Heavy FLavor AVeraging group (HFLAV) - August 2017

Compilation of B^+ Baryonic Branching Fractions ($\times 10^{-6}$) - UL at 90% CL

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

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	LHCb	Our Avg.
417	$p\bar{p}\pi^+$	1.62 ± 0.20	$1.69 \pm 0.29 \pm 0.26$ † [1]	$1.60^{+0.22}_{-0.19} \pm 0.12$ [2]		$1.62^{+0.21}_{-0.20}$
417	$p\bar{p}\pi^+$ §				$1.07 \pm 0.11 \pm 0.11$ [3]	1.07 ± 0.16
420	$p\bar{p}K^+$	5.9 ± 0.5	$6.7 \pm 0.5 \pm 0.4$ † [4]	$5.54^{+0.27}_{-0.25} \pm 0.36$ [2]	$4.46 \pm 0.21 \pm 0.27$ ¶ [5]	5.14 ± 0.25
421	$\Theta^{++}\bar{p}$ [1]	< 0.091	< 0.09 [4]	< 0.091 [6]		< 0.09
422	$f_J(2221)K^+$ [2]	< 0.41		< 0.41 [6]		< 0.41
423	$p\bar{\Lambda}(1520)$	< 1.5	< 1.5 [4]		$0.315 \pm 0.048 \pm 0.027$ [3]	0.315 ± 0.055
425	$p\bar{p}K^{*+}$	$3.6^{+0.8}_{-0.7}$	$5.3 \pm 1.5 \pm 1.3$ † [1]	$3.38^{+0.73}_{-0.60} \pm 0.39$ ‡ [7]		$3.64^{+0.79}_{-0.70}$
426	$f_J(2221)K^{*+}$ [2]	< 0.77	< 0.77 [1]			< 0.77
427	$p\bar{\Lambda}$	< 0.32		< 0.32 [8]	$0.24^{+0.10}_{-0.08} \pm 0.03$ [9]	$0.24^{+0.10}_{-0.09}$
429	$p\bar{\Lambda}\pi^0$	$3.00^{+0.7}_{-0.6}$		$3.00^{+0.61}_{-0.53} \pm 0.33$ [10]		$3.00^{+0.69}_{-0.62}$
430	$p\bar{\Sigma}(1385)^0$	< 0.47		< 0.47 [10]		< 0.47
431	$\Delta^+\bar{\Lambda}$	< 0.82		< 0.82 [10]		< 0.82
433	$p\bar{\Lambda}\pi^+\pi^-$ (NR)	5.9 ± 1.1		$5.92^{+0.88}_{-0.84} \pm 0.69$ [11]		$5.92^{+1.12}_{-1.09}$
434	$p\bar{\Lambda}\rho^0$	4.8 ± 0.9		$4.78^{+0.67}_{-0.64} \pm 0.60$ [11]		$4.78^{+0.90}_{-0.88}$
435	$p\bar{\Lambda}f_2(1270)$	2.0 ± 0.8		$2.03^{+0.77}_{-0.72} \pm 0.27$ [11]		$2.03^{+0.82}_{-0.77}$
436	$\Lambda\bar{\Lambda}\pi^+$	< 0.94		< 0.94 § [12]		< 0.94 §
437	$\Lambda\bar{\Lambda}K^+$	3.4 ± 0.6		$3.38^{+0.41}_{-0.36} \pm 0.41$ ‡ [12]		$3.38^{+0.58}_{-0.55}$
438	$\Lambda\bar{\Lambda}K^{*+}$	$2.2^{+1.2}_{-0.9}$		$2.19^{+1.13}_{-0.88} \pm 0.33$ § [12]		$2.19^{+1.18}_{-0.94}$
439	$\bar{\Delta}^0 p$	< 1.38		< 1.38 § [2]		< 1.38 §
440	$\Delta^{++}\bar{p}$	< 0.14		< 0.14 § [2]		< 0.14 §

Results for LHCb are relative BFs converted to absolute BFs.

† Charmonium decays to $p\bar{p}$ have been statistically subtracted.

‡ The charmonium mass region has been vetoed.

§ Di-baryon mass is less than 2.85 GeV/c^2.

¶ Includes contribution where $p\bar{p}$ is produced in charmonia decays.

[1] $\Theta(1540)^{++} \to K^+p$ (pentaquark candidate).

[2] In this product of BFs, all daughter BFs not shown are set to 100%.

