 2.091e-02 | No | 5.850e-04 | 8.976e-04 | No |
| | 30-50% | 4.748e-03 | 5.643e-03 | No | -2.372e-02 | 8.418e-02 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 4.757e-03 | 4.395e-02 | No | 6.412e-04 | 1.649e-03 | No |
| | 10-30% | 5.303e-04 | 1.251e-03 | No | 3.083e-02 | 6.150e-03 | Yes |
| | 30-50% | 1.818e-03 | 1.113e-03 | No | 3.013e-05 | 7.756e-04 | No |
| ΛK^- | 0-10% | -7.716e-03 | 4.941e-02 | No | 2.136e-02 | 1.327e-02 | Yes |
| | 10-30% | -2.561e-02 | 9.671e-02 | No | 5.935e-03 | 2.936e-03 | Yes |
| | 30-50% | 1.166e-04 | 5.787e-03 | No | -8.552e-02 | 6.472e-01 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -3.651e-05 | 9.638e-05 | No | 7.891e-03 | 3.091e-02 | No |
| | 10-30% | -9.620e-04 | 1.854e-03 | Yes | 1.019e-04 | 1.806e-04 | No |
| | 30-50% | 1.642e-03 | 1.472e-03 | No | -1.052e-03 | 2.182e-03 | No |

Table 55: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|------------------|-----------|-----|------------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.9992 vs 0.9993 | | | 0.9993 vs 0.9994 | | |
| ΛK^+ | 0-10% | -1.448e-05 | 9.361e-06 | No | 6.215e-04 | 4.967e-04 | No |
| | 10-30% | 3.355e-02 | 2.063e-02 | No | 5.291e-04 | 7.270e-04 | No |
| | 30-50% | 4.609e-03 | 5.410e-03 | No | 1.360e-04 | 4.949e-05 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | -4.085e-06 | 1.016e-05 | No | 1.211e-05 | 1.145e-05 | No |
| | 10-30% | 1.249e-04 | 1.660e-04 | No | -2.328e-05 | 2.350e-05 | No |
| | 30-50% | 2.214e-03 | 1.301e-03 | No | -3.532e-03 | 4.294e-03 | No |
| ΛK^- | 0-10% | 3.409e-05 | 9.589e-06 | Yes | 1.170e-04 | 1.430e-04 | No |
| | 10-30% | 6.537e-05 | 1.967e-05 | Yes | 2.119e-04 | 2.609e-04 | No |
| | 30-50% | -4.434e-05 | 4.608e-05 | No | 9.610e-05 | 5.145e-05 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -3.270e-05 | 5.714e-05 | No | -1.744e-05 | 1.103e-05 | No |
| | 10-30% | -7.203e-05 | 2.042e-05 | Yes | 1.023e-04 | 1.924e-04 | No |
| | 30-50% | 2.030e-03 | 1.831e-03 | No | 7.645e-05 | 5.303e-05 | No |

Table 56: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: $\Lambda(\bar{\Lambda})$ Cosine of Pointing Angle

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

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK^+ | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.562e-02 | 2.256e-01 | No |
| | 10-30% | -8.206e-08 | 6.120e-06 | No | -8.865e-03 | 6.253e-03 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -2.358e-03 | 2.022e-03 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -1.186e-03 | 1.200e-03 | Yes |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | -4.978e-04 | 6.611e-04 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 6.475e-04 | 2.420e-03 | Yes |
| ΛK^- | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.843e-02 | 1.344e-01 | No |
| | 10-30% | 1.759e-07 | 1.059e-06 | No | 6.419e-03 | 5.210e-03 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -7.035e-02 | 2.801e-01 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -4.477e-04 | 3.459e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | 1.255e-03 | 9.275e-04 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -8.232e-04 | 6.959e-04 | No |

