Charmonium modes

Γ_{48}	$B^+ \to J/\psi(1S) K^+$		$(1.02 \pm 0.14) \times 10^{-3}$	
Γ_{49}	$B^+ \to J/\psi(1S) K^+ \pi^+ \pi^-$		$(1.4 \pm 0.6) \times 10^{-3}$	
Γ_{50}	$B^+ \to J/\psi(1S) K^*(892)^+$		$(1.7 \pm 0.5) \times 10^{-3}$	
Γ_{51}	$B^+ \to \psi(2S) K^+$		$(6.9 \pm 3.1) \times 10^{-4}$	S=1.3
Γ_{52}	$B^+ \to \psi(2S) K^*(892)^+$		$< 3.0 \times 10^{-3}$	CL=90%
Γ_{53}	$B^+ \to \psi(2S) K^*(892)^+ \pi^+ \pi^-$		$(1.9 \pm 1.2) \times 10^{-3}$	
Γ_{54}	$B^+ \to \chi_{c1}(1P) K^+$		$(1.0 \pm 0.4) \times 10^{-3}$	
Γ_{55}	$B^+ \to \chi_{c1}(1P) K^*(892)^+$		$< 2.1 \times 10^{-3}$	CL=90%

***K* or *K** modes**

Γ_{56}	$B^+ \to K^0 \pi^+$		$< 1.0 \times 10^{-4}$	CL=90%
Γ_{57}	$B^+ \to K^*(892)^0 \pi^+$		$< 1.5 \times 10^{-4}$	CL=90%
Γ_{58}	$B^+ \to K^+ \pi^- \pi^+$ (no charm)		$< 1.9 \times 10^{-4}$	CL=90%
Γ_{59}	$B^+ \to K_1(1400)^0 \pi^+$		$< 2.6 \times 10^{-3}$	CL=90%
Γ_{60}	$B^+ \to K_2^*(1430)^0 \pi^+$		$< 6.8 \times 10^{-4}$	CL=90%
Γ_{61}	$B^+ \to K^+ \rho^0$		$< 8 \times 10^{-5}$	CL=90%
Γ_{62}	$B^+ \to K^*(892)^+ \pi^+ \pi^-$		$< 1.1 \times 10^{-3}$	CL=90%
Γ_{63}	$B^+ \to K^*(892)^+ \rho^0$		$< 9.0 \times 10^{-4}$	CL=90%
Γ_{64}	$B^+ \to K_1(1400)^+ \rho^0$		$< 7.8 \times 10^{-4}$	CL=90%
Γ_{65}	$B^+ \to K_2^*(1430)^+ \rho^0$		$< 1.5 \times 10^{-3}$	CL=90%
Γ_{66}	$B^+ \to K^+ K^- K^+$		$< 3.5 \times 10^{-4}$	CL=90%
Γ_{67}	$B^+ \to K^+ \phi$		$< 9 \times 10^{-5}$	CL=90%
Γ_{68}	$B^+ \to K^*(892)^+ K^+ K^-$		$< 1.6 \times 10^{-3}$	CL=90%
Γ_{69}	$B^+ \to K^*(892)^+ \phi$		$< 1.3 \times 10^{-3}$	CL=90%
Γ_{70}	$B^+ \to K_1(1400)^+ \phi$		$< 1.1 \times 10^{-3}$	CL=90%
Γ_{71}	$B^+ \to K_2^*(1430)^+ \phi$		$< 3.4 \times 10^{-3}$	CL=90%
Γ_{72}	$B^+ \to K^+ f_0(980)$		$< 8 \times 10^{-5}$	CL=90%
Γ_{73}	$B^+ \to K^*(892)^+ \gamma$		$(5.7 \pm 3.3) \times 10^{-5}$	
Γ_{74}	$B^+ \to K_1(1270)^+ \gamma$		$< 7.3 \times 10^{-3}$	CL=90%
Γ_{75}	$B^+ \to K_1(1400)^+ \gamma$		$< 2.2 \times 10^{-3}$	CL=90%
Γ_{76}	$B^+ \to K_2^*(1430)^+ \gamma$		$< 1.4 \times 10^{-3}$	CL=90%
Γ_{77}	$B^+ \to K^*(1680)^+ \gamma$		$< 1.9 \times 10^{-3}$	CL=90%
Γ_{78}	$B^+ \to K_3^*(1780)^+ \gamma$		$< 5.5 \times 10^{-3}$	CL=90%
Γ_{79}	$B^+ \to K_4^*(2045)^+ \gamma$		$< 9.9 \times 10^{-3}$	CL=90%

