

# $\Xi(2370)$

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

OMITTED FROM SUMMARY TABLE

## $\Xi(2370)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
<b><math>\approx 2370</math> OUR ESTIMATE</b>					
2356 ± 10		JENKINS	83	MPS	– $K^- p \rightarrow K^+$ MM
2370	50	HASSALL	81	HBC	–0 $K^- p$ 6.5 GeV/ <i>c</i>
2373 ± 8	94	AMIRZADEH	80	HBC	–0 $K^- p$ 8.25 GeV/ <i>c</i>
2392 ± 27		DIBIANCA	75	DBC	$\Xi 2\pi$

## $\Xi(2370)$ WIDTH

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

## $\Xi(2370)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\Lambda \bar{K} \pi$ Includes $\Gamma_4 + \Gamma_6$ .	seen
$\Gamma_2$ $\Sigma \bar{K} \pi$ Includes $\Gamma_5 + \Gamma_6$ .	seen
$\Gamma_3$ $\Omega^- K$	
$\Gamma_4$ $\Lambda \bar{K}^*(892)$	
$\Gamma_5$ $\Sigma \bar{K}^*(892)$	
$\Gamma_6$ $\Sigma(1385) \bar{K}$	

## $\Xi(2370)$ BRANCHING RATIOS

<b><math>\Gamma(\Lambda \bar{K} \pi)/\Gamma_{\text{total}}</math></b>		<b><math>\Gamma_1/\Gamma</math></b>			
<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/ <i>c</i>
<b><math>\Gamma(\Sigma \bar{K} \pi)/\Gamma_{\text{total}}</math></b>		<b><math>\Gamma_2/\Gamma</math></b>			
<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/ <i>c</i>
<b><math>[\Gamma(\Lambda \bar{K} \pi) + \Gamma(\Sigma \bar{K} \pi)]/\Gamma_{\text{total}}</math></b>		<b><math>(\Gamma_1 + \Gamma_2)/\Gamma</math></b>			
<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/ <i>c</i>

$\Gamma(\Omega^- K)/\Gamma_{\text{total}}$						$\Gamma_3/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>		
0.09±0.04	<sup>1</sup> KINSON	80	HBC	—	$K^- p$ 8.25 GeV/c	
$[\Gamma(\Lambda\bar{K}^*(892)) + \Gamma(\Sigma\bar{K}^*(892))]/\Gamma_{\text{total}}$						$(\Gamma_4+\Gamma_5)/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>		
0.22±0.13	<sup>1</sup> KINSON	80	HBC	—	$K^- p$ 8.25 GeV/c	
$\Gamma(\Sigma(1385)\bar{K})/\Gamma_{\text{total}}$						$\Gamma_6/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>		
0.12±0.08	<sup>1</sup> KINSON	80	HBC	—	$K^- p$ 8.25 GeV/c	

### $\Xi(2370)$ FOOTNOTES

<sup>1</sup> 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)