$K_4^*(2045)$

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

$K_4^*(2045)$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
$2048^{+\ 8}_{-\ 9}$ OUR AVERAGE Error includes scale factor of 1.1.						
$2090 \pm 9^{+11}_{-29}$	183k	ABLIKIM	19AQ	BES	$\pm$	$J/\psi \to K^+K^-\pi^0$
$2062 \pm 14 \pm 13$		[1] ASTON	86	LASS	0	11 $K^-p \to K^-\pi^+n$
2039 ± 10	400	[2,3] CLELAND	82	SPEC	$\pm$	50 $K^+p \to K^0_S\pi^\pm p$
$2070^{+100}_{-\ 40}$		[4] ASTON	81C	LASS	0	11 $K^-p \to K^-\pi^+n$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
2079 ± 7	431	TORRES	86	MPSF		400 pA $\to 4K$X
2088 ± 20	650	BAUBILLIER	82	HBC	$-$	8.25 $K^-p \to K^0_S\pi^-p$
2115 ± 46	488	CARMONY	77	HBC	0	9 $K^+d \to K^+\pi$'s X

[1] From a fit to all moments.
[2] From a fit to 8 moments.
[3] Number of events evaluated by us.
[4] From energy-independent partial-wave analysis.

$K_4^*(2045)$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
$199^{+\ 27}_{-\ 19}$ OUR AVERAGE						
$201 \pm 19^{+57}_{-17}$	183k	ABLIKIM	19AQ	BES	$\pm$	$J/\psi \to K^+K^-\pi^0$
$221 \pm 48 \pm 27$		[5] ASTON	86	LASS	0	11 $K^-p \to K^-\pi^+n$
189 ± 35	400	[6,7] CLELAND	82	SPEC	$\pm$	50 $K^+p \to K^0_S\pi^\pm p$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
61 ± 58	431	TORRES	86	MPSF		400 pA $\to 4K$X
$170^{+100}_{-\ 50}$	650	BAUBILLIER	82	HBC	$-$	8.25 $K^-p \to K^0_S\pi^-p$
240^{+500}_{-100}		[8] ASTON	81C	LASS	0	11 $K^-p \to K^-\pi^+n$
300 ± 200		CARMONY	77	HBC	0	9 $K^+d \to K^+\pi$'s X

[5] From a fit to all moments.
[6] From a fit to 8 moments.
[7] Number of events evaluated by us.
[8] From energy-independent partial-wave analysis.

$K_4^*(2045)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$K\pi$	(9.9±1.2) %
Γ_2	$K^*(892)\pi\pi$	(9 ±5) %
Γ_3	$K^*(892)\pi\pi\pi$	(7 ±5) %
Γ_4	$\rho K\pi$	(5.7±3.2) %
Γ_5	$\omega K\pi$	(5.0±3.0) %
Γ_6	$\phi K\pi$	(2.8±1.4) %
Γ_7	$\phi K^*(892)$	(1.4±0.7) %

$K_4^*(2045)$ BRANCHING RATIOS

$\Gamma(K\pi)/\Gamma_{total}$ — Γ_1/Γ

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.099±0.012	ASTON	88	LASS	0	11 $K^- p \to K^- \pi^+ n$

$\Gamma(K^*(892)\pi\pi)/\Gamma(K\pi)$ — Γ_2/Γ_1

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.89±0.53	BAUBILLIER	82	HBC	−	8.25 $K^- p \to p K^0_S 3\pi$

$\Gamma(K^*(892)\pi\pi\pi)/\Gamma(K\pi)$ — Γ_3/Γ_1

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.75±0.49	BAUBILLIER	82	HBC	−	8.25 $K^- p \to p K^0_S 3\pi$

$\Gamma(\rho K\pi)/\Gamma(K\pi)$ — Γ_4/Γ_1

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.58±0.32	BAUBILLIER	82	HBC	−	8.25 $K^- p \to p K^0_S 3\pi$

$\Gamma(\omega K\pi)/\Gamma(K\pi)$ — Γ_5/Γ_1

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.50±0.30	BAUBILLIER	82	HBC	−	8.25 $K^- p \to p K^0_S 3\pi$

$\Gamma(\phi K\pi)/\Gamma_{total}$ — Γ_6/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.028±0.014	[9] TORRES	86	MPSF	400 pA $\to$ 4KX

$\Gamma(\phi K^*(892))/\Gamma_{total}$ — Γ_7/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.014±0.007	[9] TORRES	86	MPSF	400 pA $\to$ 4KX

[9] Error determination is model dependent.

$K_4^*(2045)$ REFERENCES

ABLIKIM	19AQ	PR D100 032004	M. Ablikim *et al.*	(BESIII Collab.)
ASTON	88	NP B296 493	D. Aston *et al.*	(SLAC, NAGO, CINC, INUS)
ASTON	86	PL B180 308	D. Aston *et al.*	(SLAC, NAGO, CINC, INUS)
TORRES	86	PR D34 707	S. Torres *et al.*	(VPI, ARIZ, FNAL, FSU+)
BAUBILLIER	82	PL 118B 447	M. Baubillier *et al.*	(BIRM, CERN, GLAS+)
CLELAND	82	NP B208 189	W.E. Cleland *et al.*	(DURH, GEVA, LAUS+)
ASTON	81C	PL 106B 235	D. Aston *et al.*	(SLAC, CARL, OTTA) JP
CARMONY	77	PR D16 1251	D.D. Carmony *et al.*	(PURD, UCD, IUPU)