Polynomial Bgds, THERM Bgds fit together

				Methods						
Centrality	System	Parameter	Separa	nte Radii		Shared Rac	dii			
			Unique λ	Share λ_{Conj}	Unique λ	Share λ_{Conj}	Share Single λ			
	$\Lambda \mathrm{K}^+$	λ	1.37	1.37	1.97	1.91				
	$ar{\Lambda} \mathrm{K}^-$	λ	1.39	1.57	2.00	1.91	1.83			
0-10%	ΛK^-	λ	1.58	1.87	2.04	1.83				
	$ar{\Lambda} \mathrm{K}^+$	λ	1.60	1.07	2.07	1.03				
	$\Lambda \mathrm{K}^+$ & $ar{\Lambda} \mathrm{K}^-$	R	4.90	4.89	6.18	5.83	5.81			
	$\Lambda { m K}^-$ & $ar{\Lambda} { m K}^+$	R	4.11	5.75	0.16		3.01			
	$\Lambda \mathrm{K}^+$	λ	1.70	1.54	1.50	1.39				
	$ar{\Lambda} \mathrm{K}^-$	λ	1.51	1.34	1.33	1.39	1.31			
10-30%	ΛK ⁻	λ	1.08	1.18	1.43	1.31	1.31			
	$ar{\Lambda} \mathrm{K}^+$	λ	1.10	1.10	1.48	1.31				
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	4.78	4.68	4.75	4.53	4.50			
	$\Lambda \mathrm{K}^-$ & $\bar{\Lambda} \mathrm{K}^+$	R	3.05	4.05	4.73	4.33	4.30			
	$\Lambda \mathrm{K}^+$	λ	1.30	1.00	1.16	1.02	1.07			
	$ar{\Lambda} \mathrm{K}^-$	λ	1.18	1.23	1.06					
30-50%	ΛK^-	λ	1.27	0.91	2.07	1.11	1.07			
	$ar{\Lambda} \mathrm{K}^+$	λ	0.83	0.91	1.06	1.11				
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	3.24	3.23	3.21	2.99	3.09			
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	1.98	2.47	3.21	2.99	3.09			
		$\mathbb{R}f_0$	-1.13	-1.13	-1.13	-1.09	-1.12			
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.36	0.36	0.53	0.44	0.48			
		d_0	1.09	1.11	1.02	0.99	1.01			
		$\mathbb{R}f_0$	0.15	0.30	0.40	0.40	0.39			
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.30	0.40	0.41	0.45	0.45			
		d_0	2.07	-5.15	-4.81	-4.37	-4.35			

Table 1: Comparison: Polynomial non-flat background, THERMINATOR backgrounds fit together

Polynomial Bgds, THERM Bgds fit together(v2)

			Methods						
Centrality	System	Parameter	Separa	ate Radii	Shared Radii				
			Unique λ	Share λ_{Conj}	Unique λ	Share λ_{Conj}	Share Single λ		
	$\Lambda \mathrm{K}^+$		1.37	1.37	1.97	1.91			
	$ar{\Lambda} \mathrm{K}^-$	λ	1.39	1.37	2.00	1.91	1.83		
0-10%	ΛK^-	λ	1.58	1.87	2.04	1.83	1.03		
	$ar{\Lambda} \mathrm{K}^+$		1.60	1.07	2.07	1.03			
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	R	4.90	4.89	6.18	5.83	5.81		
	$\Lambda K^- \& \bar{\Lambda} K^+$	T(4.11	5.75	0.10	3.03	3.01		
	$\Lambda \mathrm{K}^+$		1.70	1.54	1.50	1.39			
10-30%	$ar{\Lambda} \mathrm{K}^-$	λ	1.51	1.51	1.33	1.39	1.31		
	$\Lambda \mathrm{K}^-$	λ	1.08	1.18	1.43	1.31	1.51		
	$ar{\Lambda} \mathrm{K}^+$		1.10	1.10	1.48	1.31			
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	4.78	4.68	4.75	4.53	4.50		
	$\Lambda K^- \& \bar{\Lambda} K^+$	IX.	3.05	4.05	4.73	4.55	4.50		
	$\Lambda \mathrm{K}^+$		1.30	1.23	1.16	1.02			
	$ar{\Lambda} \mathrm{K}^-$	λ	1.18		1.06		1.07		
30-50%	ΛK^-	λ	1.27	0.91	2.07	1.11	1.07		
	$ar{\Lambda} \mathrm{K}^+$		0.83	0.71	1.06	1.11			
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	3.24	3.23	3.21	2.99	3.09		
	$\Lambda K^- \& \bar{\Lambda} K^+$	T(1.98	2.47	3.21	2.77	3.07		
		$\mathbb{R}f_0$	-1.13	-1.13	-1.13	-1.09	-1.12		
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	$\mathbb{I}f_0$	0.36	0.36	0.53	0.44	0.48		
		d_0	1.09	1.11	1.02	0.99	1.01		
		$\mathbb{R}f_0$	0.15	0.30	0.40	0.40	0.39		
	$\Lambda K^- \ \& \ \bar{\Lambda} K^+$	$\mathbb{I} f_0$	0.30	0.40	0.41	0.45	0.45		
		d_0	2.07	-5.15	-4.81	-4.37	-4.35		