Light unflavored meson modes

Γ_{80}	$B^+ \to \pi^+ \pi^0$		$< 2.4 \times 10^{-4}$	CL=90%
Γ_{81}	$B^+ \to \pi^+ \pi^+ \pi^-$		$< 1.9 \times 10^{-4}$	CL=90%
Γ_{82}	$B^+ \to \rho^0 \pi^+$		$< 1.5 \times 10^{-4}$	CL=90%
Γ_{83}	$B^+ \to \pi^+ f_0(980)$		$< 1.4 \times 10^{-4}$	CL=90%
Γ_{84}	$B^+ \to \pi^+ f_2(1270)$		$< 2.4 \times 10^{-4}$	CL=90%
Γ_{85}	$B^+ \to \pi^+ \pi^0 \pi^0$		$< 8.9 \times 10^{-4}$	CL=90%
Γ_{86}	$B^+ \to \rho^+ \pi^0$		$< 5.5 \times 10^{-4}$	CL=90%
Γ_{87}	$B^+ \to \pi^+ \pi^- \pi^+ \pi^0$		$< 4.0 \times 10^{-3}$	CL=90%
Γ_{88}	$B^+ \to \rho^+ \rho^0$		$< 1.0 \times 10^{-3}$	CL=90%
Γ_{89}	$B^+ \to a_1(1260)^+ \pi^0$		$< 1.7 \times 10^{-3}$	CL=90%
Γ_{90}	$B^+ \to a_1(1260)^0 \pi^+$		$< 9.0 \times 10^{-4}$	CL=90%
Γ_{91}	$B^+ \to \omega \pi^+$		$< 4.0 \times 10^{-4}$	CL=90%
Γ_{92}	$B^+ \to \eta \pi^+$		$< 7.0 \times 10^{-4}$	CL=90%
Γ_{93}	$B^+ \to \pi^+ \pi^+ \pi^+ \pi^- \pi^-$		$< 8.6 \times 10^{-4}$	CL=90%
Γ_{94}	$B^+ \to \rho^0 a_1(1260)^+$		$< 6.2 \times 10^{-4}$	CL=90%
Γ_{95}	$B^+ \to \rho^0 a_2(1320)^+$		$< 7.2 \times 10^{-4}$	CL=90%
Γ_{96}	$B^+ \to \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^0$		$< 6.3 \times 10^{-3}$	CL=90%
Γ_{97}	$B^+ \to a_1(1260)^+ a_1(1260)^0$		< 1.3 %	CL=90%

Baryon modes

Γ_{98}	$B^+ \to p \overline{p} \pi^+$		$< 1.6 \times 10^{-4}$	CL=90%
Γ_{99}	$B^+ \to p \overline{p} \pi^+ \pi^+ \pi^-$		$< 5.2 \times 10^{-4}$	CL=90%
Γ_{100}	$B^+ \to p \overline{\Lambda}$		$< 6 \times 10^{-5}$	CL=90%
Γ_{101}	$B^+ \to p \overline{\Lambda} \pi^+ \pi^-$		$< 2.0 \times 10^{-4}$	CL=90%
Γ_{102}	$B^+ \to \overline{\Delta}^0 p$		$< 3.8 \times 10^{-4}$	CL=90%
Γ_{103}	$B^+ \to \Delta^{++} \overline{p}$		$< 1.5 \times 10^{-4}$	CL=90%

Lepton Family number (*LF*) or Lepton number (*L*) violating modes, or $\Delta B = 1$ weak neutral current (*B1*) modes

