

Heavy Flavor Averaging Group - October 2016

B^+ Branching Fractions (decays with kaons part 1) ($\times 10^{-6}$) - UL at 90% CL
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
262	$K^0\pi^+$	23.7 ± 0.8	$23.9 \pm 1.1 \pm 1.0$	$23.97 \pm 0.53 \pm 0.71$	$18.8^{+3.7+2.1}_{-3.3-1.8}$			23.79 ± 0.75
263	$K^+\pi^0$	12.9 ± 0.5	$13.6 \pm 0.6 \pm 0.7$	$12.62 \pm 0.31 \pm 0.56$	$12.9^{+2.4+1.2}_{-2.2-1.1}$			$12.94^{+0.52}_{-0.51}$
264	$\eta'K^+$	70.6 ± 2.5	$71.5 \pm 1.3 \pm 3.2$	$69.2 \pm 2.2 \pm 3.7$	$80^{+10}_{-9} \pm 7$			71.1 ± 2.6
265	$\eta'K^{*+}$	$4.8^{+1.8}_{-1.6}$	$4.8^{+1.6}_{-1.4} \pm 0.8$	< 2.9	< 35			$4.8^{+1.8}_{-1.6}$
266	$\eta'K_0^*(1430)^+$	5.2 ± 2.1	$5.2 \pm 1.9 \pm 1.0$					5.2 ± 2.1
267	$\eta'K_2^*(1430)^+$	28 ± 5	$28.0^{+4.6}_{-4.3} \pm 2.6$					$28.0^{+5.3}_{-5.0}$
268	ηK^+	2.4 ± 0.4	$2.94^{+0.39}_{-0.34} \pm 0.21$	$2.12 \pm 0.23 \pm 0.11$	$2.2^{+2.8}_{-2.2}$			$2.36^{+0.22}_{-0.21}$
269	ηK^{*+}	19.3 ± 1.6	$18.9 \pm 1.8 \pm 1.3$	$19.3^{+2.0}_{-1.9} \pm 1.5$	$26.4^{+9.6}_{-8.2} \pm 3.3$			19.3 ± 1.6
270	$\eta K_0^*(1430)^+$	18 ± 4	$18.2 \pm 2.6 \pm 2.6$					18.2 ± 3.7
271	$\eta K_2^*(1430)^+$	9.1 ± 3.0	$9.1 \pm 2.7 \pm 1.4$					9.1 ± 3.0
272	$\eta(1295)K^+ \dagger$	$2.9^{+0.8}_{-0.7}$	$2.9^{+0.8}_{-0.7} \pm 0.2 \S$					$2.9^{+0.8}_{-0.7}$
274	$\eta(1405)K^+ \dagger$	< 1.2	< 1.2					< 1.2
275	$\eta(1475)K^+ \dagger$	$13.8^{+2.1}_{-1.8}$	$13.8^{+1.8+1.0}_{-1.7-0.6}$					$13.8^{+2.1}_{-1.8}$
276	$f_1(1285)K^+$	< 2.0	< 2.0					< 2.0
277	$f_1(1420)K^+ \dagger$	< 2.9	< 2.9					< 2.9
279	$\phi(1680)K^+ \dagger$	< 3.4	< 3.4					< 3.4
280	$f_0(1500)K^+$	3.7 ± 2.2	$3.7 \pm 2.2 \ddagger$					3.7 ± 2.2
281	ωK^+	6.7 ± 0.8	$6.3 \pm 0.5 \pm 0.3$	$6.8 \pm 0.4 \pm 0.4$	$3.2^{+2.4}_{-1.9} \pm 0.8$			6.5 ± 0.4
282	ωK^{*+}	< 7.4	< 7.4		< 87			< 7.4
283	$\omega(K\pi)_0^{*+}$	28 ± 4	$27.5^{+3.0}_{-2.6}$					$27.5^{+3.0}_{-2.6}$
284	$\omega K_0^*(1430)^+$	24 ± 5	$24.0 \pm 2.6 \pm 4.4$					24.0 ± 5.1
285	$\omega K_2^*(1430)^+$	21 ± 4	$21.5 \pm 3.6 \pm 2.4$					21.5 ± 4.3
286	$a_0(980)^+K^0 \dagger$	< 3.9	< 3.9					< 3.9
287	$a_0(980)^0K^+ \dagger$	< 2.5	< 2.5					< 2.5
288	$K^{*0}\pi^+$	10.1 ± 0.9	$10.8 \pm 0.6^{+1.2}_{-1.4}$	$9.7 \pm 0.6^{+0.8}_{-0.9}$	< 16			$10.1^{+0.8}_{-0.9}$
289	$K^{*+}\pi^0$	8.2 ± 1.9	$8.2 \pm 1.5 \pm 1.1$		$7.1^{+11.4}_{-7.1} \pm 1.0$			8.2 ± 1.8
290	$K^+\pi^+\pi^-$	51 ± 2.9	$54.4 \pm 1.1 \pm 4.6$	$48.8 \pm 1.1 \pm 3.6$				51.0 ± 3.0
291	$K^+\pi^+\pi^- (NR)$	$16.3^{+2.1}_{-1.5}$	$9.3 \pm 1.0^{+6.9}_{-1.7}$	$16.9 \pm 1.3^{+1.7}_{-1.6}$	< 28			16.3 ± 2.0
292	$\omega(782)K^+ (K^+\pi^+\pi^-)$	6 ± 9	$5.9^{+8.8+0.5}_{-9.0-0.4}$					$5.9^{+8.8}_{-9.0}$
293	$f_0(980)K^+ (K^+\pi^+\pi^-) \dagger$	$9.4^{+1.0}_{-1.2}$	$10.3 \pm 0.5^{+2.0}_{-1.4}$	$8.8 \pm 0.8^{+0.9}_{-1.8}$				$9.4^{+0.9}_{-1.0}$
294	$f_2(1270)^0K^+ (K^+\pi^+\pi^-)$	1.07 ± 0.27	$0.88^{+0.38+0.01}_{-0.33-0.03}$	$1.33 \pm 0.30^{+0.23}_{-0.34}$				1.07 ± 0.29
295	$f_0(1370)^0K^+ (K^+\pi^+\pi^-) \dagger$	< 10.7	< 10.7					< 10.7
296	$\rho(1450)^0K^+ (K^+\pi^+\pi^-)$	< 11.7	< 11.7					< 11.7
297	$f_2'(1525)K^+ (K^+\pi^+\pi^-)$	< 3.4	< 3.4					< 3.4
298	$\rho^0K^+ (K^+\pi^+\pi^-)$	3.7 ± 0.5	$3.56 \pm 0.45^{+0.57}_{-0.46}$	$3.89 \pm 0.47^{+0.43}_{-0.41}$	< 17			$3.74^{+0.49}_{-0.45}$
299	$K_0^*(1430)^0\pi^+ (K^+\pi^+\pi^-)$	45^{+9}_{-7}	$32.0 \pm 1.2^{+10.8}_{-6.0}$	$51.6 \pm 1.7^{+7.0}_{-7.5}$				45.1 ± 6.3
300	$K_2^*(1430)^0\pi^+ (K^+\pi^+\pi^-)$	$5.6^{+2.2}_{-1.5}$	$5.6 \pm 1.2^{+1.8}_{-0.8}$	< 6.9				$5.6^{+2.2}_{-1.4}$
301	$K^*(1410)^0\pi^+ (K^+\pi^+\pi^-)$	< 45	< 45	< 45				< 45
302	$K^*(1680)^0\pi^+ (K^+\pi^+\pi^-)$	< 12	< 15	< 12				< 12
303	$K^+\pi^0\pi^0$	16.2 ± 1.9	$16.2 \pm 1.2 \pm 1.5$					16.2 ± 1.9
304	$f_0(980)K^+ (K^+\pi^0\pi^0)$	2.8 ± 0.8	$2.8 \pm 0.6 \pm 0.5$					2.8 ± 0.8
305	$K^-\pi^+\pi^+$	< 0.95	< 0.95	< 4.5			< 0.046	< 0.046
306	$K^-\pi^+\pi^+ (NR)$	< 56			< 56			< 56
307	$K_1(1270)^0\pi^+$	< 40	< 40					< 40
308	$K_1(1400)^0\pi^+$	< 39	< 39					< 39
309	$K^0\pi^+\pi^0$	< 66			< 66			< 66
310	$\rho^+K^0(K^0\pi^+\pi^0)$	8.0 ± 1.5	$8.0^{+1.4}_{-1.3} \pm 0.6$		< 48			$8.0^{+1.5}_{-1.4}$
311	$K^{*+}\pi^+\pi^-$	75 ± 10	$75.3 \pm 6.0 \pm 8.1$					75.3 ± 10.1
312	$K^{*+}\rho^0$	4.6 ± 1.1	$4.6 \pm 1.0 \pm 0.4$		< 74			4.6 ± 1.1
313	$f_0(980)K^{*+} \dagger$	4.2 ± 0.7	$4.2 \pm 0.6 \pm 0.3$					4.2 ± 0.7