Table 2: Comparison: Polynomial non-flat background, THERMINATOR backgrounds fit together(v2)

Linear Bgds

					Method	ls		
Centrality	System	Parameter	Separa	ate Radii		Shared Rac	dii	
			Unique λ	Share λ_{Conj}	Unique λ	Share λ_{Conj}	Share Single λ	
	$\Lambda \mathrm{K}^+$	λ	1.38	1.37	1.85	1.75		
	$ar{\Lambda} \mathrm{K}^-$	λ	1.39	1.37	1.87	1.73	1.65	
0-10%	ΛK^-	λ	2.04	1.63	1.87	1.64	1.03	
	$ar{\Lambda} \mathrm{K}^+$	λ	2.07	1.03	1.91	1.04		
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	5.27	5.25	6.22	5.83	5.81	
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	6.51	5.67	0.22	3.03	3.01	
	$\Lambda \mathrm{K}^+$	λ	1.68	1.49	1.56	1.39		
	$ar{\Lambda} \mathrm{K}^-$	λ	1.46	1.49	1.36	1.39	1.31	
10-30%	ΛK^-	λ	1.43	1.16	1.46	1.30	1.51	
	$ar{\Lambda} \mathrm{K}^+$	λ	1.47	1.10	1.50	1.30		
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	R	4.94	4.81	4.86	4.59	4.57	
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	4.70	4.14	4.00	7.37	4.57	
	$\Lambda \mathrm{K}^+$	λ	1.19	1.16	1.13	1.01	1.04	
	$ar{\Lambda} \mathrm{K}^-$	λ	1.15	1.10	1.09	1.01		
30-50%	ΛK^-	λ	1.92	0.88	2.00	1.07	1.04	
	$ar{\Lambda} \mathrm{K}^+$	λ	1.01	0.00	1.03	1.07		
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	3.28	3.28	3.24	3.03	3.11	
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	3.11	2.54	3.24	3.03	3.11	
		$\mathbb{R}f_0$	-1.22	-1.23	-1.18	-1.16	-1.20	
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.53	0.52	0.64	0.53	0.59	
		d_0	1.12	1.14	1.07	1.01	1.07	
		$\mathbb{R}f_0$	0.40	0.33	0.43	0.43	0.42	
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.44	0.47	0.46	0.52	0.51	
		d_0	-5.20	-4.85	-4.78	-4.20	-4.22	