Table 57: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-------------|-----|------------|------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK^+ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 9.608 e-05 | 6.160 e-05 | No |
| | 10-30% | 4.124 e-08 | 12.733 e-08 | No | 1.295 e-04 | 1.506 e-04 | No |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 2.389 e-03 | 1.970 e-03 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 5.367 e-05 | 2.099 e-05 | Yes |
| | 10-30% | 0.000 e-00 | 0.000 e-00 | No | 2.513 e-04 | 5.004 e-04 | No |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 4.787 e-04 | 3.569 e-04 | No |
| ΛK^- | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 2.188 e-05 | 8.266 e-05 | No |
| | 10-30% | 1.712 e-07 | 9.950 e-07 | No | 6.518 e-03 | 5.362 e-03 | No |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 3.759 e-04 | 9.4144e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 0.000 e-00 | 0.000 e-00 | No | 4.498 e-04 | 3.527 e-04 | No |
| | 10-30% | 0.000 e-00 | 0.000 e-00 | No | 1.046 e-03 | 0.793 e-03 | No |
| | 30-50% | 0.000 e-00 | 0.000 e-00 | No | 8.169 e-04 | 7.310 e-04 | No |

Table 58: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK^+ | 0-10% | 0.000e+00 | 0.000e+00 | No | -1.712e-03 | 4.803e-04 | Yes |
| | 10-30% | -3.081e-08 | 9.643e-07 | No | -7.545e-03 | 5.625e-03 | Yes |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -2.433e-03 | 1.467e-03 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -9.956e-04 | 1.046e-03 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | -6.565e-02 | 3.681e-01 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 2.580e-02 | 1.941e-01 | No |
| ΛK^- | 0-10% | 0.000e+00 | 0.000e+00 | No | 2.999e-03 | 2.975e-03 | No |
| | 10-30% | 1.831e-07 | 1.134e-06 | No | 5.955e-03 | 4.628e-03 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -2.068e-01 | 2.323e+00 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -4.767e-04 | 2.701e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | 1.151e-03 | 1.010e-03 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -1.356e-01 | 1.525e+00 | No |

Table 59: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 0.5 vs 1 mm | | | 1 vs 2 mm | | |
| ΛK^+ | 0-10% | 0.000e+00 | 0.000e+00 | No | -2.429e-04 | 2.561e-04 | No |
| | 10-30% | -3.554e-08 | 6.097e-08 | No | 1.598e-04 | 7.738e-05 | Yes |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -2.317e-03 | 1.992e-03 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -9.883e-04 | 9.265e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | -2.472e-04 | 5.419e-04 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | 1.227e-03 | 1.328e-03 | No |
| ΛK^- | 0-10% | 0.000e+00 | 0.000e+00 | No | 3.677e-03 | 4.028e-03 | No |
| | 10-30% | 1.875e-07 | 1.095e-06 | No | 6.518e-03 | 5.373e-03 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -2.985e-04 | 5.747e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 0.000e+00 | 0.000e+00 | No | -4.252e-04 | 3.414e-04 | No |
| | 10-30% | 0.000e+00 | 0.000e+00 | No | 1.033e-03 | 8.146e-04 | No |
| | 30-50% | 0.000e+00 | 0.000e+00 | No | -7.193e-04 | 7.376e-04 | No |

Table 60: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $p^+(\bar{p}^-)$ Daughter of $\Lambda(\bar{\Lambda})$