† Product BF - daughter BF taken to be 100%

§ Product BF $\times \mathcal{B}(\eta(1295) \rightarrow \eta\pi\pi)$

‡ Average of results in $K_S^0K^+K^-$, $K_S^0K_S^0K^+$ [21] and $K^+\pi^+\pi^-$ [56]. Reference [56] includes an f_X resonance with parameters that are compatible with $f_0(1500)$.

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B^+ Branching Fractions (decays with kaons part 2) ($\times 10^{-6}$) - UL at 90% CL
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
314	$a_1^+ K^0$	35 ± 7	$34.9 \pm 5.0 \pm 4.4$					34.9 ± 6.7
315	$b_1^+ K^0 \dagger$	9.6 ± 1.9	$9.6 \pm 1.7 \pm 0.9$					9.6 ± 1.9
317	$K_1(1400)^+ \rho^0$	< 780	$< 780^\diamond$					$< 780^\diamond$
318	$K_2(1430)^+ \rho^0$	< 1500	$< 1500^\diamond$					$< 1500^\diamond$
319	$b_1^0 K^+ \dagger$	9.1 ± 2.0	$9.1 \pm 1.7 \pm 1.0$					9.1 ± 2.0
320	$b_1^+ K^{*0} \dagger$	< 5.9	< 5.9					< 5.9
321	$b_1^0 K^{*+} \dagger$	< 6.7	< 6.7					< 6.7
322	$K^+ \bar{K}^0$	1.31 ± 0.17	$1.61 \pm 0.44 \pm 0.09$	$1.11 \pm 0.19 \pm 0.05$	< 3.3		$1.52 \pm 0.21 \pm 0.05$	1.32 ± 0.14
323	$\bar{K}^0 K^+ \pi^0$	< 24			< 24			< 24
324	$K^+ K_S K_S$	10.8 ± 0.6	$10.6 \pm 0.5 \pm 0.3$	$13.4 \pm 1.9 \pm 1.5$				10.8 ± 0.6
325	$f_0(980) K^+ (K^+ K_S K_S)$	14.7 ± 3.3	$14.7 \pm 2.8 \pm 1.8$					14.7 ± 3.3
326	$f_0(1710) K^+ (K^+ K_S K_S)$	$0.48^{+0.40}_{-0.26}$	$0.48^{+0.40}_{-0.24} \pm 0.11$					$0.48^{+0.41}_{-0.26}$
327	$K^+ K_S K_S (NR)$	20 ± 4	$19.8 \pm 3.7 \pm 2.5$					19.8 ± 4.5
328	$K_S K_S \pi^+$	< 0.51	< 0.51	< 3.2				< 0.51
329	$K^+ K^- \pi^+$	5.0 ± 0.7	$5.0 \pm 0.5 \pm 0.5$	< 13				5.0 ± 0.7
330	$K^+ K^- \pi^+ (NR)$	< 75			< 75			< 75
331	$\bar{K}^{*0} K^+ (K^+ K^- \pi^+)$	< 1.1	< 1.1		< 5.3			< 1.1
332	$\bar{K}_0^*(1430)^0 K^+ (K^+ K^- \pi^+)$	< 2.2	< 2.2					< 2.2
333	$K^+ K^+ \pi^-$	< 0.16	< 0.16	< 2.4			< 0.011	< 0.011
334	$K^+ K^+ \pi^- (NR)$	< 87.9						< 87.9
335	$f_2'(1525) K^+$	1.8 ± 0.5	$1.8 \pm 0.5^\ddagger$	< 8				1.8 ± 0.5
336	$f_J(2220) K^+$	< 1.2		< 1.2				< 1.2
337	$K^{*+} \pi^+ K^-$	< 11.8	< 11.8					< 11.8
338	$K^{*+} \bar{K}^{*0}$	1.2 ± 0.5	$1.2 \pm 0.5 \pm 0.1$	< 1.31	< 71			1.2 ± 0.5
339	$K^{*+} K^+ \pi^-$	< 6.1	< 6.1					< 6.1
340	$K^+ K^- K^+$	34.0 ± 1.4	$34.6 \pm 0.6 \pm 0.9$	$30.6 \pm 1.2 \pm 2.3$				34.0 ± 1.0
341	$\phi K^+ (K^+ K^- K^+)$	$8.8^{+0.7}_{-0.6}$	$9.2 \pm 0.4^{+0.7}_{-0.5}$	$9.6 \pm 0.9^{+1.1}_{-0.8}$	$5.5^{+2.1}_{-1.8} \pm 0.6$	$7.6 \pm 1.3 \pm 0.6$		8.8 ± 0.5
342	$f_0(980) K^+ (K^+ K^- K^+)$	9.4 ± 3.2	$9.4^{+1.6}_{-2.8}$					$9.4^{+1.6}_{-2.8}$
343	$a_2(1320) K^+ (K^+ K^- K^+) \dagger$	< 1.1		< 1.1				< 1.1
344	$X_0(1550) K^+ (K^+ K^- K^+) \dagger$	4.3 ± 0.7	$4.3 \pm 0.60 \pm 0.30$					4.30 ± 0.67
345	$\phi(1680) K^+ (K^+ K^- K^+) \dagger$	< 0.8		< 0.8				< 0.8
346	$f_0(1710) K^+ (K^+ K^- K^+) \dagger$	1.1 ± 0.6	$1.12 \pm 0.25 \pm 0.50$					1.12 ± 0.56
347	$K^+ K^- K^+ (NR)$	$23.8^{+2.8}_{-5.0}$	$22.8 \pm 2.7 \pm 7.6$	$24.0 \pm 1.5^{+2.6}_{-6.0}$				$23.8^{+2.9}_{-5.1}$
348	$K^{*+} K^+ K^-$	36 ± 5	$36.2 \pm 3.3 \pm 3.6$					36.2 ± 4.9
349	ϕK^{*+}	10.0 ± 2.0	$11.2 \pm 1.0 \pm 0.9$	$6.7^{+2.1+0.7}_{-1.9-1.0}$	$10.6^{+6.4+1.8}_{-4.9-1.6}$			10.0 ± 1.1
350	$\phi(K\pi)_0^{*+}$	8.3 ± 1.6	$8.3^{+1.4}_{-0.8}$					$8.3^{+1.4}_{-0.8}$
351	$\phi K_1(1270)^+$	6.1 ± 1.9	$6.1 \pm 1.6 \pm 1.1$					6.1 ± 1.9
352	$\phi K_1(1400)^+$	< 3.2	< 3.2					< 3.2
353	$\phi K^*(1410)^+$	< 4.3	< 4.3					< 4.3
354	$\phi K_0^*(1430)^+$	7.0 ± 1.6	$7.0 \pm 1.3 \pm 0.9$					7.0 ± 1.6
355	$\phi K_2^*(1430)^+$	8.4 ± 2.1	$8.4 \pm 1.8 \pm 1.0$					8.4 ± 2.1
356	$\phi K_2(1770)^+$	< 15	< 15					< 15
357	$\phi K_2(1820)^+$	< 16.3	< 16.3					< 16.3
358	$a_1^+ K^{*0}$	< 3.6	< 3.6					< 3.6
359	$\phi \phi K^+ \S$	5.0 ± 1.2	$5.6 \pm 0.5 \pm 0.3$	$2.6^{+1.1}_{-0.9} \pm 0.3$				5.0 ± 0.5
360	$\eta' \eta' K^+$	< 25	< 25					< 25
361	$K^+ \omega \phi$	< 1.9		< 1.9				< 1.9
362	$K^+ X(1812) \dagger$	< 0.32		< 0.32				< 0.32

\dagger Product BF - daughter BF taken to be 100%.

$\S M_{\phi\phi} < 2.85 \text{ GeV}/c^2$

\ddagger Average of results in $K_S^0 K^+ K^-$, $K_S^0 K_S^0 K^+$ [21].

\diamond Result from ARGUS. Cited in the BABAR column to avoid adding a column to the table.

