

Heavy Flavor Averaging Group - B^+ Polarization Measurements - April 2008

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 | $0.49 \pm 0.05 \pm 0.03$ | $0.52 \pm 0.08 \pm 0.03$ | 0.50 ± 0.05 |
| 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 |

Heavy Flavor Averaging Group - B^+ Polarization Measurements - April 2008
 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. |
|------------------------------------|--------------------------|--|--------------------------|-----------------|
| $f_{\perp} = \Lambda_{\perp\perp}$ | $0.19 \pm 0.08 \pm 0.02$ | $0.21 \pm 0.05 \pm 0.02$ | $0.19 \pm 0.08 \pm 0.02$ | 0.20 ± 0.05 |
| ϕ_{\parallel} | $2.10 \pm 0.28 \pm 0.04$ | $2.47 \pm 0.20 \pm 0.07$ | $2.10 \pm 0.28 \pm 0.04$ | 2.34 ± 0.17 |
| ϕ_{\perp} | $2.31 \pm 0.30 \pm 0.07$ | $2.69 \pm 0.20 \pm 0.03$ | $2.31 \pm 0.30 \pm 0.07$ | 2.58 ± 0.17 |
| A_{CP}^0 | New | $0.17 \pm 0.11 \pm 0.02$ | | 0.17 ± 0.11 |
| A_{CP}^{\perp} | New | $0.22 \pm 0.24 \pm 0.08$ | | 0.22 ± 0.25 |
| $\Delta\phi_{\parallel}$ | New | $0.07 \pm 0.20 \pm 0.05$ | | 0.07 ± 0.21 |
| $\Delta\phi_{\perp}$ | New | $0.19 \pm 0.20 \pm 0.07$ | | 0.19 ± 0.21 |

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

Heavy Flavor Averaging Group - B^0 Polarization Measurements - April 2008

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. |
|------|---------------------------|---------------------------|-------------------------------------|-------------------------------------|---------------------------|
| 199 | $\overline{K^{*0}}\rho^0$ | New | $0.57 \pm 0.09 \pm 0.08$ | | 0.57 ± 0.12 |
| 204 | ϕK^{*0} | 0.48 ± 0.04 | $0.506 \pm 0.040 \pm 0.015$ | $0.45 \pm 0.05 \pm 0.02$ | 0.484 ± 0.034 |
| – | $\phi K_2^{*0}(1430)$ | New | $0.85 \pm 0.07 \pm 0.04$ | | 0.85 ± 0.08 |
| 205 | $K^{*0}\overline{K^{*0}}$ | New | $0.80^{+0.10}_{-0.12} \pm 0.06$ | | $0.80^{+0.12}_{-0.13}$ |
| 253 | $\rho^0\rho^0$ | New | $0.70 \pm 0.14 \pm 0.05$ | | 0.70 ± 0.15 |
| 257 | $\rho^+\rho^-$ | $0.967^{+0.022}_{-0.027}$ | $0.992 \pm 0.024^{+0.026}_{-0.013}$ | $0.941^{+0.034}_{-0.040} \pm 0.030$ | $0.978^{+0.025}_{-0.022}$ |

Heavy Flavor Averaging Group - B^0 Polarization Measurements - April 2008

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 | New Avg. |
|------------------------------------|------------------------|---|---------------------------------|------------------------|
| $f_{\perp} = \Lambda_{\perp\perp}$ | 0.26 ± 0.04 | $0.227 \pm 0.038 \pm 0.013$ | $0.31_{-0.05}^{+0.06} \pm 0.02$ | 0.256 ± 0.032 |
| ϕ_{\parallel} | $2.36_{-0.16}^{+0.18}$ | $2.31 \pm 0.14 \pm 0.08$ | $2.40_{-0.24}^{+0.28} \pm 0.07$ | $2.33_{-0.13}^{+0.14}$ |
| ϕ_{\perp} | 2.49 ± 0.18 | $2.24 \pm 0.15 \pm 0.09$ | $2.51 \pm 0.25 \pm 0.06$ | 2.33 ± 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 $B^0 \rightarrow \phi K_2^{*0}(1430)$
 In PDG2006 New since PDG2006 (preliminary) New since PDG2006 (published)

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

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

Charmless VV Polarization Measurements:

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