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

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK^+ | 0-10% | -4.843e-03 | 1.821e-02 | No | -3.108e-03 | 3.879e-03 | No |
| | 10-30% | -1.895e-02 | 7.504e-02 | No | -2.906e-02 | 8.290e-02 | No |
| | 30-50% | -4.478e-02 | 1.099e-01 | No | -1.124e-03 | 2.850e-03 | No |
| $\bar{\Lambda} K^-$ | 0-10% | -5.539e-03 | 2.449e-02 | No | -1.614e-04 | 2.137e-04 | No |
| | 10-30% | -1.357e-04 | 1.308e+02 | No | -3.438e-04 | 1.172e-04 | Yes |
| | 30-50% | 6.511e-03 | 5.171e-03 | Yes | -5.130e-04 | 4.026e-04 | No |
| ΛK^- | 0-10% | 3.514e-05 | 5.587e-05 | Yes | -1.187e-04 | 8.452e-05 | No |
| | 10-30% | -8.213e-07 | 7.934e-05 | Yes | -7.553e-03 | 3.721e-02 | No |
| | 30-50% | -4.040e-02 | 2.390e-01 | No | -4.779e-04 | 4.900e-04 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -3.105e-04 | 3.344e-04 | Yes | -7.463e-05 | 8.161e-05 | No |
| | 10-30% | -4.365e-04 | 3.362e-04 | No | -7.773e-03 | 6.077e-02 | No |
| | 30-50% | -3.146e-02 | 2.417e-01 | No | -2.535e-03 | 2.080e-03 | No |

Table 61: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ SimpleExp

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-------------|-----|------------|-------------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK^+ | 0-10% | 1.404 e-05 | 0.557 e-05 | Yes | 2.773 e-03 | 4.076 e-03 | No |
| | 10-30% | 5.158 e-05 | 4.849 e-05 | No | 4.003 e-05 | 1.537 e-05 | Yes |
| | 30-50% | 1.948 e-04 | 0.281 e-04 | Yes | 1.293 e-04 | 0.381 e-04 | Yes |
| $\bar{\Lambda} K^-$ | 0-10% | 3.412 e-06 | 31.010 e-06 | No | 1.292 e-05 | 0.737 e-05 | No |
| | 10-30% | 4.179 e-05 | 1.256 e-05 | Yes | 3.348 e-04 | 2.737 e-04 | No |
| | 30-50% | 3.761 e-03 | 2.491 e-03 | No | 5.462 e-04 | 10.737 e-04 | No |
| ΛK^- | 0-10% | 3.044 e-05 | 0.577 e-05 | Yes | 5.793 e-05 | 8.022 e-05 | No |
| | 10-30% | 4.823 e-05 | 1.221 e-05 | Yes | 8.026 e-05 | 1.586 e-05 | Yes |
| | 30-50% | 8.278 e-05 | 13.261 e-05 | No | 1.516 e-04 | 0.395 e-04 | Yes |
| $\bar{\Lambda} K^+$ | 0-10% | 1.995 e-05 | 1.807 e-05 | No | 1.645 e-05 | 0.714 e-05 | Yes |
| | 10-30% | 4.629 e-04 | 3.597 e-04 | No | 7.971 e-05 | 1.562 e-05 | Yes |
| | 30-50% | 2.733 e-04 | 0.291 e-04 | Yes | 2.922 e-04 | 3.621 e-04 | No |

Table 62: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$

DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK^+ | 0-10% | -2.578e-03 | 4.473e-02 | No | -3.254e-03 | 4.068e-03 | No |
| | 10-30% | 5.165e-04 | 7.025e-04 | No | -4.162e-03 | 3.253e-03 | No |
| | 30-50% | 1.504e-02 | 5.178e-03 | Yes | -3.467e-02 | 2.791e-01 | No |
| $\bar{\Lambda} K^-$ | 0-10% | 1.026e-03 | 1.045e-03 | No | -9.881e-03 | 3.186e-02 | No |
| | 10-30% | -1.050e-04 | 2.779e-04 | No | -1.161e-02 | 6.045e-02 | No |
| | 30-50% | 5.187e-03 | 5.521e-03 | No | -3.825e-04 | 1.473e-03 | No |
| ΛK^- | 0-10% | -2.588e-03 | 3.666e-02 | No | -5.881e-03 | 6.284e-02 | No |
| | 10-30% | 5.937e-03 | 2.872e-04 | Yes | 2.942e-02 | 1.801e-02 | No |
| | 30-50% | 3.185e-03 | 2.838e-03 | No | -9.919e-03 | 9.801e-03 | No |
| $\bar{\Lambda} K^+$ | 0-10% | -2.047e-04 | 6.630e-04 | No | -3.852e-05 | 9.646e-05 | No |
| | 10-30% | -1.088e-02 | 2.905e-04 | Yes | -3.925e-03 | 3.920e-03 | Yes |
| | 30-50% | 1.456e-05 | 3.774e-04 | No | -2.516e-03 | 2.087e-03 | No |