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B^+ Branching Fractions (decays without kaons) ($\times 10^{-6}$) - UL at 90% CL
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
379	$\pi^+\pi^0$	5.5 ± 0.4	$5.02 \pm 0.46 \pm 0.29$	$5.86 \pm 0.26 \pm 0.38$	$4.6_{-1.6}^{+1.8+0.6}$			$5.48_{-0.34}^{+0.35}$
380	$\pi^+\pi^+\pi^-$	15.2 ± 1.4	$15.2 \pm 0.6 \pm 1.3$					15.2 ± 1.4
381	$\rho^0\pi^+$	8.3 ± 1.2	$8.1 \pm 0.7_{-1.6}^{+1.3}$	$8.0_{-2.0}^{+2.3} \pm 0.7$	$10.4_{-3.4}^{+3.3} \pm 2.1$			$8.3_{-1.3}^{+1.2}$
382	$f_0(980)\pi^+ \dagger$	< 1.5	< 1.5					< 1.5
383	$f_2(1270)\pi^+$	$1.6_{-0.4}^{+0.7}$	$1.57 \pm 0.42_{-0.25}^{+0.55}$					$1.57_{-0.49}^{+0.69}$
384	$\rho(1450)^0\pi^+ \dagger$	$1.4_{-0.9}^{+0.6}$	$1.4 \pm 0.4_{-0.8}^{+0.5}$					$1.4_{-0.9}^{+0.6}$
385	$f_0(1370)\pi^+ \dagger$	< 4.0	< 4.0					< 4.0
386	$f_0(500)\pi^+ \dagger$	< 4.1	< 4.1					< 4.1
387	$\pi^+\pi^-\pi^+(NR)$	$5.3_{-1.1}^{+1.5}$	$5.3 \pm 0.7_{-0.8}^{+1.3}$					$5.3_{-1.1}^{+1.5}$
388	$\pi^+\pi^0\pi^0$	< 890	$< 890^\diamond$					$< 890^\diamond$
389	$\rho^+\pi^0$	10.9 ± 1.4	$10.2 \pm 1.4 \pm 0.9$	$13.2 \pm 2.3_{-1.9}^{+1.4}$	< 43			$10.9_{-1.5}^{+1.4}$
391	$\rho^+\rho^0$	24.0 ± 1.9	$23.7 \pm 1.4 \pm 1.4$	$31.7 \pm 7.1_{-6.7}^{+3.8}$				$24.0_{-2.0}^{+1.9}$
392	$f_0(980)\rho^+ \dagger$	< 2.0	< 2.0					< 2.0
393	$a_1^+\pi^0$	26 ± 7	$26.4 \pm 5.4 \pm 4.1$					26.4 ± 6.8
394	$a_1^0\pi^+$	20 ± 6	$20.4 \pm 4.7 \pm 3.4$					20.4 ± 5.8
395	$\omega\pi^+$	6.9 ± 0.5	$6.7 \pm 0.5 \pm 0.4$	$6.9 \pm 0.6 \pm 0.5$	$11.3_{-2.9}^{+3.3} \pm 1.4$			6.9 ± 0.5
396	$\omega\rho^+$	15.9 ± 2.1	$15.9 \pm 1.6 \pm 1.4$		< 61			15.9 ± 2.1
397	$\eta\pi^+$	4.02 ± 0.27	$4.00 \pm 0.40 \pm 0.24$	$4.07 \pm 0.26 \pm 0.21$	$1.2_{-1.2}^{+2.8}$			4.02 ± 0.27
398	$\eta\rho^+$	7.0 ± 2.9	$9.9 \pm 1.2 \pm 0.8$	$4.1_{-1.3}^{+1.4} \pm 0.4$	$4.8_{-3.8}^{+5.2}$			6.9 ± 1.0
399	$\eta'\pi^+$	2.7 ± 0.9	$3.5 \pm 0.6 \pm 0.2$	$1.8_{-0.6}^{+0.7} \pm 0.1$	$1.0_{-1.0}^{+5.8}$			$2.7_{-0.4}^{+0.5}$
400	$\eta'\rho^+$	9.7 ± 2.2	$9.7_{-1.8}^{+1.9} \pm 1.1$	< 5.8	< 33			$9.7_{-2.1}^{+2.2}$
401	$\phi\pi^+$	< 0.15	< 0.24	< 0.33	< 5		< 0.15	< 0.15
402	$\phi\rho^+$	< 3.0	< 3.0		< 16			< 3.0
403	$a_0(980)^0\pi^+ \dagger$	< 5.8	< 5.8					< 5.8
404	$a_0(980)^+\pi^0 \dagger$	< 1.4	< 1.4					< 1.4
405	$\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-$	< 860	$< 860^\diamond$					$< 860^\diamond$
406	$\rho^0 a_1(1260)^+$	< 620			< 620			< 620
407	$\rho^0 a_2(1320)^+$	< 720			< 720			< 720
408	$b_1^0\pi^+ \dagger$	6.7 ± 2.0	$6.7 \pm 1.7 \pm 1.0$					6.7 ± 2.0
409	$b_1^+\pi^0 \dagger$	< 3.3	< 3.3					< 3.3
410	$\pi^+\pi^+\pi^+\pi^-\pi^-\pi^0$	< 6300	$< 6300^\diamond$					$< 6300^\diamond$
411	$b_1^+\rho^0 \dagger$	< 5.2	< 5.2					< 5.2
413	$b_1^0\rho^+ \dagger$	< 3.3	< 3.3					< 3.3

\dagger Product BF - daughter BF taken to be 100%;

