

$\Xi_c(2930)$ $I(J^P) = ?(?^?)$ Status: **

OMITTED FROM SUMMARY TABLE

 $\Xi_c(2930)$ MASSES $\Xi_c(2930)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2942.3 ± 4.4 ± 1.5	21	LI	18D	BELL e^+e^- at $\Upsilon(4S)$

 $\Xi_c(2930)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2938.55 ± 0.21 ± 0.22	10.4k	¹ AAIJ	20X	LHCB pp at 13 TeV

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

2928.9 ± 3.0 $\begin{smallmatrix} +0.9 \\ -12.0 \end{smallmatrix}$	61	LI	18A	BELL e^+e^- at $\Upsilon(4S)$
2931 ± 3 ± 5	34	AUBERT	08H	BABR $\Upsilon(4S) \rightarrow B\bar{B}$

¹AAIJ 20X reports $2938.55 \pm 0.21 \pm 0.17 \pm 0.14$ MeV where the last uncertainty is due to the Λ_c^+ mass. Observes that the broader resonance at 2930 MeV seen in $B^- \rightarrow K^- \Lambda_c^+ \bar{\Lambda}_c^-$ by LI 18A and AUBERT 08H resolves into two narrower peaks at approximately 2939 MeV and 2923 MeV.

 $\Xi_c(2930)^+ - \Xi_c(2930)^0$ MASS DIFFERENCE

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
13.4 ± 5.3 $\begin{smallmatrix} +1.7 \\ -12.1 \end{smallmatrix}$	21	¹ LI	18D	BELL e^+e^- at $\Upsilon(4S)$

¹This LI 18D value is not independent of the mass measurements.

 $\Xi_c(2930)$ WIDTHS $\Xi_c(2930)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
14.8 ± 8.8 ± 2.5	21	LI	18D	BELL e^+e^- at $\Upsilon(4S)$

 $\Xi_c(2930)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
10.2 ± 0.8 ± 1.1	10.4k	¹ AAIJ	20X	LHCB pp at 13 TeV

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

19.5 ± 8.4 $\begin{smallmatrix} +5.9 \\ -7.9 \end{smallmatrix}$	61	LI	18A	BELL e^+e^- at $\Upsilon(4S)$
36 ± 7 ± 11	34	AUBERT	08H	BABR $\Upsilon(4S) \rightarrow B\bar{B}$

¹AAIJ 20X observes that the broader resonance at 2930 MeV seen in $B^- \rightarrow K^- \Lambda_c^+ \bar{\Lambda}_c^-$ by LI 18A and AUBERT 08H resolves into two narrower peaks at approximately 2939 MeV and 2923 MeV.

$\Xi_c(2930)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda_c^+ K^-$	seen
Γ_2	$\Lambda_c^+ K_S^0$	seen

$\Xi_c(2930)$ BRANCHING RATIOS

$\Gamma(\Lambda_c^+ K^-)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	10.4k	AAIJ	20X LHCb	pp at 13 TeV	
seen	61	LI	18A BELLE	Significance 5.1 std	
seen	34	AUBERT	08H BABR	e^+e^- at $\Upsilon(4S)$	
$\Gamma(\Lambda_c^+ K_S^0)/\Gamma_{\text{total}}$					Γ_2/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	21	LI	18D BELLE	Significance 4.1 std	

$\Xi_c(2930)$ REFERENCES

AAIJ	20X	PRL 124 222001	R. Aaij <i>et al.</i>	(LHCb Collab.)
LI	18A	EPJ C78 252	Y.B. Li <i>et al.</i>	(BELLE Collab.)
LI	18D	EPJ C78 928	Y.B. Li <i>et al.</i>	(BELLE Collab.)
AUBERT	08H	PR D77 031101	B. Aubert <i>et al.</i>	(BABAR Collab.)