$K_2(2250)$

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

OMITTED FROM SUMMARY TABLE

This entry contains various peaks in strange meson systems reported in the 2150–2260 MeV region, as well as enhancements seen in the antihyperon-nucleon system, either in the mass spectra or in the $J^P = 2^-$ wave.

$K_2(2250)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
2247 ±17 OUR AVERAGE						
2200.0±40.0		[1] ARMSTRONG	83C	OMEG	−	18 $K^- p \to \Lambda \overline{p} X$
2235 ±50		[1] BAUBILLIER	81	HBC	−	8 $K^- p \to \Lambda \overline{p} X$
2260 ±20		[1] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p} X$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
2147 ± 4	37	CHLIAPNIK...	79	HBC	+	32 $K^+ p \to \overline{\Lambda} p X$
2240 ±20	20	LISSAUER	70	HBC		9 $K^+ p$

[1] $J^P = 2^-$ from moments analysis.

$K_2(2250)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
180 ±30 OUR AVERAGE Error includes scale factor of 1.4.						
150.0±30.0		[2] ARMSTRONG	83C	OMEG	−	18 $K^- p \to \Lambda \overline{p} X$
210 ±30		[2] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p} X$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
∼ 200		[2] BAUBILLIER	81	HBC	−	8 $K^- p \to \Lambda \overline{p} X$
∼ 40	37	CHLIAPNIK...	79	HBC	+	32 $K^+ p \to \overline{\Lambda} p X$
80 ±20	20	LISSAUER	70	HBC		9 $K^+ p$

[2] $J^P = 2^-$ from moments analysis.

$K_2(2250)$ DECAY MODES

	Mode
Γ_1	$K \pi \pi$
Γ_2	$p \overline{\Lambda}$

$K_2(2250)$ REFERENCES

ARMSTRONG 83C NP B227 365 + (BARI, BIRM, CERN, MILA, CURIN+)
BAUBILLIER 81 NP B183 1 + (BIRM, CERN, GLAS, MSU, CURIN) JP
CLELAND 81 NP B184 1 +Nef, Martin+ (PITT, GEVA, LAUS, DURH) JP
CHLIAPNIK... 79 NP B158 253 Chliapnikov, Gerdyukov+ (CERN, BELG, MONS)
LISSAUER 70 NP B18 491 +Alexander, Firestone, Goldhaber (LBL)

OTHER RELATED PAPERS

ALEXANDER 68B PRL 20 755 +Firestone, Goldhaber, Shen (LRL)

$K_3(2320)$

$I(J^P) = \frac{1}{2}(3^+)$

OMITTED FROM SUMMARY TABLE

Seen in the $J^P = 3^+$ wave of the antihyperon-nucleon system. Needs confirmation.

$K_3(2320)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
2324 ±24 OUR AVERAGE					
2330.0±40.0	[1] ARMSTRONG	83C	OMEG	−	18 $K^- p \to \Lambda \overline{p} X$
2320.0±30.0	[1] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p} X$

[1] $J^P = 3^+$ from moments analysis.

$K_3(2320)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
150.0±30.0	[2] ARMSTRONG	83C	OMEG	−	18 $K^- p \to \Lambda \overline{p} X$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
∼ 250.0	[2] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p} X$

[2] $J^P = 3^+$ from moments analysis.

$K_3(2320)$ DECAY MODES

	Mode
Γ_1	$p \overline{\Lambda}$

$K_3(2320)$ REFERENCES

ARMSTRONG 83C NP B227 365 + (BARI, BIRM, CERN, MILA, CURIN+)
CLELAND 81 NP B184 1 +Nef, Martin+ (PITT, GEVA, LAUS, DURH)

$K_5^*(2380)$

$I(J^P) = \frac{1}{2}(5^-)$

OMITTED FROM SUMMARY TABLE

Seen in partial wave analysis of the $K^- \pi^+$ system. Needs confirmation.

$K_5^*(2380)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
2382±14±19	[1] ASTON	86	LASS	0	11 $K^- p \to K^- \pi^+ n$

[1] From a fit to all the moments.

$K_5^*(2380)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
178±37±32	[2] ASTON	86	LASS	0	11 $K^- p \to K^- \pi^+ n$

[2] From a fit to all the moments.

$K_5^*(2380)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$K \pi$	(6.1±1.2) %

$K_5^*(2380)$ BRANCHING RATIOS

$\Gamma(K\pi)/\Gamma_{total}$ Γ_1/Γ

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
0.061±0.012	ASTON	88	LASS	0	11 $K^- p \to K^- \pi^+ n$

$K_5^*(2380)$ REFERENCES

ASTON 88 NP B296 493 +Awaji, Bienz, Bird+ (SLAC, NAGO, CINC, INUS)
ASTON 86 PL B180 308 +Awaji, D'Amore+ (SLAC, NAGO, CINC, INUS)

$K_4(2500)$

$I(J^P) = \frac{1}{2}(4^-)$

OMITTED FROM SUMMARY TABLE

Seen in the $J^P = 4^-$ wave of the antihyperon-nucleon system. Needs confirmation.

$K_4(2500)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
2490.0±20.0	[1] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p}$

[1] $J^P = 4^-$ from moments analysis.

$K_4(2500)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
∼ 250.0	[2] CLELAND	81	SPEC	±	50 $K^+ p \to \Lambda \overline{p}$

[2] $J^P = 4^-$ from moments analysis.

$K_4(2500)$ DECAY MODES

	Mode
Γ_1	$p \overline{\Lambda}$

$K_4(2500)$ REFERENCES

CLELAND 81 NP B184 1 +Nef, Martin+ (PITT, GEVA, LAUS, DURH)