

K₂(1820)

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

Observed by ASTON 93 from a partial wave analysis of the $K^- \omega$ system. See mini-review under $K_2(1770)$.

K₂(1820) MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1816 ± 13	¹ ASTON	93 LASS	11 $K^- p \rightarrow K^- \omega p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
~ 1840	² DAUM	81C CNTR	63 $K^- p \rightarrow K^- 2\pi p$
¹ From a partial wave analysis of the $K^- \omega$ system.			
² From a partial wave analysis of the $K^- 2\pi$ system.			

K₂(1820) WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
276 ± 35	³ ASTON	93 LASS	11 $K^- p \rightarrow K^- \omega p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
~ 230	⁴ DAUM	81C CNTR	63 $K^- p \rightarrow K^- 2\pi p$
³ From a partial wave analysis of the $K^- \omega$ system.			
⁴ From a partial wave analysis of the $K^- 2\pi$ system.			

K₂(1820) DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $K \pi \pi$	
Γ_2 $K_2^*(1430) \pi$	seen
Γ_3 $K^*(892) \pi$	seen
Γ_4 $K f_2(1270)$	seen
Γ_5 $K \omega$	seen

K₂(1820) BRANCHING RATIOS

$\Gamma(K_2^*(1430)\pi)/\Gamma(K\pi\pi)$	Γ_2/Γ_1		
VALUE	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
~ 0.77	DAUM	81C CNTR	63 $K^- p \rightarrow \bar{K} 2\pi p$

$\Gamma(K^*(892)\pi)/\Gamma(K\pi\pi)$	Γ_3/Γ_1		
VALUE	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
~ 0.05	DAUM	81C CNTR	63 $K^- p \rightarrow \bar{K} 2\pi p$

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

Γ_4/Γ_1

VALUE DOCUMENT ID TECN COMMENT

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

~ 0.18 DAUM 81C CNTR 63K⁻ p → $\bar{K} 2\pi p$

$K_2(1820)$ REFERENCES

ASTON 93 PL B308 186 D. Aston *et al.* (SLAC, NAGO, CINC, INUS)
DAUM 81C NP B187 1 C. Daum *et al.* (AMST, CERN, CRAC, MPIM+)