Table 3: Comparison: Linear non-flat background

Stavinsky method, no non-flat background in fit

			Methods						
Centrality	System	Parameter	Separa	ate Radii		Shared Rac	dii		
			Unique λ	Share λ_{Conj}	Unique λ	Share λ_{Conj}	Share Single λ		
	$\Lambda \mathrm{K}^+$	λ	0.95	0.93	1.34	1.21			
	$ar{\Lambda} \mathrm{K}^-$	λ	0.90	0.93	1.27	1.21	1.05		
0-10%	ΛK^-	λ	2.38	1.28	2.15	1.15	1.03		
	$ar{\Lambda} \mathrm{K}^+$	λ	2.26	1.20	2.06	1.13			
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	5.44	5.43	5.75	5.25	5.04		
	$\Lambda { m K}^-$ & $ar{\Lambda} { m K}^+$	R	5.54	5.06	3.73	3.23	3.04		
	$\Lambda \mathrm{K}^+$	λ	0.71	0.68	0.87	0.80			
	$ar{\Lambda} \mathrm{K}^-$	λ	0.67	0.08	0.81	0.80	0.82		
10-30%	ΛK ⁻	λ	1.56	0.90	1.47	0.88	0.82		
	$ar{\Lambda} \mathrm{K}^+$	λ	1.77	0.90	1.66	0.88			
	$\Lambda \mathrm{K}^+$ & $ar{\Lambda} \mathrm{K}^-$	R	4.21	4.17	4.16	3.90	3.99		
	$\Lambda { m K}^-$ & $ar{\Lambda} { m K}^+$	R	3.89	3.57	4.10	3.90	3.99		
	$\Lambda \mathrm{K}^+$	λ	0.98	1.11	0.70	0.82			
	$ar{\Lambda} \mathrm{K}^-$	λ	1.14	1.11	0.82	0.82	0.88		
30-50%	ΛK^-	λ	4.14	0.84	3.99	0.98	0.00		
	$ar{\Lambda} \mathrm{K}^+$	λ	1.38	0.64	1.36	0.98			
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	4.01	4.07	3.03	3.03	3.17		
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	2.65	2.36	3.03	3.03	3.17		
		$\mathbb{R}f_0$	-1.96	-1.92	-1.51	-1.46	-1.52		
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	$\mathbb{I}f_0$	1.13	1.12	0.77	0.57	0.65		
		d_0	0.58	0.51	-0.47	-0.42	-0.44		
		$\mathbb{R}f_0$	0.24	0.32	0.34	0.53	0.55		
	$\Lambda \mathrm{K}^- \ \& \ ar{\Lambda} \mathrm{K}^+$	$\mathbb{I}f_0$	0.27	0.54	0.36	0.75	0.82		
		d_0	6.28	4.36	4.13	2.35	2.14		

Table 4: Comparison: Stavinsky method, no non-flat background in fit

Separate radii, unique λ

Centrality	System	Parameter			Methods		
Centranty	System	Farameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)	Stav.(Lin. Bgd)	Method 5
	$\Lambda \mathrm{K}^+$	λ	1.37	1.38	0.95	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	1.39	1.39	0.90	0.00	0.00
0-10%	ΛK^-	λ	1.58	2.04	2.38	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	1.60	2.07	2.26	0.00	0.00
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	4.90	5.27	5.44	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	4.11	6.51	5.54	0.00	0.00
	$\Lambda \mathrm{K}^+$	λ	1.70	1.68	0.71	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	1.51	1.46	0.67	0.00	0.00
10-30%	ΛK^-	λ	1.08	1.43	1.56	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	1.10	1.47	1.77	0.00	0.00
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	4.78	4.94	4.21	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	3.05	4.70	3.89	0.00	0.00
	$\Lambda \mathrm{K}^+$	λ	1.30	1.19	0.98	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	1.18	1.15	1.14	0.00	0.00
30-50%	$\Lambda \mathrm{K}^-$	λ	1.27	1.92	4.14	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	0.83	1.01	1.38	0.00	0.00
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	3.24	3.28	4.01	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	1.98	3.11	2.65	0.00	0.00
		$\mathbb{R}f_0$	-1.13	-1.22	-1.96	0.00	0.00
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	$\mathbb{I}f_0$	0.36	0.53	1.13	0.00	0.00
		d_0	1.09	1.12	0.58	0.00	0.00
		$\mathbb{R}f_0$	0.15	0.40	0.24	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.30	0.44	0.27	0.00	0.00
		d_0	2.07	-5.20	6.28	0.00	0.00

Table 5: Compare non-flat background treatment methods: Separate radii, unique $\boldsymbol{\lambda}$

Separate radii, unique λ (v2)

