

Heavy Flavor Averaging Group - October 2016

Compilation of CP Asymmetries for B^+ modes

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

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CDF	LHCb	Our Avg.
262	$K^0\pi^+$	-0.017 ± 0.016	$-0.029 \pm 0.039 \pm 0.010$	$-0.011 \pm 0.021 \pm 0.006$		$-0.022 \pm 0.025 \pm 0.010$	-0.017 ± 0.016
263	$K^+\pi^0$	0.037 ± 0.021	$0.030 \pm 0.039 \pm 0.010$	$0.043 \pm 0.024 \pm 0.002$			0.040 ± 0.021
264	$\eta'K^+$	0.013 ± 0.017	$0.008^{+0.017}_{-0.018} \pm 0.009$	$0.028 \pm 0.028 \pm 0.021$			0.013 ± 0.017
265	$\eta'K^{*+}$	-0.26 ± 0.27	$-0.26 \pm 0.27 \pm 0.02$				-0.26 ± 0.27
266	$\eta'K_0^*(1430)^+$	0.06 ± 0.20	$0.06 \pm 0.20 \pm 0.02$				0.06 ± 0.20
267	$\eta'K_2^*(1430)^+$	0.15 ± 0.13	$0.15 \pm 0.13 \pm 0.02$				0.15 ± 0.13
268	ηK^+	-0.37 ± 0.08	$-0.36 \pm 0.11 \pm 0.03$	$-0.38 \pm 0.11 \pm 0.01$			-0.37 ± 0.08
269	ηK^{*+}	0.02 ± 0.06	$0.01 \pm 0.08 \pm 0.02$	$0.03 \pm 0.10 \pm 0.01$			0.02 ± 0.06
270	$\eta K_0^*(1430)^+$	$0.05 \pm 0.13 \pm 0.02$	$0.05 \pm 0.13 \pm 0.02$				0.05 ± 0.13
271	$\eta K_2^*(1430)^+$	$-0.45 \pm 0.30 \pm 0.02$	$-0.45 \pm 0.30 \pm 0.02$				-0.45 ± 0.30
281	ωK^+	0.02 ± 0.05	$-0.01 \pm 0.07 \pm 0.01$	$-0.03 \pm 0.04 \pm 0.01$			-0.02 ± 0.04
282	ωK^{*+}	0.29 ± 0.35	$0.29 \pm 0.35 \pm 0.02$				0.29 ± 0.35
284	$\omega K_0^*(1430)^+$	-0.10 ± 0.09	$-0.10 \pm 0.09 \pm 0.02$				-0.10 ± 0.09
285	$\omega K_2^*(1430)^+$	0.14 ± 0.15	$0.14 \pm 0.15 \pm 0.02$				0.14 ± 0.15
288	$K^{*0}\pi^+$	-0.04 ± 0.09	$0.032 \pm 0.052^{+0.016}_{-0.013}$	$-0.149 \pm 0.064 \pm 0.022$			-0.038 ± 0.042
289	$K^{*+}\pi^0$	-0.06 ± 0.24	$-0.06 \pm 0.24 \pm 0.04$				-0.06 ± 0.24
290	$K^+\pi^+\pi^-$	0.033 ± 0.010	$0.028 \pm 0.020 \pm 0.023$	$0.049 \pm 0.026 \pm 0.020$		$0.025 \pm 0.004 \pm 0.008$	0.027 ± 0.008
