Ξ(2500)

$I(J^P) = \frac{1}{2}(?^?)$ Status: *
J, P need confirmation.

OMITTED FROM SUMMARY TABLE

The ALITTI 69 peak might be instead the Ξ(2370) or might be neither the Ξ(2370) nor the Ξ(2500).

Ξ(2500) MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
≈ 2500 OUR ESTIMATE						
2505 ± 10		JENKINS	83	MPS	–	$K^- p \to K^+$ MM
2430 ± 20	30	ALITTI	69	HBC	–	$K^- p$ 4.6–5 GeV/c
2500 ± 10	45	BARTSCH	69	HBC	−0	$K^- p$ 10 GeV/c

Ξ(2500) WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	CHG
150^{+60}_{-40}	ALITTI	69	HBC	–
59 ± 27	BARTSCH	69	HBC	−0

Ξ(2500) DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Xi\pi$	
Γ_2	$\Lambda\overline{K}$	
Γ_3	$\Sigma\overline{K}$	
Γ_4	$\Xi\pi\pi$	seen
Γ_5	$\Xi(1530)\pi$	
Γ_6	$\Lambda\overline{K}\pi + \Sigma\overline{K}\pi$	seen

Ξ(2500) BRANCHING RATIOS

$\Gamma(\Xi\pi)/[\Gamma(\Xi\pi)+\Gamma(\Lambda\overline{K})+\Gamma(\Sigma\overline{K})+\Gamma(\Xi(1530)\pi)]$ $\Gamma_1/(\Gamma_1+\Gamma_2+\Gamma_3+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	COMMENT
<0.5	ALITTI	69	HBC	1 standard dev. limit

$\Gamma(\Lambda\overline{K})/[\Gamma(\Xi\pi)+\Gamma(\Lambda\overline{K})+\Gamma(\Sigma\overline{K})+\Gamma(\Xi(1530)\pi)]$ $\Gamma_2/(\Gamma_1+\Gamma_2+\Gamma_3+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	CHG
0.5 ± 0.2	ALITTI	69	HBC	–

$\Gamma(\Sigma\overline{K})/[\Gamma(\Xi\pi)+\Gamma(\Lambda\overline{K})+\Gamma(\Sigma\overline{K})+\Gamma(\Xi(1530)\pi)]$ $\Gamma_3/(\Gamma_1+\Gamma_2+\Gamma_3+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	CHG
0.5 ± 0.2	ALITTI	69	HBC	–

$\Gamma(\Xi(1530)\pi)/[\Gamma(\Xi\pi)+\Gamma(\Lambda\overline{K})+\Gamma(\Sigma\overline{K})+\Gamma(\Xi(1530)\pi)]$ $\Gamma_5/(\Gamma_1+\Gamma_2+\Gamma_3+\Gamma_5)$

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.2	ALITTI	69	HBC	1 standard dev. limit

$\Gamma(\Xi\pi\pi)/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE	*DOCUMENT ID*		*TECN*	*CHG*
seen	BARTSCH	69	HBC	-0

$[\Gamma(\Lambda\overline{K}\pi)+\Gamma(\Sigma\overline{K}\pi)]/\Gamma_{\text{total}}$ Γ_6/Γ

VALUE	*DOCUMENT ID*		*TECN*	*CHG*
seen	BARTSCH	69	HBC	-0

$\Xi(2500)$ REFERENCES

JENKINS	83	PRL 51 951	C.M. Jenkins *et al.*	(FSU, BRAN, LBL+)
ALITTI	69	PRL 22 79	J. Alitti *et al.*	(BNL, SYRA) I
BARTSCH	69	PL 28B 439	J. Bartsch *et al.*	(AACH, BERL, CERN+)