Γ_{104}	$B^+ \to \pi^+ e^+ e^-$	*B1*	$< 3.9 \times 10^{-3}$	CL=90%
Γ_{105}	$B^+ \to \pi^+ \mu^+ \mu^-$	*B1*	$< 9.1 \times 10^{-3}$	CL=90%
Γ_{106}	$B^+ \to K^+ e^+ e^-$	*B1*	$< 6 \times 10^{-5}$	CL=90%
Γ_{107}	$B^+ \to K^+ \mu^+ \mu^-$	*B1*	$< 1.7 \times 10^{-4}$	CL=90%
Γ_{108}	$B^+ \to K^*(892)^+ e^+ e^-$	*B1*	$< 6.9 \times 10^{-4}$	CL=90%
Γ_{109}	$B^+ \to K^*(892)^+ \mu^+ \mu^-$	*B1*	$< 1.2 \times 10^{-3}$	CL=90%
Γ_{110}	$B^+ \to \pi^+ e^+ \mu^-$	*LF*	$< 6.4 \times 10^{-3}$	CL=90%
Γ_{111}	$B^+ \to \pi^+ e^- \mu^+$	*LF*	$< 6.4 \times 10^{-3}$	CL=90%
Γ_{112}	$B^+ \to K^+ e^+ \mu^-$	*LF*	$< 6.4 \times 10^{-3}$	CL=90%
Γ_{113}	$B^+ \to K^+ e^- \mu^+$	*LF*	$< 6.4 \times 10^{-3}$	CL=90%
Γ_{114}	$B^+ \to \pi^- e^+ e^+$	*L*	$< 3.9 \times 10^{-3}$	CL=90%
Γ_{115}	$B^+ \to \pi^- \mu^+ \mu^+$	*L*	$< 9.1 \times 10^{-3}$	CL=90%
Γ_{116}	$B^+ \to \pi^- e^+ \mu^+$	*L*	$< 6.4 \times 10^{-3}$	CL=90%
Γ_{117}	$B^+ \to K^- e^+ e^+$	*L*	$< 3.9 \times 10^{-3}$	CL=90%
Γ_{118}	$B^+ \to K^- \mu^+ \mu^+$	*L*	$< 9.1 \times 10^{-3}$	CL=90%
Γ_{119}	$B^+ \to K^- e^+ \mu^+$	*L*	$< 6.4 \times 10^{-3}$	CL=90%

B DECAY MODES

$\overline{B}$ modes are charge conjugates of the modes below.

For the following modes, the charge of *B* was not determined. The measurements are for an admixture of *B* mesons at the $\Upsilon(4S)$ unless otherwise indicated by a footnote and a "$\overline{b}$" instead of "*B*" in the initial state.

Semileptonic and leptonic modes

Γ_{120}	$B \to e^+ \nu_e$ anything	[b]	(10.4 ± 0.4) %	S=1.3
Γ_{121}	$B \to \overline{D}^*(2010) e^+ \nu_e$		(7.0 ± 2.3) %	
Γ_{122}	$B \to \overline{p} e^+ \nu_e$ anything		$< 1.6 \times 10^{-3}$	CL=90%
Γ_{123}	$B \to \mu^+ \nu_\mu$ anything	[b]	(10.3 ± 0.5) %	
Γ_{124}	$B \to \ell^+ \nu_\ell$ anything	[a,b]	(10.43 ± 0.24) %	
Γ_{125}	$B \to D^- \ell^+ \nu_\ell$ anything	[a]	(2.7 ± 0.8) %	
Γ_{126}	$B \to \overline{D}^0 \ell^+ \nu_\ell$ anything	[a]	(7.0 ± 1.4) %	
Γ_{127}	$B \to D^{**} \ell^+ \nu_\ell$	[a,c]	(2.7 ± 0.7) %	
Γ_{128}	$B \to D_s^- \ell^+ \nu_\ell$ anything	[a]	$< 9 \times 10^{-3}$	CL=90%
Γ_{129}	$B \to D_s^- \ell^+ \nu_\ell K^+$ anything	[a]	$< 6 \times 10^{-3}$	CL=90%
Γ_{130}	$B \to D_s^- \ell^+ \nu_\ell K^0$ anything	[a]	$< 9 \times 10^{-3}$	CL=90%
Γ_{131}	$B \to \ell^+ \nu_\ell$ noncharmed	[a]		
Γ_{132}	$B \to K^+ \ell^+ \nu_\ell$ anything	[a]	(5.6 ± 1.0) %	
Γ_{133}	$B \to K^- \ell^+ \nu_\ell$ anything	[a]	(1.0 ± 0.6) %	
Γ_{134}	$B \to K^0 / \overline{K}^0 \ell^+ \nu_\ell$ anything	[a]	(4.1 ± 0.8) %	
Γ_{135}	$\overline{b} \to \tau^+ \nu_\tau$ anything	[d]	(4.1 ± 1.0) %	

