

# Heavy FLavor AVeraging group (HFLAV) - April 2019

Compilation of  $B_c^+$  Branching Fractions - UL at 90% CL

Preliminary Updated results not included in PDG Live as of Dec. 31, 2017

RPP#	Mode	PDG2017 AVG.	LHCb	Our Avg.
18	$f_c \mathcal{B}(B_c^+ \rightarrow p \bar{p} \pi^+) / f_u$ §	$3.6 \times 10^{-8}$	$< 2.8 \times 10^{-8}$ [1]	$< 2.8 \times 10^{-8}$
25	$f_c \mathcal{B}(B_c^+ \rightarrow K^+ K^0) / f_u \mathcal{B}(B^+ \rightarrow K_S^0 \pi^+)$ †		$< 5.8 \times 10^{-2}$ [2]	$< 5.8 \times 10^{-2}$
	$\sigma(B_c^+) \mathcal{B}(B_c^+ \rightarrow K^+ K^- \pi^+) / \sigma(B^+)$ †		$< 15 \times 10^{-8}$ [3]	$< 15 \times 10^{-8}$

Channels with no RPP# were not included in PDG Live as of Dec. 31, 2017.

§ PDG result at 95% CL, LHCb at 90% CL.

† Measured in the annihilation region  $m(K^- \pi^+) < 1.834 \text{ GeV}/c^2$ .

‡ PDG converts the LHCb result to  $f_c \mathcal{B}(B_c^+ \rightarrow K^+ K^0) < 4.6 \times 10^{-7}$ .

## References

- [1] R. Aaij *et al.*, (LHCb collaboration), Phys. Lett. **B759**, 313, (2016), arXiv:1603.07037 [hep-ex].
- [2] R. Aaij *et al.*, (LHCb collaboration), Phys. Lett. **B726**, 646, (2013), arXiv:1308.1277 [hep-ex].
- [3] R. Aaij *et al.*, (LHCb collaboration), Phys. Rev. **D94**, 091102, (2016), arXiv:1607.06134 [hep-ex].