293	$f_0(980)K^+$	$-0.08 \pm 0.09^\dagger$	$-0.106 \pm 0.050^{+0.036}_{-0.015}$	$-0.077 \pm 0.065^{+0.046}_{-0.026}$			$-0.095^{+0.049}_{-0.042}$
294	$f_2(1270)K^+$	$-0.68^{+0.19}_{-0.017}$	$-0.85 \pm 0.22^{+0.26}_{-0.13}$	$-0.59 \pm 0.22 \pm 0.04$			$-0.68^{+0.20}_{-0.18}$
295	$f_0(1370)K^+$	$0.28^{+0.30}_{-0.29}$	$0.28 \pm 0.26^{+0.15}_{-0.14}$				$0.28^{+0.30}_{-0.29}$
298	$\rho^0 K^+$	0.37 ± 0.10	$0.44 \pm 0.10^{+0.06}_{-0.14}$	$0.30 \pm 0.11^{+0.11}_{-0.05}$			0.37 ± 0.11
299	$K_0^*(1430)^0\pi^+$	0.055 ± 0.033	$0.032 \pm 0.035^{+0.034}_{-0.028}$	$0.076 \pm 0.038^{+0.028}_{-0.022}$			$0.055^{+0.034}_{-0.032}$
300	$K_2^*(1430)^0\pi^+$	$0.05^{+0.29}_{-0.24}$	$0.05 \pm 0.23^{+0.18}_{-0.08}$				$0.05^{+0.29}_{-0.24}$
303	$K^+\pi^0\pi^0$	-0.06 ± 0.07	$-0.06 \pm 0.06 \pm 0.04$				-0.06 ± 0.07
310	ρ^+K^0	-0.12 ± 0.17	$-0.12 \pm 0.17 \pm 0.02$				-0.12 ± 0.17
311	$K^{*+}\pi^+\pi^-$	0.07 ± 0.08	$0.07 \pm 0.07 \pm 0.04$				0.07 ± 0.08
312	$K^{*+}\rho^0$	0.31 ± 0.13	$0.31 \pm 0.13 \pm 0.03$				0.31 ± 0.13
313	$f_0(980)K^{*+}$	-0.15 ± 0.12	$-0.15 \pm 0.12 \pm 0.03$				-0.15 ± 0.12
314	a^+K^0	0.12 ± 0.11	$0.12 \pm 0.11 \pm 0.02$				0.12 ± 0.11
315	$b_1^+K^0$	-0.03 ± 0.15	$-0.03 \pm 0.15 \pm 0.02$				-0.03 ± 0.15
312	$K^{*0}\rho^+$	-0.01 ± 0.16	$-0.01 \pm 0.16 \pm 0.02$				-0.01 ± 0.16
319	$b_1^0K^+$	-0.46 ± 0.20	$-0.46 \pm 0.20 \pm 0.02$				-0.46 ± 0.20
322	$K^+\bar{K}^0$	0.04 ± 0.14	$0.10 \pm 0.26 \pm 0.03$	$0.014 \pm 0.168 \pm 0.002$		$-0.21 \pm 0.14 \pm 0.01$	-0.087 ± 0.100
324	$K^+K_S K_S$	$0.04^{+0.04}_{-0.05}$	$0.04^{+0.04}_{-0.05} \pm 0.02$				$0.04^{+0.04}_{-0.05}$
329	$K^+K^-\pi^+$	-0.12 ± 0.05	$0.00 \pm 0.10 \pm 0.03$			$-0.123 \pm 0.017 \pm 0.014$	-0.118 ± 0.022
340	$K^+K^-K^+$	-0.036 ± 0.012	$-0.017^{+0.019}_{-0.014} \pm 0.014$			$-0.036 \pm 0.004 \pm 0.007$	-0.033 ± 0.007