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RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
227	$K^+\pi^-$	19.6 ± 0.5	$19.1 \pm 0.6 \pm 0.6$	$20.0 \pm 0.34 \pm 0.60$	$18.0^{+2.3+1.2}_{-2.1-0.9}$			$19.57^{+0.53}_{-0.52}$
228	$K^0\pi^0$	9.9 ± 0.5	$10.1 \pm 0.6 \pm 0.4$	$9.68 \pm 0.46 \pm 0.50$	$12.8^{+4.0+1.7}_{-3.3-1.4}$			9.93 ± 0.49
229	$\eta' K^0$	66 ± 4	$68.5 \pm 2.2 \pm 3.1$	$58.9^{+3.6}_{-3.5} \pm 4.3$	$89^{+18}_{-16} \pm 9$			66.1 ± 3.1
230	$\eta' K^{*0}$	3.1 ± 0.9	$3.1^{+0.9}_{-0.8} \pm 0.3$	$2.6 \pm 0.7 \pm 0.2$	$7.8^{+7.7}_{-5.7}$			$2.8^{+0.6}_{-0.5}$
231	$\eta' K_0^*(1430)^0$	6.3 ± 1.6	$6.3 \pm 1.3 \pm 0.9$					6.3 ± 1.6
232	$\eta' K_2^*(1430)^0$	13.7 ± 3.2	$13.7^{+3.0}_{-1.9} \pm 1.2$					$13.7^{+3.2}_{-2.2}$
233	ηK^0	$1.23^{+0.27}_{-0.24}$	$1.15^{+0.43}_{-0.38} \pm 0.09$	$1.27^{+0.33}_{-0.29} \pm 0.08$	$0.0^{+3.0}_{-0.0}$			$1.23^{+0.27}_{-0.24}$
234	ηK^{*0}	15.9 ± 1.0	$16.5 \pm 1.1 \pm 0.8$	$15.2 \pm 1.2 \pm 1.0$	$13.8^{+5.5}_{-4.6} \pm 1.6$			15.9 ± 1.0
235	$\eta K_0^*(1430)^0$	11.0 ± 2.2	$11.0 \pm 1.6 \pm 1.5$					11.0 ± 2.2
236	$\eta K_2^*(1430)^0$	9.6 ± 2.1	$9.6 \pm 1.8 \pm 1.1$					9.6 ± 2.1
237	ωK^0	5.0 ± 0.6	$5.4 \pm 0.8 \pm 0.3$	$4.5 \pm 0.4 \pm 0.3$	$10.0^{+5.4}_{-4.2} \pm 1.4$			4.8 ± 0.4
238	$a_0(980)^0 K^0 \dagger$	< 7.8	< 7.8					< 7.8
239	$b_1^0 K^0 \dagger$	< 7.8	< 7.8					< 7.8
240	$a_0(980)^- K^+ \dagger$	< 1.9	< 1.9					< 1.9
241	$b_1^- K^+ \dagger$	7.4 ± 1.4	$7.4 \pm 1.0 \pm 1.0$					7.4 ± 1.4
242	$b_1^0 K^{*0} \dagger$	< 8.0	< 8.0					< 8.0
243	$b_1^- K^{*+} \dagger$	< 5.0	< 5.0					< 5.0
244	$a_0(1450)^- K^+ \dagger$	< 3.1	< 3.1					< 3.1
245	$K_S X^0(\text{Familon}) \dagger$	< 53			< 53			< 53
246	ωK^{*0}	2.0 ± 0.5	$2.2 \pm 0.6 \pm 0.2$	$1.8 \pm 0.7^{+0.3}_{-0.2}$	< 23			2.0 ± 0.5
247	ωK^{*0}	18.4 ± 2.5	$18.4^{+1.8}_{-1.7}$					$18.4^{+1.8}_{-1.7}$
248	$\omega K_0^*(1430)^0$	16.0 ± 3.4	$16.0 \pm 1.6 \pm 3.0$					16.0 ± 3.4
249	$\omega K_2^*(1430)^0$	10.1 ± 2.3	$10.1 \pm 2.0 \pm 1.1$					10.1 ± 2.3
250	$\omega K^+\pi^- (NR)^1$	5.1 ± 1.0		$5.1 \pm 0.7 \pm 0.7$				5.1 ± 1.0
251	$K^+\pi^-\pi^0$	37.8 ± 3.2	$38.5 \pm 1.0 \pm 3.9$	$36.6^{+4.2}_{-4.3} \pm 3.0$	< 40			37.8 ± 3.2
252	$\rho^- K^+$	7.0 ± 0.9	$6.6 \pm 0.5 \pm 0.8$	$15.1^{+3.4+2.4}_{-3.3-2.6}$	< 32			7.0 ± 0.9
253	$\rho(1450)^- K^+$	2.4 ± 1.2	$2.4 \pm 1.0 \pm 0.6$					2.4 ± 1.2
254	$\rho(1700)^- K^+$	0.6 ± 0.7	$0.6 \pm 0.6 \pm 0.4$					0.6 ± 0.7
255	$K^+\pi^-\pi^0 (NR)$	2.8 ± 0.6	$2.8 \pm 0.5 \pm 0.4$	< 9.4				2.8 ± 0.6
256	$(K\pi)_0^{*+}\pi^-$	34 ± 5	$34.2 \pm 2.4 \pm 4.1$					34.2 ± 4.8
257	$(K\pi)_0^{*+}\pi^0$	8.5 ± 1.7	$8.6^{+1.1}_{-1.3}$					$8.6^{+1.1}_{-1.3}$
258	$K_2^*(1430)^0\pi^0$	< 4.0	< 4.0					< 4.0
259	$K^*(1680)^0\pi^0$	< 7.5	< 7.5					< 7.5
260	$K_x^{*0}\pi^0 \ ^2$	6.1 ± 1.6		$6.1^{+1.6+0.5}_{-1.5-0.6}$				$6.1^{+1.7}_{-1.6}$
261	$K^0\pi^+\pi^-$	65 ± 8	$50.2 \pm 1.5 \pm 1.8$	$47.5 \pm 2.4 \pm 3.7$	$50^{+10}_{-9} \pm 7$		$65.2^{+6.0}_{-5.1} \diamond$	51.8 ± 1.9
262	$K^0\pi^+\pi^- (NR)$	$14.7^{+4.0}_{-2.6}$	$11.1^{+2.5}_{-1.0} \pm 0.9$	$19.9 \pm 2.5^{+1.7}_{-2.0}$				14.7 ± 2.0
263	$\rho^0 K^0$	4.7 ± 0.6	$4.4 \pm 0.7 \pm 0.3$	$6.1 \pm 1.0^{+1.1}_{-1.2}$	< 39			4.7 ± 0.7
264	$K^{*+}\pi^-$	8.4 ± 0.8	$8.2 \pm 0.9 \ ^3$	$8.4 \pm 1.1^{+1.0}_{-0.9}$	$16^{+6}_{-5} \pm 2$			8.4 ± 0.8
265	$K_0^*(1430)^+\pi^-$	33 ± 7	$29.9^{+2.3}_{-1.7} \pm 3.6$	$49.7 \pm 3.8^{+6.8}_{-8.2}$				$33.5^{+3.9}_{-3.8}$
266	$K_x^{*+}\pi^- \ ^2$	5.1 ± 1.6		$5.1^{+1.5+0.6}_{-1.5-0.7}$				$5.1^{+1.6}_{-1.7}$
267	$K^*(1410)^+\pi^- \dagger$	< 3.8		< 3.8				< 3.8
268	$f_0(980)K^0 \dagger$	7.0 ± 0.9	$6.9 \pm 0.8 \pm 0.6$	$7.6 \pm 1.7^{+0.9}_{-1.3}$				7.0 ± 0.9
269	$f_2(1270)^0 K^0$	$2.7^{+1.3}_{-1.2}$	$2.7^{+1.0}_{-0.8} \pm 0.9$	$< 2.5^\dagger$				$2.7^{+1.3}_{-1.2}$
270	$f_x(1300)^0 K^0$	1.8 ± 0.7	$1.81^{+0.55}_{-0.45} \pm 0.48$					$1.81^{+0.73}_{-0.66}$

\dagger Product BF - daughter BF taken to be 100%; \ddagger Relative BF converted to absolute BF; $^1 0.755 < M(K\pi) < 1.250 \text{ GeV}/c^2$; $^2 K_x^{*0}$ stands for the possible candidates for $K^*(1410)$, $K_0^*(1430)$, $K_2^*(1430)$;
 3 Average of BABAR results from $B^0 \rightarrow K^+\pi^-\pi^0$ and $B^0 \rightarrow K^0\pi^+\pi^-$.
 \diamond Obtained from a fit to the ratios of BF's measured by LHCb (Ref. [137]) and to the averages of the BF's in their numerators, as measured by other experiments (RPP 292 and 298).