Centrality	System	Parameter		Method	s
Centranty	System	1 at afficter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)
	$\Lambda \mathrm{K}^+$	λ	1.37	1.38	0.95
	$ar{\Lambda} \mathrm{K}^-$	λ	1.39	1.39	0.90
0-10%	ΛK^-	λ	1.58	2.04	2.38
	$ar{\Lambda} \mathrm{K}^+$	λ	1.60	2.07	2.26
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	R	4.90	5.27	5.44
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	4.11	6.51	5.54
	$\Lambda \mathrm{K}^+$	λ	1.70	1.68	0.71
	$ar{\Lambda} \mathrm{K}^-$	λ	1.51	1.46	0.67
10-30%	ΛK^-	λ	1.08	1.43	1.56
	$ar{\Lambda} \mathrm{K}^+$	λ	1.10	1.47	1.77
	$\Lambda \mathrm{K}^+ \ \& \ \bar{\Lambda} \mathrm{K}^-$	R	4.78	4.94	4.21
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	3.05	4.70	3.89
	$\Lambda \mathrm{K}^+$	λ	1.30	1.19	0.98
	$ar{\Lambda} \mathrm{K}^-$	λ	1.18	1.15	1.14
30-50%	$\Lambda \mathrm{K}^-$	λ	1.27	1.92	4.14
	$ar{\Lambda} \mathrm{K}^+$	λ	0.83	1.01	1.38
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	3.24	3.28	4.01
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	1.98	3.11	2.65
		$\mathbb{R}f_0$	-1.13	-1.22	-1.96
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.36	0.53	1.13
		d_0	1.09	1.12	0.58
		$\mathbb{R}f_0$	0.15	0.40	0.24
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.30	0.44	0.27
		d_0	2.07	-5.20	6.28

Table 6: Compare non-flat background treatment methods: Separate radii, unique λ (v2)

Separate radii, share λ_{Conj}

	_	_			Methods		
Centrality	System	Parameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)	Stav.(Lin. Bgd)	Method 5
	$\Lambda \mathrm{K}^+ \ ar{\Lambda} \mathrm{K}^-$	λ	1.37	1.37	0.93	0.00	0.00
0-10%	$\Lambda \mathrm{K}^ ar{\Lambda} \mathrm{K}^+$	λ	1.87	1.63	1.28	0.00	0.00
	$\Lambda \mathrm{K}^+$ & $\bar{\Lambda} \mathrm{K}^-$	R	4.89	5.25	5.43	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	5.75	5.67	5.06	0.00	0.00
	$\Lambda \mathrm{K}^+$ $ar{\Lambda} \mathrm{K}^-$	λ	1.54	1.49	0.68	0.00	0.00
10-30%	$\Lambda K^- \ ar{\Lambda} K^+$	λ	1.18	1.16	0.90	0.00	0.00
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	4.68	4.81	4.17	0.00	0.00
	$\Lambda \mathrm{K}^-$ & $\bar{\Lambda} \mathrm{K}^+$	R	4.05	4.14	3.57	0.00	0.00
	$\Lambda \mathrm{K}^+$ $ar{\Lambda} \mathrm{K}^-$	λ	1.23	1.16	1.11	0.00	0.00
30-50%	$\Lambda K^- \ ar{\Lambda} K^+$	λ	0.91	0.88	0.84	0.00	0.00
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	3.23	3.28	4.07	0.00	0.00
	$\Lambda { m K}^-$ & $ar{\Lambda} { m K}^+$	R	2.47	2.54	2.36	0.00	0.00
		$\mathbb{R}f_0$	-1.13	-1.23	-1.92	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.36	0.52	1.12	0.00	0.00
		d_0	1.11	1.14	0.51	0.00	0.00
		$\mathbb{R}f_0$	0.30	0.33	0.32	0.00	0.00
	$\Lambda \mathrm{K}^-$ & $ar{\Lambda} \mathrm{K}^+$	$\mathbb{I}f_0$	0.40	0.47	0.54	0.00	0.00
		d_0	-5.15	-4.85	4.36	0.00	0.00

Table 7: Compare non-flat background treatment methods: Separate radii, share λ_{Conj}

