Heavy Flavor Averaging Group
August 2014

Compilation of Λ_b Branching Fractions
All branching fractions are in units of 10^{-6}

In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	CDF	LHCb	New Avg.
21	$p\pi^-$	4.1 ± 0.8	$3.6 \pm 0.8 \pm 0.6$ †		3.6 ± 1.0
22	pK^-	4.9 ± 0.9	$5.6 \pm 1.0 \pm 1.0$ †		5.6 ± 1.4
23	$\Lambda\mu^+\mu^-$	10.8 ± 2.8	$17.3 \pm 4.2 \pm 5.5$	$9.6 \pm 1.6 \pm 2.5$	10.8 ± 2.7
–	$\overline{K^0}p\pi^-$	New		$12.6 \pm 1.9 \pm 3.6$ ‡	12.6 ± 4.1
–	K^0pK^-	New		< 3.5 ‡	< 3.5 ‡
–	$\Lambda\eta'$	New		< 6.3 ‡	< 6.3 ‡

† Original experimental relative BF multiplied by the best values (PDG2014) of reference BF. The first error is experimental, the second is from reference BF.
‡ Relative BF transformed to absolute.

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Compilation of Ξ_b^0 Branching Fractions
All branching fractions are in units of 10^{-6}

In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	CDF	LHCb	New Avg.
–	$\overline{K^0}p\pi^-$	New		< 1.6 †	< 1.6 †
–	$\overline{K^0}pK^-$	New		< 1.1 †	< 1.1 †

† Relative BF transformed to absolute.
The quoted numbers are $f_{\Xi_b^0}/f_d \times$BF.

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Differential Branching Fractions ($d\mathcal{B}/dq^2$) of Λ_b decays

In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)
All branching fractions are in units of 10^{-7}

RPP#	Mode	q^2 $[(\mathrm{GeV}/c^2)^2]$ †	PDG2014 Avg.	CDF	LHCb	New Avg.
23	$\Lambda\mu^+\mu^-$	< 2.0	0.3 ± 0.5	$0.15 \pm 2.01 \pm 0.05$	$0.28 \pm 0.38 \pm 0.40$	0.29 ± 0.36
	$\Lambda\mu^+\mu^-$	$[2.0, 4.3]$	0.34 ± 0.28	$1.8 \pm 1.7 \pm 0.6$	$0.31 \pm 0.26 \pm 0.10$	0.34 ± 0.20
	$\Lambda\mu^+\mu^-$	$[4.3, 8.68]$	0.15 ± 0.17	$-0.2 \pm 1.6 \pm 0.1$	$0.15 \pm 0.17 \pm 0.04$	0.15 ± 0.12
	$\Lambda\mu^+\mu^-$	$[10.09, 12.86]$	0.62 ± 0.29	$3.0 \pm 1.5 \pm 1.0$	$0.56 \pm 0.21 \pm 0.20$	0.62 ± 0.20
	$\Lambda\mu^+\mu^-$	$[14.18, 16.00]$	0.82 ± 0.30	$1.0 \pm 0.7 \pm 0.3$	$0.79 \pm 0.24 \pm 0.23$	0.82 ± 0.21
	$\Lambda\mu^+\mu^-$	> 16.00	1.18 ± 0.34	$7.0 \pm 1.9 \pm 2.2$	$1.10 \pm 0.18 \pm 0.29$	1.18 ± 0.24

† See the papers for the exact $q^2 = M^2(\mu^+\mu^-)$ selection.

Λ_b and Ξ_b^0 Branching Fractions: CDF References

[1] CDF Collaboration, (A. Aaltonen *et al.*), Phys. Rev. Lett. **103**, 031801 (2009).

[2] CDF Collaboration, (A. Aaltonen *et al.*), Phys. Rev. Lett. **107**, 201802 (2011).

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[5] LHCb Collaboration (R. Aaij *et al.*), Phys. Lett. B **725**, 25 (2013).

[6] LHCb Collaboration (R. Aaij *et al.*), J. High Energ. Phys. **1404**, 087 (2014).

[7] LHCb Collaboration (R. Aaij *et al.*), LHCb-CONF-2013-010 (2013).