Heavy Flavor Averaging Group - October 2016

B^0 Branching Fractions (decays with kaons part 2) ($\times 10^{-6}$) - UL at 90% CL
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
271	$K^{*0}\pi^0$	3.3 ± 0.6	$3.3 \pm 0.5 \pm 0.4$	< 3.5	< 3.6			3.3 ± 0.6
272	$K_2^*(1430)^+\pi^-$	< 6	< 16.2	< 6.3				< 6.3
273	$K^*(1680)^+\pi^-$	< 10	< 25	< 10.1				< 10.1
275	$\rho^0 K^+\pi^-$	2.8 ± 0.7		$2.8 \pm 0.5 \pm 0.5^2$				2.8 ± 0.7
276	$f_0(980)K^+\pi^-$	$1.4^{+0.5}_{-0.6}$		$1.4 \pm 0.4^{+0.3}_{-0.4}^2$				$1.4^{+0.5}_{-0.6}$
277	$K^+\pi^-\pi^+\pi^-$	< 2.1		< 2.1				< 2.1
278	$K^{*0}\pi^+\pi^-$	55 ± 5	$54.5 \pm 2.9 \pm 4.3$					54.5 ± 5.2
279	$K^{*0}\rho^0$	3.9 ± 1.3	$5.1 \pm 0.6^{+0.6}_{-0.8}$	$2.1^{+0.8+0.9}_{-0.7-0.5}$	< 34			3.9 ± 0.8
280	$f_0(980)K^{*0}\dagger$	$3.9^{+2.1}_{-1.8}$	$5.7 \pm 0.6 \pm 0.4$	$1.4^{+0.6+0.6}_{-0.5-0.4}$				3.9 ± 0.5
281	$K_1(1270)^+\pi^-$	< 30	17^{+6}_{-25}					17^{+6}_{-25}
282	$K_1(1400)^+\pi^-$	< 27	16^{+8}_{-24}					16^{+8}_{-24}
283	$a_1^- K^+$	16 ± 4	$16.3 \pm 2.9 \pm 2.3$					16.3 ± 3.7
284	$K^{*+}\rho^-$	10.3 ± 0.26	$10.3 \pm 2.3 \pm 1.3$					10.3 ± 2.6
285	$K_0(1430)^+\rho^-$	28 ± 12	$28 \pm 10 \pm 6$					28 ± 11
287	$K_0^*(1430)^0\rho^0$	27 ± 6	$27 \pm 4 \pm 4$					27 ± 5
288	$K_0^*(1430)^0 f_0(980)$	2.7 ± 0.9	$2.7 \pm 0.7 \pm 0.6$					2.7 ± 0.9
289	$K_2^*(1430)^0 f_0(980)$	8.6 ± 2.0	$8.6 \pm 1.7 \pm 1.0$					8.6 ± 2.0
290	K^+K^-	0.13 ± 0.05	< 0.5	$0.10 \pm 0.08 \pm 0.04$	< 0.8	$0.23 \pm 0.10 \pm 0.10^\ddagger$	$0.0780 \pm 0.0127 \pm 0.084^\ddagger$	0.1111 ± 0.03
291	$K^0\bar{K}^0$	1.21 ± 0.16	$1.08 \pm 0.28 \pm 0.11$	$1.26 \pm 0.19 \pm 0.05$	< 3.3			1.21 ± 0.16
292	$K^0K^-\pi^+$	7.3 ± 1.1	$6.4 \pm 1.0 \pm 0.6$	< 18	< 21		$6.64 \pm 0.99^\diamond$	6.54 ± 0.7
293	$K^{*0}\bar{K}^0 \spadesuit$	< 1.9	< 1.9				$< 0.96^\ddagger$	$< 0.96^\ddagger$
-	$K^{*+}K^\pm$	New					$< 0.4^\ddagger$	$< 0.4^\ddagger$
294	$K^+K^-\pi^0$	2.2 ± 0.6		$2.17 \pm 0.60 \pm 0.24$	< 19			2.17 ± 0.6
295	$K_S K_S \pi^0$	< 0.9	< 0.9					< 0.9
296	$K_S K_S \eta$	< 1.0	< 1.0					< 1.0
297	$K_S K_S \eta'$	< 2.0	< 2.0					< 2.0
298	$K^+K^-K^0$	26.3 ± 1.5	$26.5 \pm 0.9 \pm 0.8$	$28.3 \pm 3.3 \pm 4.0$			$19.1 \pm 1.9^\diamond$	24.5 ± 1.0
299	ϕK^0	7.3 ± 0.7	$7.1 \pm 0.6^{+0.4}_{-0.3}$	$9.0^{+2.2}_{-1.8} \pm 0.7$	$5.4^{+3.7}_{-2.7} \pm 0.7$			$7.3^{+0.7}_{-0.6}$
300	$f_0(980)K^0 \dagger$	$7.0^{+3.5}_{-3.0}$	$7.0^{+2.6}_{-1.8} \pm 2.4$					$7.0^{+3.5}_{-3.0}$
