

K₁(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.

K₁(1650) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
1650 ± 50		FRAME	86	OMEG +	13 $K^+ p \rightarrow \phi K^+ p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
1861 ± 10 ⁺ _{−46}	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
1911 ± 37 ⁺ _{−48}	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
1793 ± 59 ⁺ _{−101}	4289	^{2,3} 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 $K^- p \rightarrow K^- 2\pi p$

¹One 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 σ .

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

³Superseded by AAIJ 21E.

K₁(1650) WIDTH

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

¹One 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 σ .

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

³Superseded by AAIJ 21E.

K₁(1650) DECAY MODES

Mode
Γ_1 $K \pi \pi$
Γ_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+)
