

**$K_2(1820)$** 

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

See our mini-review in the 2004 edition of this *Review* (PDG 04) under  $K_2(1770)$ .

 **$K_2(1820)$  MASS**

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>1819±12 OUR AVERAGE</b>				
$1853 \pm 27^{+18}_{-35}$	4289	<sup>1</sup> AAIJ	17C LHCb	$B^+ \rightarrow J/\psi \phi K^+$
$1816 \pm 13$		<sup>2</sup> ASTON	93 LASS	$11K^- p \rightarrow K^- \omega p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
~ 1840		<sup>3</sup> DAUM	81C CNTR	63 $K^- p \rightarrow K^- 2\pi p$
<sup>1</sup> From an amplitude analysis of the decay $B^+ \rightarrow J/\psi \phi K^+$ with a significance of $3.0 \sigma$ .				
<sup>2</sup> From a partial wave analysis of the $K^- \omega$ system.				
<sup>3</sup> From a partial wave analysis of the $K^- 2\pi$ system.				

 **$K_2(1820)$  WIDTH**

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>264±34 OUR AVERAGE</b>				
$167 \pm 58^{+82}_{-72}$	4289	<sup>4</sup> AAIJ	17C LHCb	$B^+ \rightarrow J/\psi \phi K^+$
$276 \pm 35$		<sup>5</sup> ASTON	93 LASS	$11K^- p \rightarrow K^- \omega p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
~ 230		<sup>6</sup> DAUM	81C CNTR	63 $K^- p \rightarrow K^- 2\pi p$
<sup>4</sup> From an amplitude analysis of the decay $B^+ \rightarrow J/\psi \phi K^+$ with a significance of $3.0 \sigma$ .				
<sup>5</sup> From a partial wave analysis of the $K^- \omega$ system.				
<sup>6</sup> From a partial wave analysis of the $K^- 2\pi$ system.				

 **$K_2(1820)$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $K \pi \pi$	
$\Gamma_2$ $K_2^*(1430) \pi$	seen
$\Gamma_3$ $K^*(892) \pi$	seen
$\Gamma_4$ $K f_2(1270)$	seen
$\Gamma_5$ $K \omega$	seen
$\Gamma_6$ $K \phi$	seen

 **$K_2(1820)$  BRANCHING RATIOS**

$\Gamma(K_2^*(1430)\pi)/\Gamma(K\pi\pi)$	$\Gamma_2/\Gamma_1$		
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
~ 0.77	DAUM	81C CNTR	63 $K^- p \rightarrow \bar{K} 2\pi p$

$\Gamma(K^*(892)\pi)/\Gamma(K\pi\pi)$   $\Gamma_3/\Gamma_1$

VALUE DOCUMENT ID TECN COMMENT

• • • We do not use the following data for averages, fits, limits, etc. • • •

~ 0.05                      DAUM              81C    CNTR    63K<sup>-</sup> p →  $\bar{K}2\pi p$

$\Gamma(K f_2(1270))/\Gamma(K\pi\pi)$   $\Gamma_4/\Gamma_1$

VALUE DOCUMENT ID TECN COMMENT

• • • We do not use the following data for averages, fits, limits, etc. • • •

~ 0.18                      DAUM              81C    CNTR    63K<sup>-</sup> p →  $\bar{K}2\pi p$

$\Gamma(K\phi)/\Gamma_{\text{total}}$   $\Gamma_6/\Gamma$

VALUE EVTS DOCUMENT ID TECN COMMENT

**seen**                      4289              <sup>7</sup> AAIJ              17C    LHCB    B<sup>+</sup> → J/ψ φ K<sup>+</sup>

<sup>7</sup> From an amplitude analysis of the decay B<sup>+</sup> → J/ψ φ K<sup>+</sup> with a significance of 3.0 σ.

**K<sub>2</sub>(1820) 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.)
PDG	04	PL B592 1	S. Eidelman <i>et al.</i>	(PDG Collab.)
ASTON	93	PL B308 186	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
DAUM	81C	NP B187 1	C. Daum <i>et al.</i>	(AMST, CERN, CRAC, MPIM+)