

# K<sub>2</sub><sup>\*</sup>(1980)

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

## K<sub>2</sub><sup>\*</sup>(1980) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>1974 ± 26 OUR AVERAGE</b>					
2073 ± 94 <sup>+245</sup> <sub>-240</sub>	4289	<sup>1</sup> AAIJ	17C	LHCB	B <sup>+</sup> → J/ψ φ K <sup>+</sup>
1973 ± 8 ± 25		ASTON	87	LASS 0	11 K <sup>-</sup> p → K <sup>0</sup> π <sup>+</sup> π <sup>-</sup> n
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
2020 ± 20		TIKHOMIROV 03	SPEC		40.0 π <sup>-</sup> C → K <sub>S</sub> <sup>0</sup> K <sub>S</sub> <sup>0</sup> K <sub>L</sub> <sup>0</sup> X
1978 ± 40	241	BIRD	89	LASS -	11 K <sup>-</sup> p → K <sup>0</sup> π <sup>-</sup> p
<sup>1</sup> From an amplitude analysis of the decay B <sup>+</sup> → J/ψ φ K <sup>+</sup> with a significance of 5.4 σ.					

## K<sub>2</sub><sup>\*</sup>(1980) WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>376 ± 70 OUR AVERAGE</b>					
678 ± 311 <sup>+1153</sup> <sub>-559</sub>	4289	<sup>2</sup> AAIJ	17C	LHCB	B <sup>+</sup> → J/ψ φ K <sup>+</sup>
373 ± 33 ± 60		ASTON	87	LASS 0	11 K <sup>-</sup> p → K <sup>0</sup> π <sup>+</sup> π <sup>-</sup> n
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
180 ± 70		TIKHOMIROV 03	SPEC		40.0 π <sup>-</sup> C → K <sub>S</sub> <sup>0</sup> K <sub>S</sub> <sup>0</sup> K <sub>L</sub> <sup>0</sup> X
398 ± 47	241	BIRD	89	LASS -	11 K <sup>-</sup> p → K <sup>0</sup> π <sup>-</sup> p
<sup>2</sup> From an amplitude analysis of the decay B <sup>+</sup> → J/ψ φ K <sup>+</sup> with a significance of 5.4 σ.					

## K<sub>2</sub><sup>\*</sup>(1980) DECAY MODES

Mode	Fraction (Γ <sub>i</sub> /Γ)
Γ <sub>1</sub> K <sup>*</sup> (892)π	possibly seen
Γ <sub>2</sub> K ρ	possibly seen
Γ <sub>3</sub> K f <sub>2</sub> (1270)	possibly seen
Γ <sub>4</sub> K φ	seen

## K<sub>2</sub><sup>\*</sup>(1980) BRANCHING RATIOS

<b>Γ(K<sup>*</sup>(892)π)/Γ<sub>total</sub></b>	<b>Γ<sub>1</sub>/Γ</b>
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
<b>possibly seen</b>	GULER   11   BELL   B <sup>+</sup> → J/ψ K <sup>+</sup> π <sup>+</sup> π <sup>-</sup>
<b>Γ(K ρ)/Γ<sub>total</sub></b>	<b>Γ<sub>2</sub>/Γ</b>
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
<b>possibly seen</b>	GULER   11   BELL   B <sup>+</sup> → J/ψ K <sup>+</sup> π <sup>+</sup> π <sup>-</sup>

$\Gamma(K\rho)/\Gamma(K^*(892)\pi)$					$\Gamma_2/\Gamma_1$
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
<b>1.49±0.24±0.09</b>	ASTON	87	LASS	0	11 $K^- p \rightarrow \bar{K}^0 \pi^+ \pi^- n$

$\Gamma(K f_2(1270))/\Gamma_{\text{total}}$					$\Gamma_3/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT		
<b>possibly seen</b>	TIKHOMIROV	03	SPEC	40.0	$\pi^- C \rightarrow K_S^0 K_S^0 K_L^0 X$

$\Gamma(K\phi)/\Gamma_{\text{total}}$					$\Gamma_4/\Gamma$
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
<b>seen</b>	4289	<sup>3</sup> AAIJ	17C	LHCB	$B^+ \rightarrow J/\psi \phi K^+$

<sup>3</sup>From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of 5.4  $\sigma$ .

### $K_2^*(1980)$ REFERENCES

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.)
GULER	11	PR D83 032005	H. Guler <i>et al.</i>	(BELLE Collab.)
TIKHOMIROV	03	PAN 66 828	G.D. Tikhomirov <i>et al.</i>	
		Translated from YAF 66 860.		
BIRD	89	SLAC-332	P.F. Bird	(SLAC)
ASTON	87	NP B292 693	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)