341	ϕK^+	0.04 ± 0.04	$0.128 \pm 0.044 \pm 0.013$	$0.01 \pm 0.12 \pm 0.05$	$-0.07 \pm 0.17^{+0.03}_{-0.02}$	$0.022 \pm 0.021 \pm 0.009$	0.041 ± 0.020
348	$K^{*+}K^+K^-$	0.11 ± 0.09	$0.11 \pm 0.08 \pm 0.03$				0.11 ± 0.09
349	ϕK^{*+}	-0.01 ± 0.08	$0.00 \pm 0.09 \pm 0.04$	$-0.02 \pm 0.14 \pm 0.03$			-0.01 ± 0.08
351	$\phi K_1(1270)^+$	0.15 ± 0.20	$0.15 \pm 0.19 \pm 0.05$				0.15 ± 0.20
354	$\phi K_0^*(1430)^+$	0.04 ± 0.15	$0.04 \pm 0.15 \pm 0.04$				0.04 ± 0.15
355	$\phi K_2^*(1430)^+$	-0.23 ± 0.20	$-0.23 \pm 0.19 \pm 0.06$				-0.23 ± 0.20
359	$\phi\phi K^+$	-0.10 ± 0.08	-0.10 ± 0.08				-0.10 ± 0.08
363	$K^{*+}\gamma$	0.18 ± 0.29	$0.18 \pm 0.28 \pm 0.07$				0.18 ± 0.29
365	$K^+\eta\gamma$	-0.12 ± 0.07	$-0.09 \pm 0.10 \pm 0.01$	$-0.16 \pm 0.09 \pm 0.06$			-0.12 ± 0.07
367	$K^+\phi\gamma$	-0.13 ± 0.11	$-0.26 \pm 0.14 \pm 0.05$	$-0.03 \pm 0.11 \pm 0.08$			-0.13 ± 0.10
378	$\rho^+\gamma$	-0.11 ± 0.33		$-0.11 \pm 0.32 \pm 0.09$			-0.11 ± 0.33
379	$\pi^+\pi^0$	0.03 ± 0.04	$0.03 \pm 0.08 \pm 0.01$	$0.025 \pm 0.043 \pm 0.007$			0.026 ± 0.039
380	$\pi^+\pi^-\pi^+$	0.105 ± 0.029	$0.032 \pm 0.044^{+0.040}_{-0.037}$			$0.058 \pm 0.008 \pm 0.011$	0.057 ± 0.014
381	$\rho^0\pi^+$	$0.18^{+0.09}_{-0.17}$	$0.18 \pm 0.07^{+0.040}_{-0.037}$				$0.18^{+0.09}_{-0.17}$
383	$f_2(1270)\pi^+$	$0.41^{+0.31}_{-0.29}$	$0.41 \pm 0.25^{+0.18}_{-0.15}$				$0.41^{+0.31}_{-0.29}$
384	$\rho(1450)^0\pi^+$	$-0.06^{+0.36}_{-0.42}$	$-0.06 \pm 0.28^{+0.23}_{-0.32}$				$-0.06^{+0.36}_{-0.42}$
385	$f_0(1370)\pi^+$	0.72 ± 0.22	$0.72 \pm 0.15 \pm 0.16$				0.72 ± 0.22
387	$\pi^+\pi^-\pi^+(NR)$	$-0.14^{+0.23}_{-0.16}$	$-0.14 \pm 0.14^{+0.18}_{-0.08}$				$-0.14^{+0.23}_{-0.16}$
389	$\rho^+\pi^0$	0.02 ± 0.11	$-0.01 \pm 0.13 \pm 0.02$	$0.06 \pm 0.17^{+0.04}_{-0.05}$			0.02 ± 0.11
391	$\rho^+\rho^0$	-0.05 ± 0.05	$-0.054 \pm 0.055 \pm 0.010$	$0.00 \pm 0.22 \pm 0.03$			-0.051 ± 0.054
