

Heavy Flavor Averaging Group - B^+ Polarization Measurements - April 2007

Measurements of the longitudinal polarization fraction f_L

In PDG2006 **New since PDG2006 (preliminary)** **New since PDG2006 (published)**

RPP#	Mode	PDG2006 Avg.	BABAR	Belle	New Avg.
213	$K^{*+}\rho^0$	$0.96_{-0.15}^{+0.04} \pm 0.04$	$0.96_{-0.15}^{+0.04} \pm 0.05$		$0.96_{-0.16}^{+0.06}$
214	$K^{*0}\rho^+$	$0.43 \pm 0.11_{-0.02}^{+0.05}$	$0.52 \pm 0.10 \pm 0.04$	$0.43 \pm 0.11_{-0.02}^{+0.05}$	0.48 ± 0.08
236	ϕK^{*+}	0.50 ± 0.07	$0.46 \pm 0.12 \pm 0.03$	$0.52 \pm 0.08 \pm 0.03$	0.50 ± 0.07
266	$\rho^+\rho^0$	0.96 ± 0.06	$0.905 \pm 0.042_{-0.027}^{+0.023}$	$0.95 \pm 0.11 \pm 0.02$	$0.912_{-0.045}^{+0.044}$
270	$\omega\rho^+$	$0.88_{-0.15}^{+0.12} \pm 0.03$	$0.82 \pm 0.11 \pm 0.02$		0.82 ± 0.11

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Full angular analysis of $B^+ \rightarrow \phi K^{*+}$

In PDG2006 New since PDG2006 (preliminary) New since PDG2006 (published)

Parameter	PDG2006 Avg.	BABAR	Belle	New Avg.
f_{\perp}	$0.19 \pm 0.08 \pm 0.02$		$0.19 \pm 0.08 \pm 0.02$	0.19 ± 0.08
ϕ_{\parallel}	$2.10 \pm 0.28 \pm 0.04$		$2.10 \pm 0.28 \pm 0.04$	2.10 ± 0.28
ϕ_{\perp}	$2.31 \pm 0.30 \pm 0.07$		$2.31 \pm 0.30 \pm 0.07$	2.31 ± 0.31

BR, f_L and A_{CP} are tabulated separately.

Heavy Flavor Averaging Group - B^0 Polarization Measurements - April 2007

Measurements of the longitudinal polarization fraction f_L
 In PDG2006 **New since PDG2006 (preliminary)** **New since PDG2006 (published)**

RPP#	Mode	PDG2006 Avg.	BABAR	Belle	CDF	New Avg.
199	$K^{*0}\rho^0$	New	$0.57 \pm 0.09 \pm 0.08$			0.57 ± 0.12
204	ϕK^{*0}	0.48 ± 0.04	$0.506 \pm 0.040 \pm 0.015$	$0.45 \pm 0.05 \pm 0.02$	$0.57 \pm 0.10 \pm 0.05$	0.491 ± 0.032
–	$\phi K_2^*(1430)^0$	New	$0.85 \pm 0.07 \pm 0.04$			0.85 ± 0.08
253	$\rho^0\rho^0$	New	$0.86_{-0.13}^{+0.11} \pm 0.05$			$0.86_{-0.14}^{+0.12}$
257	$\rho^+\rho^-$	$0.967_{-0.027}^{+0.022}$	$0.977 \pm 0.024_{-0.013}^{+0.015}$	$0.941_{-0.040}^{+0.034} \pm 0.030$		0.968 ± 0.023

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Full angular analysis of $B^0 \rightarrow \phi K^{*0}$
 In PDG2006 New since PDG2006 (preliminary) New since PDG2006 (published)

Parameter	PDG2006 Avg.	BABAR	Belle	CDF	New Avg.
$f_{\perp} = \Lambda_{\perp\perp}$	0.26 ± 0.04	$0.227 \pm 0.038 \pm 0.013$	$0.31^{+0.06}_{-0.05} \pm 0.02$	$0.20 \pm 0.10 \pm 0.05$	0.252 ± 0.031
ϕ_{\parallel}	$2.36^{+0.18}_{-0.16}$	$2.31 \pm 0.14 \pm 0.08$	$2.40^{+0.28}_{-0.24} \pm 0.07$	$2.97 \pm 0.52 \pm 0.26$	$2.37^{+0.14}_{-0.13}$
ϕ_{\perp}	2.49 ± 0.18	$2.24 \pm 0.15 \pm 0.09$	$2.51 \pm 0.25 \pm 0.06$	$2.77 \pm 0.37 \pm 0.37$	2.36 ± 0.14
A_{CP}^0	0.01 ± 0.09	$-0.03 \pm 0.08 \pm 0.02$	$0.13 \pm 0.12 \pm 0.04$		0.02 ± 0.07
A_{CP}^{\perp}	-0.16 ± 0.15	$-0.03 \pm 0.16 \pm 0.05$	$-0.20 \pm 0.18 \pm 0.04$		-0.11 ± 0.12
$\Delta\phi_{\parallel}$	0.02 ± 0.28	$0.24 \pm 0.14 \pm 0.08$	$-0.32 \pm 0.27 \pm 0.07$		0.10 ± 0.14
$\Delta\phi_{\perp}$	0.03 ± 0.33	$0.19 \pm 0.15 \pm 0.08$	$-0.30 \pm 0.25 \pm 0.06$		0.04 ± 0.14

BR, f_L and A_{CP} are tabulated separately.

Full angular analysis of $B^0 \rightarrow \phi K_2^*(1430)^0$
 In PDG2006 New since PDG2006 (preliminary) New since PDG2006 (published)

Parameter	PDG2006 Avg.	BABAR	Belle	CDF	New Avg.
$f_{\perp} = \Lambda_{\perp\perp}$	New	$0.045^{+0.049}_{-0.040} \pm 0.013$			$0.045^{+0.051}_{-0.042}$
ϕ_{\parallel}	New	$2.90 \pm 0.39 \pm 0.06$			2.90 ± 0.40
ϕ_{\perp}	New	$5.7^{+0.6}_{-0.9} \pm 0.1$			$5.7^{+0.6}_{-0.9}$

BR, f_L and A_{CP} are tabulated separately.

Charmless VV Polarization Measurements:

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- [12] Belle Collaboration, (K.-F. Chen *et al.*), Phys. Rev. Lett. **94**, 221804 (2005).
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