Table 63: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$ 500MeVMaxFit SimpleExp)

| Pair Type | Centrality | Fit Amplitudes | | | | | |
|---------------------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | 2 vs 3 mm | | | 3 vs 4 mm | | |
| ΛK^+ | 0-10% | 7.991e-02 | 3.641e-01 | No | -2.774e-03 | 3.759e-03 | No |
| | 10-30% | -2.559e-05 | 5.097e-05 | No | -4.152e-03 | 3.267e-03 | No |
| | 30-50% | 1.461e-02 | 5.067e-03 | Yes | -8.144e-05 | 3.055e-04 | No |
| $\bar{\Lambda} K^-$ | 0-10% | -9.069e-06 | 1.070e-05 | No | -1.506e-04 | 2.900e-04 | No |
| | 10-30% | 1.485e-05 | 2.273e-05 | No | -2.281e-04 | 2.219e-04 | No |
| | 30-50% | 3.830e-03 | 2.477e-03 | No | -2.258e-04 | 8.241e-04 | No |
| ΛK^- | 0-10% | -4.017e-05 | 5.473e-05 | No | -3.418e-05 | 5.661e-05 | No |
| | 10-30% | 6.474e-05 | 7.444e-05 | No | 4.487e-04 | 6.332e-04 | No |
| | 30-50% | 3.344e-03 | 3.224e-03 | No | 9.751e-05 | 7.055e-05 | No |
| $\bar{\Lambda} K^+$ | 0-10% | 2.080e-05 | 1.035e-05 | Yes | -1.947e-05 | 9.814e-05 | No |
| | 10-30% | -4.528e-04 | 3.642e-04 | No | 6.138e-05 | 2.809e-05 | Yes |
| | 30-50% | 2.643e-04 | 5.272e-05 | Yes | -2.107e-03 | 1.815e-03 | No |

Table 64: $\Lambda(\bar{\Lambda})K^\pm$ Analyses: DCA to Primary Vertex of $\pi^-(\pi^+)$ Daughter of $\Lambda(\bar{\Lambda})$

Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm

| Pair Type | Daughter | Track | Centrality | Fit Amplitudes | | | | | |
|---------------------|--------------------------|-------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 7 vs 8 mm | | | 8 vs 9 mm | | |
| ΛK^+ | $p(\Lambda)$ | K^+ | 0-10% | -3.686e-06 | 1.868e-06 | Yes | -2.810e-06 | 2.876e-06 | Yes |
| | | | 10-30% | 1.913e-06 | 3.456e-06 | Yes | 4.146e-06 | 2.760e-06 | No |
| | | | 30-50% | 2.437e-05 | 2.000e-05 | Yes | 4.171e-06 | 2.107e-05 | Yes |
| $\bar{\Lambda} K^-$ | $\bar{p}(\bar{\Lambda})$ | K^- | 0-10% | 7.353e-07 | 2.091e-06 | Yes | -3.354e-05 | 6.745e-06 | Yes |
| | | | 10-30% | -2.786e-05 | 7.575e-06 | Yes | 8.456e-07 | 6.874e-06 | Yes |
| | | | 30-50% | 3.246e-03 | 2.576e-04 | Yes | 2.117e-05 | 2.576e-05 | Yes |
| ΛK^- | $\pi^-(\Lambda)$ | K^- | 0-10% | -2.628e-05 | 3.735e-06 | Yes | 4.464e-06 | 3.426e-06 | Yes |
| | | | 10-30% | -8.931e-08 | 7.490e-06 | Yes | 4.327e-06 | 8.289e-06 | Yes |
| | | | 30-50% | -8.489e-06 | 1.854e-05 | No | 6.277e-05 | 2.490e-05 | Yes |
| $\bar{\Lambda} K^+$ | $\pi^+(\bar{\Lambda})$ | K^+ | 0-10% | -4.788e-06 | 2.222e-06 | Yes | -3.779e-06 | 1.987e-06 | Yes |
| | | | 10-30% | 6.776e-06 | 6.238e-06 | Yes | 1.142e-05 | 3.740e-06 | Yes |
| | | | 30-50% | 5.680e-04 | 1.505e-04 | Yes | 2.448e-06 | 2.452e-05 | Yes |