301	$f_0(1500)K^0 \dagger$	13^{+7}_{-5}	$13.3^{+5.8}_{-4.4} \pm 3.2$					$13.3^{+6.6}_{-5.4}$
302	$f_2'(1525)K^0$	$0.3^{+0.5}_{-0.4}$	$0.29^{+0.27}_{-0.18} \pm 0.36$					$0.29^{+0.45}_{-0.40}$
303	$f_0(1710)K^0 \dagger$	4.4 ± 0.9	$4.4 \pm 0.7 \pm 0.5$					4.4 ± 0.9
304	$K^0K^+K^- (NR)$	33 ± 10	$33 \pm 5 \pm 9$					33 ± 10
305	$K_S K_S K_S$	$6.2^{+1.2}_{-1.1}$	$6.19 \pm 0.48 \pm 0.19$	$4.2^{+1.6}_{-1.3} \pm 0.8$				6.04 ± 0.5
306	$f_0(980)K_S \dagger$	2.7 ± 1.8	$2.7^{+1.3}_{-1.2} \pm 1.3 \dagger$					2.7 ± 1.8
307	$f_0(1710)K_S \dagger$	$0.50^{+0.050}_{-0.026}$	$0.50^{+0.46}_{-0.24} \pm 0.11 \dagger$					$0.50^{+0.47}_{-0.26}$
308	$f_0(2010)K_S \dagger$	0.5 ± 0.6	$0.54^{+0.21}_{-0.20} \pm 0.52 \dagger$					0.54 ± 0.5
309	$K_S K_S K_S (NR)$	13.3 ± 3.1	$13.3^{+2.2}_{-2.3} \pm 2.2$					$13.3^{+3.1}_{-3.2}$
310	$K_S K_S K_L$	< 16	$< 16^2$					$< 16^2$
311	$K^{*0}K^+K^-$	27.5 ± 2.6	$27.5 \pm 1.3 \pm 2.2$					27.5 ± 2.6
312	ϕK^{*0}	10.0 ± 0.5	$9.7 \pm 0.5 \pm 0.6$	$10.4 \pm 0.5 \pm 0.6$	$11.5^{+4.5+1.8}_{-3.7-1.7}$			$10.1^{+0.6}_{-0.5}$
313	$K^+\pi^-\pi^+K^-$	< 72		$< 72^3$				$< 72^3$
314	$K^{*0}\pi^+K^-$	4.5 ± 1.3	$4.6 \pm 1.1 \pm 0.8$	$< 13.9^3$				4.6 ± 1.4
315	$K^{*0}\bar{K}^{*0}$	0.8 ± 0.5	$1.28^{+0.35}_{-0.30} \pm 0.11$	$0.26^{+0.33+0.10}_{-0.29-0.08}$	< 22			0.81 ± 0.2
316	$K^+\pi^-K^+\pi^- (NR)$	< 6.0		$< 6.0^3$				$< 6.0^3$
317	$K^{*0}K^+\pi^-$	< 2.2	< 2.2	$< 7.6^3$				< 2.2
318	$K^{*0}K^{*0}$	< 0.2	< 0.41	< 0.2	< 37			< 0.2
319	$K^{*+}K^{*-}$	< 2.0	< 2.0		< 141			< 2.0
320	$K_1^+(1400)^0\phi$	< 5000	$< 5000^5$					$< 5000^5$
321	$(K\pi)^*\phi$	4.3 ± 0.4	$4.3 \pm 0.4 \pm 0.4$	$4.3 \pm 0.4 \pm 0.4$				4.3 ± 0.4
322	$(K\pi)^*\phi^4$	< 1.7	< 1.7					< 1.7
323	$K_0^*(1430)^0\pi^+K^-$	< 31.8		$< 31.8^3$				$< 31.8^3$
324	$K_0^*(1430)^0\bar{K}^{*0}$	< 3.3		< 3.3				< 3.3
325	$K_0^*(1430)^0\bar{K}_0^*(1430)^0$	< 8.4		< 8.4				< 8.4
326	$\phi K_0^*(1430)^0$	3.9 ± 0.8	$3.9 \pm 0.5 \pm 0.6$	$4.3 \pm 0.4 \pm 0.4$				4.2 ± 0.5
327	$K_0^*(1430)^0 K^{*0}$	< 1.7		< 1.7				< 1.7
328	$K_0^*(1430)^0 K_0^*(1430)^0$	< 4.7		< 4.7				< 4.7
329	$\phi K^*(1680)^0$	< 3.5	< 3.5					< 3.5
330	$\phi K_3^*(1780)^0$	< 2.7	< 2.7					< 2.7
331	$\phi K_4^*(2045)^0$	< 15.3	< 15.3					< 15.3
332	$\rho^0 K_2^*(1430)^0$	< 1100	$< 1100^5$					$< 1100^5$
333	$\phi K_2^*(1430)^0$	6.8 ± 0.9	$7.5 \pm 0.9 \pm 0.5$	$5.5^{+0.9}_{-0.7} \pm 1.0$				6.8 ± 0.8
334	$\phi\phi K^0 \S$	4.5 ± 0.9	$4.5 \pm 0.8 \pm 0.3$					4.5 ± 0.9
335	$\eta'\eta'K^0$	< 31	< 31					< 31