Separate radii, share $\lambda_{Conj}(v2)$

Centrality	System	Parameter		Method	s
Centranty	System	r ar ameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)
	$\Lambda \mathrm{K}^+$ $ar{\Lambda} \mathrm{K}^-$	λ	1.37	1.37	0.93
0-10%	$\Lambda K^- \ ar{\Lambda} K^+$	λ	1.87	1.63	1.28
	$\Lambda { m K}^+$ & $ar{\Lambda} { m K}^-$	R	4.89	5.25	5.43
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	5.75	5.67	5.06
	$\Lambda \mathrm{K}^+$ $ar{\Lambda} \mathrm{K}^-$	λ	1.54	1.49	0.68
10-30%	$\Lambda K^- \ ar{\Lambda} K^+$	λ	1.18	1.16	0.90
	$\Lambda K^+ \& \bar{\Lambda} K^-$	R	4.68	4.81	4.17
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	4.05	4.14	3.57
	$\Lambda \mathrm{K}^+$ $ar{\Lambda} \mathrm{K}^-$	λ	1.23	1.16	1.11
30-50%	$\Lambda K^ \bar{\Lambda} K^+$	λ	0.91	0.88	0.84
	$\Lambda K^+ \& \bar{\Lambda} K^-$	R	3.23	3.28	4.07
	$\Lambda K^- \& \bar{\Lambda} K^+$	R	2.47	2.54	2.36
		$\mathbb{R}f_0$	-1.13	-1.23	-1.92
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.36	0.52	1.12
		d_0	1.11	1.14	0.51
		$\mathbb{R}f_0$	0.30	0.33	0.32
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.40	0.47	0.54
		d_0	-5.15	-4.85	4.36

Table 8: Compare non-flat background treatment methods: Separate radii, share $\lambda_{Conj}(v2)$

Shared radii, unique λ

Centrality	System	Parameter			Methods		
Centranty	System	Farameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)	Stav.(Lin. Bgd)	Method 5
	$\Lambda \mathrm{K}^+$	λ	1.97	1.85	1.34	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	2.00	1.87	1.27	0.00	0.00
0-10%	ΛK^-	λ	2.04	1.87	2.15	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	2.07	1.91	2.06	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	6.18	6.22	5.75	0.00	0.00
	$\Lambda \mathrm{K}^+$	λ	1.50	1.56	0.87	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	1.33	1.36	0.81	0.00	0.00
10-30%	$\Lambda \mathrm{K}^-$	λ	1.43	1.46	1.47	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	1.48	1.50	1.66	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	4.75	4.86	4.16	0.00	0.00
	$\Lambda \mathrm{K}^+$	λ	1.16	1.13	0.70	0.00	0.00
	$ar{\Lambda} \mathrm{K}^-$	λ	1.06	1.09	0.82	0.00	0.00
30-50%	$\Lambda \mathrm{K}^-$	λ	2.07	2.00	3.99	0.00	0.00
	$ar{\Lambda} \mathrm{K}^+$	λ	1.06	1.03	1.36	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	3.21	3.24	3.03	0.00	0.00
		$\mathbb{R}f_0$	-1.13	-1.18	-1.51	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I}f_0$	0.53	0.64	0.77	0.00	0.00
		d_0	1.02	1.07	-0.47	0.00	0.00
		$\mathbb{R}f_0$	0.40	0.43	0.34	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.41	0.46	0.36	0.00	0.00
		d_0	-4.81	-4.78	4.13	0.00	0.00

Table 9: Compare non-flat background treatment methods: Shared radii, unique λ

Shared radii, share λ_{Conj}

Centrality	System	Parameter			Methods		
Centranty	System	1 al ameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)	Stav.(Lin. Bgd)	Method 5
	$\Lambda \mathrm{K}^{+}$ $ar{\Lambda} \mathrm{K}^{-}$	λ	1.91	1.75	1.21	0.00	0.00
0-10%	$\Lambda K^ \bar{\Lambda} K^+$	λ	1.83	1.64	1.15	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	5.83	5.83	5.25	0.00	0.00
	$\Lambda \mathrm{K}^{+}$ $ar{\Lambda} \mathrm{K}^{-}$	λ	1.39	1.39	0.80	0.00	0.00
10-30%	$\Lambda K^- \ ar{\Lambda} K^+$	λ	1.31	1.30	0.88	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^ \Lambda K^- \& \bar{\Lambda} K^+$	R	4.53	4.59	3.90	0.00	0.00
	$\Lambda \mathrm{K}^{+}$ $ar{\Lambda} \mathrm{K}^{-}$	λ	1.02	1.01	0.82	0.00	0.00
30-50%	$\Lambda { m K}^- \ ar{\Lambda} { m K}^+$	λ	1.11	1.07	0.98	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	2.99	3.03	3.03	0.00	0.00
		$\mathbb{R}f_0$	-1.09	-1.16	-1.46	0.00	0.00
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I} f_0$	0.44	0.53	0.57	0.00	0.00
		d_0	0.99	1.01	-0.42	0.00	0.00
		$\mathbb{R}f_0$	0.40	0.43	0.53	0.00	0.00
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I}f_0$	0.45	0.52	0.75	0.00	0.00
		d_0	-4.37	-4.20	2.35	0.00	0.00