Table 65: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm SimpleExp

| Pair Type | Daughter | Track | Centrality | Fit Amplitudes | | | | | |
|---------------------|--------------------------|-------|------------|----------------|------------|-----|------------|------------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 7 vs 8 mm | | | 8 vs 9 mm | | |
| ΛK^+ | $p(\Lambda)$ | K^+ | 0-10% | 1.292 e-06 | 0.071 e-06 | Yes | 4.293 e-06 | 0.467 e-06 | Yes |
| | | | 10-30% | 1.273 e-06 | 0.918 e-06 | No | 2.789 e-06 | 6.481 e-06 | No |
| | | | 30-50% | 5.756 e-06 | 0.884 e-06 | Yes | 1.039 e-05 | 0.366 e-05 | Yes |
| $\bar{\Lambda} K^-$ | $\bar{p}(\bar{\Lambda})$ | K^- | 0-10% | 2.174 e-06 | 0.382 e-06 | Yes | 7.280 e-07 | 0.192 e-07 | Yes |
| | | | 10-30% | 4.654 e-06 | 0.264 e-06 | Yes | 4.714 e-06 | 0.790 e-06 | Yes |
| | | | 30-50% | 3.859 e-03 | 0.282 e-03 | Yes | 1.617 e-05 | 0.460 e-05 | Yes |
| ΛK^- | $\pi^-(\Lambda)$ | K^- | 0-10% | 4.837 e-06 | 0.126 e-06 | Yes | 5.328 e-06 | 0.606 e-06 | Yes |
| | | | 10-30% | 4.573 e-06 | 1.194 e-06 | Yes | 5.761 e-06 | 1.170 e-06 | Yes |
| | | | 30-50% | 7.689 e-06 | 1.176 e-06 | Yes | 7.790 e-06 | 1.120 e-06 | Yes |
| $\bar{\Lambda} K^+$ | $\pi^+(\bar{\Lambda})$ | K^+ | 0-10% | 1.913 e-06 | 1.201 e+00 | No | 1.546 e-06 | 0.073 e-06 | Yes |
| | | | 10-30% | 3.534 e-06 | 1.269 e-06 | Yes | 2.443 e-07 | 1.002 e+00 | No |
| | | | 30-50% | 6.155 e-04 | 1.712 e-04 | Yes | 7.848 e-06 | 0.108 e-06 | Yes |

