

$K_4^*(2045)$ 

$$I(J^P) = \frac{1}{2}(4^+)$$

 **$K_4^*(2045)$  MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>2048<sup>+8</sup><sub>-9</sub></b>	<b>OUR AVERAGE</b>	Error includes scale factor of 1.1.			
2090 ± 9 <sup>+11</sup> <sub>-29</sub>	183k	ABLIKIM	19AQ	BES ±	$J/\psi \rightarrow K^+ K^- \pi^0$
2062 ± 14 ± 13		<sup>1</sup> ASTON	86	LASS 0	11 $K^- p \rightarrow K^- \pi^+ n$
2039 ± 10	400	<sup>2,3</sup> CLELAND	82	SPEC ±	50 $K^+ p \rightarrow K_S^0 \pi^\pm p$
2070 <sup>+100</sup> <sub>-40</sub>		<sup>4</sup> ASTON	81C	LASS 0	11 $K^- p \rightarrow K^- \pi^+ n$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2079 ± 7	431	TORRES	86	MPSF	400 $pA \rightarrow 4KX$
2088 ± 20	650	BAUBILLIER	82	HBC -	8.25 $K^- p \rightarrow K_S^0 \pi^- p$
2115 ± 46	488	CARMONY	77	HBC 0	9 $K^+ d \rightarrow K^+ \pi's X$
<sup>1</sup> From a fit to all moments.					
<sup>2</sup> From a fit to 8 moments.					
<sup>3</sup> Number of events evaluated by us.					
<sup>4</sup> From energy-independent partial-wave analysis.					

 **$K_4^*(2045)$  WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>199<sup>+27</sup><sub>-19</sub></b>	<b>OUR AVERAGE</b>				
201 ± 19 <sup>+57</sup> <sub>-17</sub>	183k	ABLIKIM	19AQ	BES ±	$J/\psi \rightarrow K^+ K^- \pi^0$
221 ± 48 ± 27		<sup>5</sup> ASTON	86	LASS 0	11 $K^- p \rightarrow K^- \pi^+ n$
189 ± 35	400	<sup>6,7</sup> CLELAND	82	SPEC ±	50 $K^+ p \rightarrow K_S^0 \pi^\pm p$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
61 ± 58	431	TORRES	86	MPSF	400 $pA \rightarrow 4KX$
170 <sup>+100</sup> <sub>-50</sub>	650	BAUBILLIER	82	HBC -	8.25 $K^- p \rightarrow K_S^0 \pi^- p$
240 <sup>+500</sup> <sub>-100</sub>		<sup>8</sup> ASTON	81C	LASS 0	11 $K^- p \rightarrow K^- \pi^+ n$
300 ± 200		CARMONY	77	HBC 0	9 $K^+ d \rightarrow K^+ \pi's X$
<sup>5</sup> From a fit to all moments.					
<sup>6</sup> From a fit to 8 moments.					
<sup>7</sup> Number of events evaluated by us.					
<sup>8</sup> From energy-independent partial-wave analysis.					

**$K_4^*(2045)$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $K\pi$	$(9.9 \pm 1.2) \%$
$\Gamma_2$ $K^*(892)\pi\pi$	$(9 \pm 5) \%$
$\Gamma_3$ $K^*(892)\pi\pi\pi$	$(7 \pm 5) \%$
$\Gamma_4$ $\rho K\pi$	$(5.7 \pm 3.2) \%$
$\Gamma_5$ $\omega K\pi$	$(5.0 \pm 3.0) \%$
$\Gamma_6$ $\phi K\pi$	$(2.8 \pm 1.4) \%$
$\Gamma_7$ $\phi K^*(892)$	$(1.4 \pm 0.7) \%$

 **$K_4^*(2045)$  BRANCHING RATIOS**

$\Gamma(K\pi)/\Gamma_{\text{total}}$   $\Gamma_1/\Gamma$

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
<b><math>0.099 \pm 0.012</math></b>	ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$

$\Gamma(K^*(892)\pi\pi)/\Gamma(K\pi)$   $\Gamma_2/\Gamma_1$

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
<b><math>0.89 \pm 0.53</math></b>	BAUBILLIER	82	HBC	- 8.25 $K^- p \rightarrow p K_S^0 3\pi$

$\Gamma(K^*(892)\pi\pi\pi)/\Gamma(K\pi)$   $\Gamma_3/\Gamma_1$

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
<b><math>0.75 \pm 0.49</math></b>	BAUBILLIER	82	HBC	- 8.25 $K^- p \rightarrow p K_S^0 3\pi$

$\Gamma(\rho K\pi)/\Gamma(K\pi)$   $\Gamma_4/\Gamma_1$

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
<b><math>0.58 \pm 0.32</math></b>	BAUBILLIER	82	HBC	- 8.25 $K^- p \rightarrow p K_S^0 3\pi$

$\Gamma(\omega K\pi)/\Gamma(K\pi)$   $\Gamma_5/\Gamma_1$

VALUE	DOCUMENT ID	TECN	CHG	COMMENT
<b><math>0.50 \pm 0.30</math></b>	BAUBILLIER	82	HBC	- 8.25 $K^- p \rightarrow p K_S^0 3\pi$

$\Gamma(\phi K\pi)/\Gamma_{\text{total}}$   $\Gamma_6/\Gamma$

VALUE	DOCUMENT ID	TECN	COMMENT
<b><math>0.028 \pm 0.014</math></b>	<sup>9</sup> TORRES	86	MPSF 400 $pA \rightarrow 4KX$

$\Gamma(\phi K^*(892))/\Gamma_{\text{total}}$   $\Gamma_7/\Gamma$

VALUE	DOCUMENT ID	TECN	COMMENT
<b><math>0.014 \pm 0.007</math></b>	<sup>9</sup> TORRES	86	MPSF 400 $pA \rightarrow 4KX$

<sup>9</sup> Error determination is model dependent.

 **$K_4^*(2045)$  REFERENCES**

ABLIKIM	19AQ	PR D100 032004	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ASTON	88	NP B296 493	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
ASTON	86	PL B180 308	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
TORRES	86	PR D34 707	S. Torres <i>et al.</i>	(VPI, ARIZ, FNAL, FSU+)

BAUBILLIER	82	PL 118B 447	M. Baubillier <i>et al.</i>	(BIRM, CERN, GLAS+)
CLELAND	82	NP B208 189	W.E. Cleland <i>et al.</i>	(DURH, GEVA, LAUS+)
ASTON	81C	PL 106B 235	D. Aston <i>et al.</i>	(SLAC, CARL, OTTA) JP
CARMONY	77	PR D16 1251	D.D. Carmony <i>et al.</i>	(PURD, UCD, IUPU)

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