Heavy FLavor AVeraging group (HFLAV) - August 2017

Compilation of B^0 Baryonic Branching Fractions ($\times 10^{-6}$) - UL at 90% CL

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

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	LHCb	Our Avg.
407	$p\bar{p}$	$0.015^{+0.007}_{-0.005}$	< 0.27 [13]	< 0.11 [8]	$0.0125 \pm 0.0027 \pm 0.0018$ [14]	0.0130 ± 0.003
409	$p\bar{p}K^0$	2.66 ± 0.32	$3.0 \pm 0.5 \pm 0.3$ † [1]	$2.51^{+0.35}_{-0.29} \pm 0.21$ ‡ [7]		$2.66^{+0.34}_{-0.32}$
410	$\Theta^+\bar{p}$ §	< 0.05	< 0.05 [1]	< 0.23 [6]		< 0.05
411	$f_J(2221)K^0$ ¶	< 0.45	< 0.45 [1]			< 0.45
412	$p\bar{p}K^{*0}$	$1.24^{+0.28}_{-0.25}$	$1.47 \pm 0.45 \pm 0.40$ † [1]	$1.18^{+0.29}_{-0.25} \pm 0.11$ ‡ [7]		$1.24^{+0.28}_{-0.25}$
413	$f_J(2221)K^{*0}$ ¶	< 0.15	< 0.15 [1]			< 0.15
414	$p\overline{\Lambda}\pi^-$	3.14 ± 0.29	$3.07 \pm 0.31 \pm 0.23$ [15]	$3.23^{+0.33}_{-0.29} \pm 0.29$ [10]		$3.14^{+0.29}_{-0.28}$
415	$p\overline{\Sigma}(1385)^-$	< 0.26		< 0.26 [10]		< 0.26
416	$\Delta^0\overline{\Lambda}$	< 0.93		< 0.93 [10]		< 0.93
417	$p\overline{\Lambda}K^-$	< 0.82		< 0.82 [16]		< 0.82
418	$p\overline{\Sigma}^0\pi^-$	< 3.8		< 3.8 [16]		< 3.8
419	$\overline{\Lambda}\Lambda$	< 0.32		< 0.32 [8]		< 0.32
420	$\overline{\Lambda}\Lambda K^0$	$4.8^{+1.0}_{-0.9}$		$4.76^{+0.84}_{-0.68} \pm 0.61$ ‡ [12]		$4.76^{+1.04}_{-0.91}$
421	$\Lambda\overline{\Lambda}K^{*0}$	$2.5^{+0.9}_{-0.8}$		$2.46^{+0.87}_{-0.72} \pm 0.34$ ‡ [12]		$2.46^{+0.93}_{-0.80}$
421	$p\bar{p}K^+K^-$				$0.113 \pm 0.028 \pm 0.011 \pm 0.008$ [17]	0.113 ± 0.031
421	$p\bar{p}K^+\pi^-$				$5.9 \pm 0.3 \pm 0.3 \pm 0.4$ [17]	5.9 ± 0.6
421	$p\bar{p}\pi^+\pi^-$				$2.7 \pm 0.1 \pm 0.1 \pm 0.2$ [17]	2.7 ± 0.2

Results for LHCb are relative BFs converted to absolute BFs.

† Charmonium decays to $p\bar{p}$ have been statistically subtracted.

‡ The charmonium mass region has been vetoed.

§ $\Theta(1540)^+ \to pK^0$ (pentaquark candidate).

¶ In this product of BFs, all daughter BFs not shown are set to 100%.

Heavy FLavor AVeraging group (HFLAV) - August 2017

Compilation of B^+ and B^0 Baryonic Relative Branching Fractions

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

RPP#	Mode	PDG2014 Avg.	LHCb		Our Avg.
417	$\mathcal{B}(B^+ \to p\bar{p}\pi^+, m_{p\bar{p}} < 2.85\ \text{GeV}/c^2)/\mathcal{B}(B^+ \to J/\psi(\to p\bar{p})\pi^+)$		$12.0 \pm 1.2 \pm 0.3$	[3]	12.0 ± 1.2
420	$\mathcal{B}(B^+ \to p\bar{p}K^+)/\mathcal{B}(B^+ \to J/\psi(\to p\bar{p})K^+)$		$4.91 \pm 0.19 \pm 0.14$ †	[5]	4.91 ± 0.24
420	$\mathcal{B}(B^+ \to p\bar{p}K^+)/\mathcal{B}(B^+ \to J/\psi K^+)$	$0.0104 \pm 0.0005 \pm 0.0001$	$0.0104 \pm 0.0005 \pm 0.0001$ †‡	[5]	0.0100 ± 0.0010
423	$\mathcal{B}(B^+ \to \overline{\Lambda}(1520)(\to K^+\bar{p})p)/\mathcal{B}(B^+ \to J/\psi(\to p\bar{p})\pi^+)$		$0.033 \pm 0.005 \pm 0.007$	[3]	0.033 ± 0.009
423	$\mathcal{B}(B^0 \to p\bar{p}K^+K^-)/\mathcal{B}(B^0 \to p\bar{p}K^+\pi^-)$		$0.019 \pm 0.005 \pm 0.002$	[17]	0.019 ± 0.005
423	$\mathcal{B}(B^0 \to p\bar{p}\pi^+\pi^-)/\mathcal{B}(B^0 \to p\bar{p}K^+\pi^-)$		$0.46 \pm 0.02 \pm 0.02$	[17]	0.46 ± 0.03

† Includes contribution where $p\bar{p}$ is produced in charmonia decays.

‡ Original experimental relative BF multiplied by the best values (PDG2014) of certain reference BFs. The first error is experimental, and the second is from the reference BFs.

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