397	$\eta\pi^+$	-0.14 ± 0.07	$-0.03 \pm 0.09 \pm 0.03$	$-0.19 \pm 0.06 \pm 0.01$			-0.14 ± 0.05
398	$\eta\rho^+$	0.11 ± 0.11	$0.13 \pm 0.11 \pm 0.02$	$-0.04^{+0.34}_{-0.32} \pm 0.01$			0.11 ± 0.11
399	$\eta'\pi^+$	0.06 ± 0.16	$0.03 \pm 0.17 \pm 0.02$	$0.20^{+0.37}_{-0.36} \pm 0.04$			0.06 ± 0.15
400	$\eta'\rho^+$	0.26 ± 0.17	$0.26 \pm 0.17 \pm 0.02$				0.26 ± 0.17
401	$\omega\pi^+$	-0.04 ± 0.06^1	$-0.02 \pm 0.08 \pm 0.01$	$-0.02 \pm 0.09 \pm 0.01$			-0.02 ± 0.06
402	$\omega\rho^+$	-0.20 ± 0.09	$-0.20 \pm 0.09 \pm 0.02$				-0.20 ± 0.09
408	$b_1^0\pi^+$	0.05 ± 0.16	$0.05 \pm 0.16 \pm 0.02$				0.05 ± 0.16
417	$p\bar{p}\pi^+$	0.00 ± 0.04	$0.04 \pm 0.07 \pm 0.04$	$-0.17 \pm 0.10 \pm 0.02^\ddagger$			-0.04 ± 0.06
420	$p\bar{p}K^+$	-0.08 ± 0.04	$-0.16 \pm 0.08 \pm 0.04$	$-0.02 \pm 0.05 \pm 0.02^\ddagger$		$-0.047 \pm 0.036 \pm 0.007$	-0.051 ± 0.029
425	$p\bar{p}K^{*+}$	0.21 ± 0.16	$0.32 \pm 0.13 \pm 0.05$	$-0.01 \pm 0.19 \pm 0.02$			0.21 ± 0.11
428	$p\bar{\Lambda}\gamma$	0.17 ± 0.17		$0.17 \pm 0.16 \pm 0.05$			0.17 ± 0.17
429	$p\bar{\Lambda}\pi^0$	0.01 ± 0.17		$0.01 \pm 0.17 \pm 0.04$			0.01 ± 0.17
471	$K^+\ell\ell$	-0.02 ± 0.08	$-0.03 \pm 0.14 \pm 0.01^\S$	$0.04 \pm 0.10 \pm 0.02$			0.02 ± 0.08
472	$K^+e^+e^-$	0.14 ± 0.14		$0.14 \pm 0.14 \pm 0.03$			0.14 ± 0.14
473	$K^+\mu^+\mu^-$	-0.003 ± 0.033		$-0.05 \pm 0.13 \pm 0.03$		$0.012 \pm 0.017 \pm 0.001^2$	0.011 ± 0.017
478	$K^{*+}\ell\ell$	-0.09 ± 0.14	$0.01^{+0.26}_{-0.24} \pm 0.02$	$-0.13^{+0.17}_{-0.16} \pm 0.01$			$-0.09^{+0.14}_{-0.13}$
479	$K^{*+}e^+e^-$	$-0.14^{+0.23}_{-0.22}$		$-0.14^{+0.23}_{-0.22} \pm 0.02$			$-0.14^{+0.23}_{-0.22}$
480	$K^{*+}\mu^+\mu^-$	-0.12 ± 0.24		$-0.12 \pm 0.24 \pm 0.02$		$-0.035 \pm 0.024 \pm 0.003^2$	-0.036 ± 0.024
480	$\pi^+\mu^+\mu^-$					$-0.11 \pm 0.12 \pm 0.01$	-0.11 ± 0.12

