

$\Xi(2370)$

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

OMITTED FROM SUMMARY TABLE

$\Xi(2370)$ MASS						
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT	
≈ 2370 OUR ESTIMATE						
2356 ± 10		JENKINS	83	MPS	—	$K^- p \rightarrow K^+ \text{MM}$
2370	50	HASSALL	81	HBC	—0	$K^- p$ 6.5 GeV/ c
2373 ± 8	94	AMIRZADEH	80	HBC	—0	$K^- p$ 8.25 GeV/ c
2392 ± 27		DIBIANCA	75	DBC		$\Xi 2\pi$

$\Xi(2370)$ WIDTH						
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT	
80	50	HASSALL	81	HBC	–0	$K^- p$ 6.5 GeV/ c
80 $\pm$ 25	94	AMIRZADEH	80	HBC	–0	$K^- p$ 8.25 GeV/ c
75 $\pm$ 69		DIBIANCA	75	DBC		$\Xi 2\pi$

$\Xi(2370)$ DECAY MODES		
Mode	Fraction (Γ_i/Γ)	
Γ_1 $\Lambda \bar{K} \pi$ Includes $\Gamma_4 + \Gamma_6$.	seen	
Γ_2 $\Sigma \bar{K} \pi$ Includes $\Gamma_5 + \Gamma_6$.	seen	
Γ_3 $\Omega^- K$		
Γ_4 $\Lambda \bar{K}^*(892)$		
Γ_5 $\Sigma \bar{K}^*(892)$		
Γ_6 $\Sigma(1385) \bar{K}$		

$\Xi(2370)$ BRANCHING RATIOS						
$\Gamma(\Lambda\bar{K}\pi)/\Gamma_{\text{total}}$			Γ_1/Γ			
<u>VALUE</u>	<u>DOCUMENT ID</u>		<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
seen	AMIRZADEH	80	HBC	−0	$K^- p$ 8.25 GeV/ c	
$\Gamma(\Sigma\bar{K}\pi)/\Gamma_{\text{total}}$			Γ_2/Γ			
<u>VALUE</u>	<u>DOCUMENT ID</u>		<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
seen	AMIRZADEH	80	HBC	−0	$K^- p$ 8.25 GeV/ c	
$[\Gamma(\Lambda\bar{K}\pi) + \Gamma(\Sigma\bar{K}\pi)]/\Gamma_{\text{total}}$			$(\Gamma_1+\Gamma_2)/\Gamma$			
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>		<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
seen	50	HASSALL	81	HBC	−0	$K^- p$ 6.5 GeV/ c

$\Gamma(\Omega^- K)/\Gamma_{\text{total}}$					Γ_3/Γ
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
0.09±0.04	¹ KINSON 80	HBC	—	$K^- p$ 8.25 GeV/ c	
$[\Gamma(\Lambda \bar{K}^*(892)) + \Gamma(\Sigma \bar{K}^*(892))]/\Gamma_{\text{total}}$					$(\Gamma_4 + \Gamma_5)/\Gamma$
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
0.22±0.13	¹ KINSON 80	HBC	—	$K^- p$ 8.25 GeV/ c	
$\Gamma(\Sigma(1385) \bar{K})/\Gamma_{\text{total}}$					Γ_6/Γ
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
0.12±0.08	¹ KINSON 80	HBC	—	$K^- p$ 8.25 GeV/ c	

$\Xi(2370)$ FOOTNOTES

¹ KINSON 80 is a reanalysis of AMIRZADEH 80 with 50% more events.

$\Xi(2370)$ REFERENCES

JENKINS	83	PRL 51 951	C.M. Jenkins <i>et al.</i>	(FSU, BRAN, LBL+)
HASSALL	81	NP B189 397	J.K. Hassall <i>et al.</i>	(CAVE, MSU)
AMIRZADEH	80	PL 90B 324	J. Amirzadeh <i>et al.</i>	(BIRM, CERN, GLAS+) I
KINSON	80	Toronto Conf. 263	J.B. Kinson <i>et al.</i>	(BIRM, CERN, GLAS+) I
DIBIANCA	75	NP B98 137	F.A. Dibianca, R.J. Endorf	(CMU)