

$K_1(1650)$

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

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.

$K_1(1650)$ 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. ● ● ●					
$1861 \pm 10^{+16}_{-46}$	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
$1911 \pm 37^{+124}_{-48}$	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
$1793 \pm 59^{+153}_{-101}$	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 $K^- p \rightarrow K^- 2\pi p$

¹ 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 σ .

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

³ Superseded by AAIJ 21E.

$K_1(1650)$ 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. ● ● ●					
$149 \pm 41^{+231}_{-23}$	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
$276 \pm 50^{+319}_{-159}$	24k	¹ AAIJ	21E	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
$365 \pm 157^{+138}_{-215}$	4289	^{2,3} AAIJ	17C	LHCB	$B^+ \rightarrow J/\psi \phi K^+$
~ 250		DAUM	81C	CNTR -	63 $K^- p \rightarrow K^- 2\pi p$

¹ 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 σ .

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

³ Superseded by AAIJ 21E.

$K_1(1650)$ 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+)

NODE=M099

NODE=M099

NODE=M099M

NODE=M099M

OCCUR=2

NODE=M099M;LINKAGE=C

NODE=M099M;LINKAGE=A

NODE=M099M;LINKAGE=B

NODE=M099W

NODE=M099W

OCCUR=2

NODE=M099W;LINKAGE=C

NODE=M099W;LINKAGE=A

NODE=M099W;LINKAGE=B

NODE=M099215;NODE=M099

DESIG=1

DESIG=2

NODE=M099

REFID=61150
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 REFID=20569
 REFID=22801
 REFID=22548