

Supplemental Materials for "Measurement of absolute branching fraction of the inclusive decay $\Lambda_c^+ \rightarrow \Lambda + X$ "

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We present a summary of the yields of $\Lambda_c^+ \rightarrow \Lambda + X$ and $\bar{\Lambda}_c^- \rightarrow \bar{\Lambda} + X$, as well as the reconstruction efficiencies of Λ and $\bar{\Lambda}$.

TABLE I. Signal yields and detection efficiencies of the inclusive Λ and $\bar{\Lambda}$ in each $(p, |\cos\theta|)$ interval. The errors here reflect only statistical uncertainties.

p (GeV/c)	$N_{-,j}^{\text{sig},\Lambda}$				$N_{-,j}^{\text{sig},\bar{\Lambda}}$			
	$ \cos\theta $				$ \cos\theta $			
	[0.00, 0.20)	[0.20, 0.40)	[0.40, 0.65)	[0.65, 1.00)	[0.00, 0.20)	[0.20, 0.40)	[0.40, 0.65)	[0.65, 1.00)
[0.0, 0.3)	$4.5^{+3.7}_{-2.4}$	$4.2^{+4.3}_{-3.0}$	$5.9^{+4.4}_{-3.1}$	$6.8^{+4.6}_{-3.3}$	$0.8^{+4.4}_{-3.0}$	$7.2^{+4.3}_{-3.0}$	$3.2^{+4.3}_{-2.9}$	$-0.5^{+3.8}_{-2.4}$
[0.3, 0.5)	$26.8^{+7.2}_{-5.9}$	$17.8^{+6.2}_{-5.0}$	$44.7^{+8.3}_{-7.1}$	$11.5^{+6.0}_{-4.7}$	$33.0^{+7.6}_{-6.4}$	$23.8^{+7.2}_{-5.9}$	$27.2^{+7.5}_{-6.3}$	$21.6^{+7.1}_{-5.8}$
[0.5, 0.7)	$46.8^{+8.3}_{-7.2}$	$35.0^{+7.1}_{-5.9}$	$30.8^{+7.1}_{-5.9}$	$30.8^{+7.1}_{-5.9}$	$39.8^{+7.8}_{-6.6}$	$37.5^{+7.8}_{-6.6}$	$44.0^{+8.0}_{-6.8}$	$23.1^{+6.6}_{-5.3}$
[0.7, 0.9)	$21.5^{+6.0}_{-4.8}$	$14.4^{+5.2}_{-4.0}$	$21.0^{+6.0}_{-4.8}$	$17.9^{+5.9}_{-4.7}$	$18.9^{+5.9}_{-4.6}$	$13.9^{+5.3}_{-4.1}$	$23.0^{+6.2}_{-5.0}$	$20.5^{+6.0}_{-4.8}$
[0.9, 1.1)	$3.0^{+3.2}_{-1.8}$	$7.0^{+3.9}_{-2.7}$	$4.0^{+3.4}_{-2.1}$	$4.5^{+3.7}_{-2.4}$	$3.9^{+3.8}_{-2.5}$	$5.4^{+4.0}_{-2.6}$	$4.3^{+3.4}_{-2.2}$	$1.0^{+2.6}_{-1.2}$
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p (GeV/c)	$\varepsilon_j^{\text{sig},\Lambda} (\%)$				$\varepsilon_j^{\text{sig},\bar{\Lambda}} (\%)$			
	$ \cos\theta $				$ \cos\theta $			
	[0.00, 0.20)	[0.20, 0.40)	[0.40, 0.65)	[0.65, 1.00)	[0.00, 0.20)	[0.20, 0.40)	[0.40, 0.65)	[0.65, 1.00)
[0.0, 0.3)	7.98 ± 0.53	8.25 ± 0.52	7.75 ± 0.44	3.85 ± 0.27	8.54 ± 0.53	8.18 ± 0.52	8.24 ± 0.45	4.99 ± 0.30
[0.3, 0.5)	30.38 ± 0.55	29.38 ± 0.55	27.01 ± 0.48	15.53 ± 0.32	27.83 ± 0.50	27.30 ± 0.50	26.16 ± 0.45	14.49 ± 0.29
[0.5, 0.7)	35.92 ± 0.47	35.91 ± 0.49	34.14 ± 0.47	20.49 ± 0.36	35.02 ± 0.43	34.22 ± 0.44	32.49 ± 0.43	19.85 ± 0.34
[0.7, 0.9)	40.15 ± 0.70	39.30 ± 0.72	36.51 ± 0.71	24.05 ± 0.75	39.30 ± 0.64	39.26 ± 0.68	36.60 ± 0.69	23.56 ± 0.71
[0.9, 1.1)	41.34 ± 0.20	40.70 ± 0.19	38.38 ± 0.17	30.72 ± 0.16	40.30 ± 0.19	39.74 ± 0.16	37.17 ± 0.16	29.25 ± 0.15