[†] PDG takes the value from the BABAR amplitude analysis of $B^+ \rightarrow K^+K^-K^+$, while our numbers are from amplitude analyses of $B^+ \rightarrow K^+\pi^-\pi^+$.

[‡] PDG swaps the Belle results corresponding to $A_{CP}(p\bar{p}\pi^+)$ and $A_{CP}(p\bar{p}K^+)$. ¹ PDG uses also a result from CLEO.

[§] PDG uses also a previous result from BABAR ([12]); ² LHCb also quotes results in bins of $m(e^+\ell^-)^2$.

Heavy Flavor Averaging Group - October 2016
 Compilation of CP Asymmetries for B^0 modes
 In PDG2014 New since PDG2014 (preliminary) New since PDG2014 (published)

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	CDF	LHCb	Our Avg.
227	$K^+\pi^-$	-0.082 ± 0.006 ¹	$-0.107 \pm 0.016^{+0.006}_{-0.004}$	$-0.069 \pm 0.014 \pm 0.007$	$-0.083 \pm 0.013 \pm 0.004$	$-0.080 \pm 0.007 \pm 0.003$	-0.082 ± 0.006
230	$\eta' K^{*0}$	0.02 ± 0.23	$0.02 \pm 0.23 \pm 0.02$		$-0.22 \pm 0.29 \pm 0.07$		-0.07 ± 0.18
231	$\eta' K_0^*(1430)^0$	-0.19 ± 0.17	$-0.19 \pm 0.17 \pm 0.02$				-0.19 ± 0.17
232	$\eta' K_2^*(1430)^0$	0.14 ± 0.18	$0.14 \pm 0.18 \pm 0.02$				0.14 ± 0.18
234	ηK^{*0}	0.19 ± 0.05	$0.21 \pm 0.06 \pm 0.02$	$0.17 \pm 0.08 \pm 0.01$			0.19 ± 0.05
235	$\eta K_0^*(1430)^0$	0.06 ± 0.13	$0.06 \pm 0.13 \pm 0.02$				0.06 ± 0.13
236	$\eta K_2^*(1430)^0$	-0.07 ± 0.19	$-0.07 \pm 0.19 \pm 0.02$				-0.07 ± 0.19
241	$b_{\frac{1}{2}}^- K^+$	-0.07 ± 0.12	$-0.07 \pm 0.12 \pm 0.02$				-0.07 ± 0.12
246	ωK^{*0}	0.45 ± 0.25	$0.45 \pm 0.25 \pm 0.02$				0.45 ± 0.25
248	$\omega K_0^*(1430)^0$	-0.07 ± 0.09	$-0.07 \pm 0.09 \pm 0.02$				-0.07 ± 0.09
249	$\omega K_2^*(1430)^0$	-0.37 ± 0.17	$-0.37 \pm 0.17 \pm 0.02$				-0.37 ± 0.17
251	$K^+\pi^-\pi^0$	0.00 ± 0.06	$-0.030^{+0.045}_{-0.051} \pm 0.055$	$0.07 \pm 0.11 \pm 0.01$			$0.000^{+0.059}_{-0.061}$
252	$\rho^- K^+$	0.20 ± 0.11	$0.20 \pm 0.09 \pm 0.08$	$0.22^{+0.22+0.06}_{-0.23-0.02}$			0.20 ± 0.11
253	$\rho(1450)^- K^+$	-0.10 ± 0.33	$-0.10 \pm 0.32 \pm 0.09$				-0.10 ± 0.33
254	$\rho(1700)^- K^+$	-0.36 ± 0.61	$-0.36 \pm 0.57 \pm 0.23$				-0.36 ± 0.61
255	$K^+\pi^-\pi^0(NR)$	0.10 ± 0.18	$0.10 \pm 0.16 \pm 0.08$				0.10 ± 0.18
257	$K_0^*(1430)^0 \pi^0$	-0.15 ± 0.11	$-0.15 \pm 0.10 \pm 0.04$				-0.15 ± 0.11