Table 66: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm

Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm 500MeVMaxFit

| Pair Type | Daughter | Track | Centrality | Fit Amplitudes | | | | | |
|---------------------|----------------------------|-------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 7 vs 8 mm | | | 8 vs 9 mm | | |
| ΛK^+ | $p(\Lambda)$ | K^+ | 0-10% | -1.028e-03 | 1.913e-04 | Yes | -8.595e-04 | 1.950e-04 | Yes |
| | | | 10-30% | -1.165e-04 | 2.697e-05 | Yes | -3.465e-05 | 2.604e-05 | Yes |
| | | | 30-50% | -1.402e-04 | 1.330e+01 | No | 3.312e-05 | 8.428e-05 | No |
| $\bar{\Lambda} K^-$ | $\bar{p}^-(\bar{\Lambda})$ | K^- | 0-10% | -1.186e-03 | 2.039e-04 | Yes | -1.314e-03 | 2.545e-04 | Yes |
| | | | 10-30% | -2.705e-05 | 2.832e-05 | Yes | -5.341e-05 | 2.923e-05 | Yes |
| | | | 30-50% | 1.314e-03 | 1.515e-04 | Yes | 1.459e-04 | 8.739e-05 | No |
| ΛK^- | $\pi^-(\Lambda)$ | K^- | 0-10% | -5.785e-05 | 1.394e-05 | Yes | -4.428e-05 | 1.198e-05 | Yes |
| | | | 10-30% | -4.576e-05 | 5.522e-05 | No | -5.990e-05 | 1.099e-05 | Yes |
| | | | 30-50% | 4.274e-03 | 4.150e-03 | No | 6.659e-05 | 6.463e-05 | No |
| $\bar{\Lambda} K^+$ | $\pi^+(\bar{\Lambda})$ | K^+ | 0-10% | -2.609e-04 | 1.122e-04 | Yes | -4.269e-05 | 3.663e-05 | No |
| | | | 10-30% | -2.366e-04 | 1.483e-04 | Yes | -7.622e-05 | 1.096e-04 | No |
| | | | 30-50% | 2.265e-03 | 9.486e-04 | Yes | 2.629e-04 | 2.138e-04 | No |

Table 67: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm 500MeVMaxFit SimpleExp

| Pair Type | Daughter | Track | Centrality | Fit Amplitudes | | | | | |
|---------------------|----------------------------|-------|------------|----------------|-----------|-----|------------|-----------|-----|
| | | | | Amplitude | Error | Sig | Amplitude | Error | Sig |
| | | | | 7 vs 8 mm | | | 8 vs 9 mm | | |
| ΛK^+ | $p(\Lambda)$ | K^+ | 0-10% | 1.310e-06 | 1.696e-07 | Yes | 4.374e-06 | 2.246e-07 | Yes |
| | | | 10-30% | 2.084e-06 | 4.698e-07 | Yes | 4.124e-06 | 4.593e-06 | No |
| | | | 30-50% | -1.186e-03 | 9.739e-04 | No | 3.110e-05 | 3.395e-05 | No |
| $\bar{\Lambda} K^-$ | $\bar{p}^-(\bar{\Lambda})$ | K^- | 0-10% | 2.057e-06 | 1.499e-07 | Yes | 3.829e-06 | 1.327e-07 | Yes |
| | | | 10-30% | 7.002e-06 | 6.292e-06 | No | 4.608e-06 | 4.256e-06 | No |
| | | | 30-50% | 4.608e-06 | 4.256e-06 | No | 9.199e-05 | 7.119e-05 | No |
| ΛK^- | $\pi^-(\Lambda)$ | K^- | 0-10% | 4.686e-06 | 3.491e-07 | Yes | 2.311e-06 | 5.498e-07 | Yes |
| | | | 10-30% | 5.411e-06 | 7.471e-07 | Yes | 7.344e-06 | 5.583e-07 | Yes |
| | | | 30-50% | 2.045e-04 | 1.593e-04 | No | 1.570e-04 | 3.330e-04 | No |
| $\bar{\Lambda} K^+$ | $\pi^+(\bar{\Lambda})$ | K^+ | 0-10% | -3.063e-04 | 1.137e-04 | Yes | -6.134e-05 | 6.307e-05 | No |
| | | | 10-30% | 6.019e-06 | 6.879e-07 | Yes | 1.473e-06 | 1.292e-06 | No |
| | | | 30-50% | 1.773e-04 | 6.857e-05 | Yes | 1.701e-04 | 1.120e-04 | No |

Table 68: $\Lambda(\bar{\Lambda})K_S^0$ Analyses: Average Separation of $\Lambda(\bar{\Lambda})$ Daughter With Same Charge as K^\pm