\dagger Product BF - daughter BF taken to be 100%; \S $M_{\phi\phi} < 2.85 \text{ GeV}/c^2$; \ddagger Relative BF converted to absolute BF; \diamond Obtained from a fit to the ratios of BF's measured by LHCb (Ref. [137]) and to the averages of the BF's therein, as measured by other experiments (excluding the present line);

\spadesuit Sum of charge conjugate states; 1 $0.55 < M(\pi\pi) < 1.42 \text{ GeV}/c^2$; 2 $0.75 < M(K\pi) < 1.20 \text{ GeV}/c^2$; 3 $0.70 < M(K\pi) < 1.70 \text{ GeV}/c^2$;

4 $1.60 < M(K\pi) < 2.15 \text{ GeV}/c^2$; 5 Result from ARGUS.

Heavy Flavor Averaging Group - October 2016
 B^0 Branching Fractions (decays without kaons) ($\times 10^{-6}$) - UL at 90% CL
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CLEO	CDF	LHCb	Our Avg.
356	$\pi^+\pi^-$	5.15 ± 0.19	$5.5 \pm 0.4 \pm 0.3$	$5.04 \pm 0.21 \pm 0.18$	$4.5^{+1.4+0.5}_{-1.2-0.4}$	$5.02 \pm 0.33 \pm 0.35^\ddagger$	$5.08 \pm 0.17 \pm 0.37^\ddagger$	5.10 ± 0.19
357	$\pi^0\pi^0$	1.91 ± 0.22	$1.83 \pm 0.21 \pm 0.13$	$0.90 \pm 0.12 \pm 0.10$	< 4.4			1.17 ± 0.13
358	$\eta\pi^0$	< 1.5	< 1.5	$4.1^{+1.7+0.5}_{-1.5-0.7}$	< 2.9			$4.1^{+1.8}_{-1.7}$
359	$\eta\eta$	< 1.0	< 1.0	$0.76^{+0.27+0.14}_{-0.23-0.16}$	< 18			$0.76^{+0.30}_{-0.28}$
360	$\eta'\pi^0$	1.2 ± 0.6	$0.9 \pm 0.4 \pm 0.1$	$2.8 \pm 1.0 \pm 0.3$	$0.0^{+1.8}_{-0.0}$			1.2 ± 0.4
361	$\eta'\eta'$	< 1.7	< 1.7	< 6.5	< 47			< 1.7
362	$\eta'\eta$	< 1.2	< 1.2	< 4.5	< 27			< 1.2
363	$\eta'\rho^0$	< 1.3	< 2.8	< 1.3	< 12			< 1.3
364	$f_0(980)\eta' \dagger$	< 0.9	< 0.9	< 0.9				< 0.9
365	$\eta\rho^0$	< 1.5	< 1.5	< 1.9	< 10			< 1.5
366	$f_0(980)\eta \dagger$	< 0.4	< 0.4					< 0.4
367	$\omega\eta$	$0.94^{+0.40}_{-0.31}$	$0.94^{+0.35}_{-0.30} \pm 0.09$		< 12			$0.94^{+0.36}_{-0.31}$
368	$\omega\eta'$	$1.0^{+0.5}_{-0.4}$	$1.01^{+0.46}_{-0.38} \pm 0.09$	< 2.2	< 60			$1.01^{+0.47}_{-0.39}$
369	$\omega\rho^0$	< 1.6	< 1.6		< 11			< 1.6
370	$f_0(980)\omega \dagger$	< 1.5	< 1.5					< 1.5
371	$\omega\omega$	1.2 ± 0.4	$1.2 \pm 0.3^{+0.3}_{-0.2}$		< 19			1.2 ± 0.4
372	$\phi\pi^0$	< 0.15	< 0.28	< 0.15	< 5			< 0.15
373	$\phi\eta$	< 0.5	< 0.5		< 9			< 0.5
374	$\phi\eta'$	< 0.5	< 1.1	< 0.5	< 31			< 0.5
375	$\phi\rho^0$	< 0.33	< 0.33		< 13			< 0.33
376	$f_0(980)\phi \dagger$	< 0.38	< 0.38					< 0.38
377	$\omega\phi$	< 0.7	< 0.7		< 21			< 0.7
378	$\phi\phi$	< 0.2	< 0.2		< 12		< 0.028	< 0.028
379	$a_0^\mp(980)\pi^\pm \dagger$	< 3.1	< 3.1					< 3.1
379	$a_0^\mp(1450)\pi^\pm$	< 2.3	< 2.3					< 2.3
380	$a_0^\mp(1450)\pi^\pm \dagger$	< 2.3	< 2.3					< 2.3
382	$\rho^0\pi^0$	2.0 ± 0.5	$1.4 \pm 0.6 \pm 0.3$	$3.0 \pm 0.5 \pm 0.7$	$1.6^{+2.0}_{-1.4} \pm 0.8$			2.0 ± 0.5
383	$\rho^\mp\pi^\pm$	23.0 ± 2.3	$22.6 \pm 1.8 \pm 2.2$	$22.6 \pm 1.1 \pm 4.4$	$27.6^{+8.4}_{-7.4} \pm 4.2$			23.0 ± 2.3
384	$\pi^+\pi^-\pi^+\pi^-$	< 19.3	< 23.1	< 11.2				< 11.2