261	$K^0 \pi^+ \pi^-$	-0.01 ± 0.05	$-0.01 \pm 0.05 \pm 0.01$				-0.01 ± 0.05
264	$K^{*+} \pi^-$	-0.22 ± 0.06 ¹	$-0.24 \pm 0.07 \pm 0.02$ ²	$-0.21 \pm 0.11 \pm 0.07$			-0.23 ± 0.06
265	$K_0^*(1430)^+ \pi^-$	0.09 ± 0.07	$0.09 \pm 0.07 \pm 0.03$				0.09 ± 0.08
271	$K^{*0} \pi^0$	-0.15 ± 0.13	$-0.15 \pm 0.12 \pm 0.04$				-0.15 ± 0.13
278	$K^{*0} \pi^+ \pi^-$	0.07 ± 0.05	$0.07 \pm 0.04 \pm 0.03$				0.07 ± 0.05
279	$K^{*0} \rho^0$	-0.06 ± 0.09	$-0.06 \pm 0.09 \pm 0.02$				-0.06 ± 0.09
280	$f_0(980) K^{*0}$	0.07 ± 0.10	$0.07 \pm 0.10 \pm 0.02$				0.07 ± 0.10
283	$a_1^- K^+$	-0.16 ± 0.12	$-0.16 \pm 0.12 \pm 0.01$				-0.16 ± 0.12
284	$K^{*+} \rho^-$	0.21 ± 0.15	$0.21 \pm 0.15 \pm 0.02$				0.21 ± 0.15
311	$K^{*0} K^+ K^-$	0.01 ± 0.05	$0.01 \pm 0.05 \pm 0.02$				0.01 ± 0.05
312	ϕK^{*0}	0.00 ± 0.04	$0.01 \pm 0.06 \pm 0.03$	$-0.007 \pm 0.048 \pm 0.021$		$-0.015 \pm 0.032 \pm 0.10^\dagger$	-0.003 ± 0.038
314	$K^{*0} \pi^+ K^-$	0.22 ± 0.39	$0.22 \pm 0.33 \pm 0.20$				0.22 ± 0.39
326	$\phi K_0^*(1430)^0$	0.12 ± 0.08	$0.20 \pm 0.14 \pm 0.06$	$0.093 \pm 0.094 \pm 0.017$			0.124 ± 0.081
333	$\phi K_2^*(1430)^0$	-0.11 ± 0.10	$-0.08 \pm 0.12 \pm 0.05$	$-0.155^{+0.152}_{-0.133} \pm 0.033$			$-0.113^{+0.102}_{-0.096}$
340	$K^{*0} \gamma$	-0.002 ± 0.015	$-0.016 \pm 0.022 \pm 0.007$			$0.008 \pm 0.017 \pm 0.009$	-0.002 ± 0.015
357	$\pi^0 \pi^0$	0.43 ± 0.14	$0.43 \pm 0.26 \pm 0.05$	$0.44^{+0.52}_{-0.53} \pm 0.17$			0.43 ± 0.24
391	$a_1^\mp \pi^\pm$	-0.07 ± 0.06	$-0.07 \pm 0.07 \pm 0.02$	$-0.06 \pm 0.05 \pm 0.07$			-0.07 ± 0.06
400	$b_{\frac{1}{2}}^\mp \pi^\pm$	-0.05 ± 0.10	$-0.05 \pm 0.10 \pm 0.02$				-0.05 ± 0.10
412	$p\bar{p} K^{*0}$	0.05 ± 0.12	$0.11 \pm 0.13 \pm 0.06$	$-0.08 \pm 0.20 \pm 0.02$			0.05 ± 0.12
414	$p\bar{\Lambda} \pi^-$	0.04 ± 0.07	$-0.10 \pm 0.10 \pm 0.02$ ³	$-0.02 \pm 0.10 \pm 0.03$			-0.06 ± 0.07
477	$K^{*0} \ell \ell$	-0.05 ± 0.10	$0.02 \pm 0.20 \pm 0.02$	$-0.08 \pm 0.12 \pm 0.02$			-0.05 ± 0.10
478	$K^{*0} e^+ e^-$	-0.21 ± 0.19		$-0.21 \pm 0.19 \pm 0.02$			-0.21 ± 0.19
479	$K^{*0} \mu^+ \mu^-$	-0.07 ± 0.04		$0.00 \pm 0.15 \pm 0.03$		$-0.035 \pm 0.024 \pm 0.003^4$	-0.034 ± 0.024