Table 10: Compare non-flat background treatment methods: Shared radii, share λ_{Conj}

Shared radii, share single λ

	_		Methods						
Centrality	System	Parameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)	Stav.(Lin. Bgd)	Method 5		
0-10%	ΛK^+ $\bar{\Lambda} K^ \Lambda K^ \bar{\Lambda} K^+$	λ	1.83	1.65	1.05	0.00	0.00		
	$\Lambda K^+ \& \bar{\Lambda} K^-$ $\Lambda K^- \& \bar{\Lambda} K^+$	R	5.81	5.81	5.04	0.00	0.00		
10-30%	ЛК ⁺ ЛК ⁻ ЛК ⁻ ЛК ⁺	λ	1.31	1.31	0.82	0.00	0.00		
	$\Lambda K^{+} \& \bar{\Lambda} K^{-}$ $\Lambda K^{-} \& \bar{\Lambda} K^{+}$	R	4.50	4.57	3.99	0.00	0.00		
30-50%	ЛК ⁺ ЛК ⁻ ЛК ⁻ ЛК ⁺	λ	1.07	1.04	0.88	0.00	0.00		
	$\Lambda K^{+} \& \bar{\Lambda} K^{-}$ $\Lambda K^{-} \& \bar{\Lambda} K^{+}$	R	3.09	3.11	3.17	0.00	0.00		
	$\Lambda \mathrm{K}^+$ & $ar{\Lambda} \mathrm{K}^-$	$\mathbb{R} f_0$ $\mathbb{I} f_0$ d_0	-1.12 0.48 1.01	-1.20 0.59 1.07	-1.52 0.65 -0.44	0.00 0.00 0.00	0.00 0.00 0.00		
	$\Lambda \mathrm{K}^-$ & $\bar{\Lambda} \mathrm{K}^+$	$\mathbb{R} f_0$ $\mathbb{I} f_0$ d_0	0.39 0.45 -4.35	0.42 0.51 -4.22	0.55 0.82 2.14	0.00 0.00 0.00	0.00 0.00 0.00		

Table 11: Compare non-flat background treatment methods: Shared radii, share single $\boldsymbol{\lambda}$

Shared radii, share single $\lambda(v2)$

Controlity	Cyatam	Parameter		Method	s
Centrality	System	Parameter	Poly. Bgd	Lin. Bgd	Stav.(No Bgd)
	$\Lambda \mathrm{K}^+$				
	$ar{\Lambda} \mathrm{K}^-$	λ	1.83	1.65	1.05
0-10%	$\Lambda \mathrm{K}^-$	70	1.00	1.00	1.05
	$ar{\Lambda} \mathrm{K}^+$				
	$\Lambda K^+ \& \bar{\Lambda} K^-$	R	5.81	5.81	5.04
	$\Lambda K^- \& \bar{\Lambda} K^+$				
	$\Lambda \mathrm{K}^+$				
	$ar{\Lambda} \mathrm{K}^-$	λ	1.31	1.31	0.82
10-30%	ΛK^-				
	$ar{\Lambda} \mathrm{K}^+$				
	$\Lambda K^+ \& \bar{\Lambda} K^-$	R	4.50	4.57	3.99
	$\Lambda K^- \& \bar{\Lambda} K^+$				
	ΛK^+				
20.70~	$ar{\Lambda} ext{K}^-$	λ	1.07	1.04	0.88
30-50%	ΛK ⁻				
	ΛK ⁺				
	$\Lambda K^+ \& \bar{\Lambda} K^-$	R	3.09	3.11	3.17
	$\Lambda K^- \& \bar{\Lambda} K^+$				
	A 17+ 0 A 17-	$\mathbb{R}f_0$	-1.12	-1.20	-1.52
	$\Lambda K^+ \& \bar{\Lambda} K^-$	$\mathbb{I} f_0$	0.48	0.59	0.65
		d_0	1.01	1.07	-0.44
	ATT 0 - TTT-	$\mathbb{R}f_0$	0.39	0.42	0.55
	$\Lambda K^- \& \bar{\Lambda} K^+$	$\mathbb{I} f_0$	0.45	0.51	0.82
		d_0	-4.35	-4.22	2.14

Table 12: Compare non-flat background treatment methods: Shared radii, share single $\lambda(v2)$