385	$\rho^0\pi^+\pi^-(NR)$	< 8.8	< 8.8	< 12				< 8.8
386	$\rho^0\rho^0$	0.73 ± 0.28	$0.92 \pm 0.32 \pm 0.14$	$1.02 \pm 0.30 \pm 0.15$	< 18		$0.94 \pm 0.17 \pm 0.11^*$	0.95 ± 0.16
387	$f_0(980)\pi^+\pi^-(NR) \dagger$	< 3.8	< 3.8	< 3.0				< 3.0
388	$f_0(980)\rho^0 \dagger$	< 0.3	< 0.40	$0.78 \pm 0.22 \pm 0.11$				0.78 ± 0.25
389	$f_0(980)f_0(980) \dagger$	< 0.1	< 0.19	< 0.2				< 0.19
391	$a_1^\mp\pi^\pm$	26 ± 5	$33.2 \pm 3.8 \pm 3.0$	$22.2 \pm 2.0 \pm 2.8$				25.9 ± 2.8
392	$a_2^\pm\pi^\pm$	< 6.3		< 6.3				< 6.3
393	$\pi^+\pi^-\pi^0\pi^0$	< 3100	$< 3100^\diamond$					$< 3100^\diamond$
394	$\rho^+\rho^-$	24.2 ± 3.1	$25.5 \pm 2.1^{+3.6}_{-3.9}$	$22.8 \pm 3.8^{+2.3}_{-2.6}$				$24.2^{+3.1}_{-3.2}$
395	$a_1(1260)^0\pi^0$	< 1100	$< 1100^\diamond$					$< 1100^\diamond$
396	$\omega\pi^0$	< 0.5	< 0.5	< 2.0	< 5.5			< 0.5
397	$\pi^+\pi^+\pi^-\pi^-\pi^0$	< 9000	$< 9000^\diamond$					$< 9000^\diamond$
398	$a_1^\pm\rho^\mp$	< 61	< 61					< 61
399	$a_1^\pm\rho^0$	< 600	$< 6000^\diamond$					$< 6000^\diamond$
400	$b_1^\mp\pi^\pm \dagger$	10.9 ± 1.5	$10.9 \pm 1.2 \pm 0.9$					10.9 ± 1.5
401	$b_1^0\pi^0 \dagger$	< 1.9	< 1.9					< 1.9
402	$b_1^\pm\rho^\mp \dagger$	< 1.4	< 1.4					< 1.4
403	$b_1^0\rho^0 \dagger$	< 3.4	< 3.4					< 3.4
404	$\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-$	< 3000	$< 3000^\diamond$					$< 3000^\diamond$
405	$a_1^\pm a_1^\mp$	11.8 ± 2.6	11.8 ± 2.6					11.8 ± 2.6
406	$\pi^+\pi^+\pi^+\pi^-\pi^-\pi^0$	< 11000	$< 11000^\diamond$					$< 11000^\diamond$
	$\phi\pi^+\pi^-$						$0.182 \pm 0.048 \pm 0.014^\ddagger\blacklozenge$	0.182 ± 0.050

\dagger Product BF - daughter BF taken to be 100%;

\ddagger Relative BF converted to absolute BF;

* Result given as $0.94 \pm 0.17 \pm 0.09 \pm 0.06$ where last error is from $\mathcal{B}(B^0 \rightarrow \phi K^{*0})$;

\blacklozenge In the mass range $400 < m(\pi^+\pi^-) < 1600$ GeV/c.

Heavy Flavor Averaging Group - October 2016
 Compilation of B^0 relative Branching Fractions - UL at 90% CL

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

RPP#	Mode	PDG2014 Avg.	CDF	LHCb	Our Avg.
273	$\mathcal{B}(B^0 \rightarrow K^+K^-)/\mathcal{B}(B^0 \rightarrow K^+\pi^-)$		$0.012 \pm 0.005 \pm 0.005$	$(3.98 \pm 0.65 \pm 0.42) \times 10^{-3}$	0.012 ± 0.007
356	$\mathcal{B}(B^0 \rightarrow \pi^+\pi^-)/\mathcal{B}(B^0 \rightarrow K^+\pi^-)$	0.261 ± 0.010	$0.259 \pm 0.017 \pm 0.016$	$0.262 \pm 0.009 \pm 0.017$	0.261 ± 0.015
–	$\mathcal{B}(B^0 \rightarrow K^{*\mp}K^\pm)/\mathcal{B}(B^0 \rightarrow K^{*+}\pi^-)$	New		< 0.05	< 0.05
–	$\mathcal{B}(B^0 \rightarrow K_S^0 K^{*0})/\mathcal{B}(B^0 \rightarrow K_S^0 \pi^+ \pi^-)$ †			< 0.020	< 0.020

† Sum of charge conjugate states in the numerator and denominator.

Charmless Mesonic Decays:

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