BOTTOM, CHARMED MESONS ($B = C = \pm 1$)

$B_c^+ = c\overline{b}$, $B_c^- = \overline{c}b$, similarly for B_c^*'s

B_c^+

$I(J^P) = 0(0^-)$
I, J, P need confirmation.

Quantum numbers shown are quark-model predicitions.

Mass $m = 6274.9 \pm 0.8$ MeV
Mean life $\tau = (0.510 \pm 0.009) \times 10^{-12}$ s

B_c^- modes are charge conjugates of the modes below.

B_c^+ DECAY MODES × B($\overline{b} \to B_c$)	Fraction (Γ_i/Γ)	Confidence level	p (MeV/c)
The following quantities are not pure branching ratios; rather the fraction $\Gamma_i/\Gamma \times$ B($\overline{b} \to B_c$).			
$J/\psi(1S)\ell^+\nu_\ell$ anything	$(8.1 \pm 1.2) \times 10^{-5}$		–
$J/\psi(1S)\pi^+$	seen		2371
$J/\psi(1S)K^+$	seen		2341
$J/\psi(1S)\pi^+\pi^+\pi^-$	seen		2350
$J/\psi(1S)a_1(1260)$	$< 1.2 \times 10^{-3}$	90%	2169
$J/\psi(1S)K^+K^-\pi^+$	seen		2203
$J/\psi(1S)\pi^+\pi^+\pi^+\pi^-\pi^-$	seen		2309
$\psi(2S)\pi^+$	seen		2052
$J/\psi(1S)D^0K^+$	seen		1539
$J/\psi(1S)D^*(2007)^0K^+$	seen		1412
$J/\psi(1S)D^*(2010)^+K^{*0}$	seen		920
$J/\psi(1S)D^+K^{*0}$	seen		1123
$J/\psi(1S)D_s^+$	seen		1822
$J/\psi(1S)D_s^{*+}$	seen		1728
$J/\psi(1S)p\overline{p}\pi^+$	seen		1792
$\chi_c^0\pi^+$	$(2.4\ ^{+0.9}_{-0.8}) \times 10^{-5}$		2205
$p\overline{p}\pi^+$	not seen		2970
D^0K^+	$(3.8\ ^{+1.2}_{-1.1}) \times 10^{-7}$		2837
$D^0\pi^+$	$< 1.6 \times 10^{-7}$	95%	2858
$D^{*0}\pi^+$	$< 4 \times 10^{-7}$	95%	2815
$D^{*0}K^+$	$< 4 \times 10^{-7}$	95%	2793

$D_s^+ \overline{D}^0$	< 1.4	$\times 10^{-7}$	90%	2484
$D_s^+ D^0$	< 6	$\times 10^{-8}$	90%	2484
$D^+ \overline{D}^0$	< 3.0	$\times 10^{-6}$	90%	2521
$D^+ D^0$	< 1.9	$\times 10^{-6}$	90%	2521
$D^*(2010)^+ \overline{D}^0$	< 6.2	$\times 10^{-3}$	90%	2467
$D_s^{*+} \overline{D}^*(2007)^0$	< 1.7	$\times 10^{-6}$	90%	2366
$D_s^{*+} D^*(2007)^0$	< 3.1	$\times 10^{-6}$	90%	2366
$D^*(2010)^+ \overline{D}^*(2007)^0$	< 1.0	$\times 10^{-4}$	90%	2410
$D^*(2010)^+ D^*(2007)^0$	< 2.0	$\times 10^{-5}$	90%	2410
$D^+ K^{*0}$	< 0.20	$\times 10^{-6}$	90%	2783
$D^+ \overline{K}^{*0}$	< 0.16	$\times 10^{-6}$	90%	2783
$D_s^+ K^{*0}$	< 0.28	$\times 10^{-6}$	90%	2751
$D_s^+ \overline{K}^{*0}$	< 0.4	$\times 10^{-6}$	90%	2751
$D_s^+ \phi$	< 0.32	$\times 10^{-6}$	90%	2727
$K^+ K^0$	< 4.6	$\times 10^{-7}$	90%	3098
$B_s^0 \pi^+ /$ B$(\overline{b} \to \ B_s)$	$(2.37^{+0.37}_{-0.35}) \times 10^{-3}$			–