Measurements of time-dependent CP asymmetries are listed on the Unitarity Triangle home page. (<http://www.slac.stanford.edu/xorg/hfag/triangle/index.html>)

[†] Extracted from measured $\Delta A_{CP} = A_{CP}(\phi K^{*0}) - A_{CP}(J/\psi K^{*0}) = 0.015 \pm 0.032 \pm 0.005$.

¹ PDG uses also a result from CLEO.

² Average of BABAR results from $B^0 \rightarrow K^+ \pi^- \pi^0$ and $B^0 \rightarrow K^0 \pi^+ \pi^-$.

³ PDG quotes the opposite asymmetry.

⁴ LHCb also quotes results in bins of $m(\ell^+ \ell^-)^2$.

Heavy Flavor Averaging Group - October 2016

Compilation of CP Asymmetries for B^\pm/B^0 Admixture

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

RPP#	Mode	PDG2014 Avg.	BABAR	Belle	Our Avg.
65	$K^*\gamma$	$-0.003 \pm 0.017^\ddagger$	$-0.003 \pm 0.017 \pm 0.007$	$-0.015 \pm 0.044 \pm 0.012$	-0.005 ± 0.017
77	$s\gamma$	-0.008 ± 0.029	$0.017 \pm 0.019 \pm 0.010^{\S}$	$0.002 \pm 0.050 \pm 0.030$	0.015 ± 0.020
	$(s+d)\gamma$	-0.01 ± 0.05	$0.057 \pm 0.060 \pm 0.018^1$	$0.022 \pm 0.039 \pm 0.009^*$	0.032 ± 0.034
80	$s\eta$	$-0.13^{+0.04}_{-0.05}$		$-0.13 \pm 0.04^{+0.02}_{-0.03}$	$-0.13^{+0.04}_{-0.05}$
86	π^+X	0.10 ± 0.17	$0.10 \pm 0.16 \pm 0.05$		0.10 ± 0.17
121	$s\ell\ell$	-0.22 ± 0.26	$0.04 \pm 0.11 \pm 0.01$		0.04 ± 0.11
126	$K^*e^+e^-$	-0.18 ± 0.15		$-0.18 \pm 0.15 \pm 0.01$	-0.18 ± 0.15
128	$K^*\mu^+\mu^-$	-0.03 ± 0.13		$-0.03 \pm 0.13 \pm 0.02$	-0.03 ± 0.13
129	$K\ell\ell$	New	$-0.03 \pm 0.14 \pm 0.01$		-0.03 ± 0.14
130	$K^*\ell\ell$	-0.04 ± 0.07	$0.03 \pm 0.13 \pm 0.01^\ddagger$	$-0.10 \pm 0.10 \pm 0.01$	-0.05 ± 0.08

[§] BABAR also measures the difference in direct CP asymmetry for charged and neutral B mesons: $\Delta A_{CP} = +(5.0 \pm 3.9 \pm 1.5)\%$.

[†] Previous BABAR result is also included in the PDG Average.

¹ There is another BABAR result using the recoil method (Phys. Rev. D 77, 051103), and a CLEO result (Phys. Rev. Lett. 86, 5661) that are used in the PDG average

* Require $E_\gamma > 2.1$ GeV.

[‡] PDG include also a result from CLEO.

Heavy Flavor Averaging Group - October 2016

Compilation of CP Asymmetries for B_s^0 mesons

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

RPP#	Mode	PDG2014 Avg.	Belle	CDF	LHCb	Our Avg.
52	π^+K^-	0.28 ± 0.04		$0.22 \pm 0.07 \pm 0.02$	$0.27 \pm 0.04 \pm 0.01$	0.26 ± 0.04

Heavy Flavor Averaging Group - October 2016

Compilation of CP Asymmetries for Λ_b baryons

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

RPP#	Mode	PDG2014 Avg.	CDF	LHCb	Our Avg.
21	$p\pi^-$	0.03 ± 0.18	$0.06 \pm 0.07 \pm 0.03$		0.06 ± 0.08
22	pK^-	0.37 ± 0.17	$-0.10 \pm 0.08 \pm 0.04$		-0.10 ± 0.09
–	$\bar{K}^0p\pi^-$	New		$0.22 \pm 0.13 \pm 0.03$	0.22 ± 0.13
–	$\Lambda K^+\pi^-$	New		$-0.53 \pm 0.23 \pm 0.11$	-0.53 ± 0.26
–	ΛK^+K^-	New		$-0.28 \pm 0.10 \pm 0.07$	-0.28 ± 0.12

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