***D*, *D**, or D_s modes**

Γ_{136}	$B \to D^-$ anything		(26 ± 4) %	
Γ_{137}	$B \to \overline{D}^0$ anything		(54 ± 6) %	
Γ_{138}	$B \to D^*(2010)^-$ anything		(23.2 ± 3.3) %	S=1.1
Γ_{139}	$B \to D_s^{\pm}$ anything	[e]	(8.9 ± 1.1) %	
Γ_{140}	$B \to D_s D$, $D_s^* D$, $D_s D^*$, or $D_s^* D^*$	[e]	(5.0 ± 0.9) %	
Γ_{141}	$B \to D^*(2010) \gamma$		$< 1.1 \times 10^{-3}$	CL=90%
Γ_{142}	$B \to D_s^+ \pi^-$, $D_s^{*+} \pi^-$, $D_s^+ \rho^-$, $D_s^{*+} \rho^-$, $D_s^+ \pi^0$, $D_s^{*+} \pi^0$, $D_s^+ \eta$, $D_s^{*+} \eta$, $D_s^+ \rho^0$, $D_s^{*+} \rho^0$, $D_s^+ \omega$, $D_s^{*+} \omega$		$< 5 \times 10^{-4}$	CL=90%

Charmonium modes

Γ_{143}	$B \to J/\psi(1S)$ anything		(1.30 ± 0.17) %	
Γ_{144}	$B \to \psi(2S)$ anything		$(4.6 \pm 2.0) \times 10^{-3}$	
Γ_{145}	$B \to \chi_{c1}(1P)$ anything		(1.1 ± 0.4) %	

***K* or *K** modes**

Γ_{146}	$B \to K^{\pm}$ anything	[e]	(85 ± 11) %	
Γ_{147}	$B \to K^+$ anything			
Γ_{148}	$B \to K^-$ anything			
Γ_{149}	$B \to K^0 / \overline{K}^0$ anything		(63 ± 8) %	
Γ_{150}	$b \to s \gamma$	[f]	$< 1.2 \times 10^{-3}$	CL=90%
Γ_{151}	$B \to K^*(892) \gamma$		$< 2.4 \times 10^{-4}$	CL=90%
Γ_{152}	$B \to K_1(1400) \gamma$		$< 4.1 \times 10^{-4}$	CL=90%
Γ_{153}	$B \to K_2^*(1430) \gamma$		$< 8.3 \times 10^{-4}$	CL=90%
Γ_{154}	$B \to K_2(1770) \gamma$		$< 1.2 \times 10^{-3}$	CL=90%
Γ_{155}	$B \to K_3^*(1780) \gamma$		$< 3.0 \times 10^{-3}$	CL=90%
Γ_{156}	$B \to K_4^*(2045) \gamma$		$< 1.0 \times 10^{-3}$	CL=90%

Light unflavored meson modes

Γ_{157}	$B \to \phi$ anything		(2.3 ± 0.8) %	

Baryon modes

Γ_{158}	$B \to$ charmed-baryon anything		(6.4 ± 1.1) %	
Γ_{159}	$B \to \overline{\Sigma}_c^{--}$ anything		$(4.8 \pm 2.5) \times 10^{-3}$	
Γ_{160}	$B \to \overline{\Sigma}_c^-$ anything		< 1.1 %	CL=90%
Γ_{161}	$B \to \overline{\Sigma}_c^0$ anything		$(5.3 \pm 2.5) \times 10^{-3}$	
Γ_{162}	$B \to \overline{\Sigma}_c^0 N (N = p$ or $n)$		$< 1.7 \times 10^{-3}$	CL=90%
Γ_{163}	$B \to p$ anything $+ \ \overline{p}$ anything		(8.0 ± 0.5) %	