

# K<sub>1</sub>(1650)

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

This entry contains various peaks in strange meson systems ( $K^+ \phi$ ,  $K \pi \pi$ ) reported in partial-wave analysis in the 1600–1900 mass region.

## K<sub>1</sub>(1650) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>1650 ± 50</b>		FRAME	86	OMEG +	13 $K^+ p \rightarrow \phi K^+ p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
1861 ± 10 <sup>+</sup> <sub>−46</sub>	24k	<sup>1</sup> AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
1911 ± 37 <sup>+</sup> <sub>−48</sub>	24k	<sup>1</sup> AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
1793 ± 59 <sup>+</sup> <sub>−101</sub>	4289	<sup>2,3</sup> AAIJ	17C	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
~ 1840		ARMSTRONG	83	OMEG −	18.5 $K^- p \rightarrow 3K p$
~ 1800		DAUM	81C	CNTR −	63 $K^- p \rightarrow K^- 2\pi p$

<sup>1</sup>One of two  $K_1$  states reported by AAIJ 21E. From an amplitude analysis of the decay

$B^+ \rightarrow J/\psi \phi K^+$  with a significance of 4.5  $\sigma$ .

<sup>2</sup>From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of 7.6  $\sigma$ .

<sup>3</sup>Superseded by AAIJ 21E.

## K<sub>1</sub>(1650) WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>150 ± 50</b>		FRAME	86	OMEG +	13 $K^+ p \rightarrow \phi K^+ p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
149 ± 41 <sup>+</sup> <sub>−23</sub>	24k	<sup>1</sup> AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
276 ± 50 <sup>+</sup> <sub>−159</sub>	24k	<sup>1</sup> AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
365 ± 157 <sup>+</sup> <sub>−215</sub>	4289	<sup>2,3</sup> AAIJ	17C	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
~ 250		DAUM	81C	CNTR −	63 $K^- p \rightarrow K^- 2\pi p$

<sup>1</sup>One of two  $K_1$  states reported by AAIJ 21E. From an amplitude analysis of the decay

$B^+ \rightarrow J/\psi \phi K^+$  with a significance of 4.5  $\sigma$ .

<sup>2</sup>From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of 7.6  $\sigma$ .

<sup>3</sup>Superseded by AAIJ 21E.

## K<sub>1</sub>(1650) DECAY MODES

Mode
$\Gamma_1$ $K \pi \pi$
$\Gamma_2$ $K \phi$

## $K_1(1650)$ REFERENCES

AAIJ	21E	PRL 127 082001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	17C	PRL 118 022003	R. Aaij <i>et al.</i>	(LHCb Collab.)
Also		PR D95 012002	R. Aaij <i>et al.</i>	(LHCb Collab.)
FRAME	86	NP B276 667	D. Frame <i>et al.</i>	(GLAS)
ARMSTRONG	83	NP B221 1	T.A. Armstrong <i>et al.</i>	(BARI, BIRM, CERN+)
DAUM	81C	NP B187 1	C. Daum <i>et al.</i>	(AMST, CERN, CRAC, MPIM+)

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