NODE=B156

$\Xi_c(2930)$

$I(J^P) = ?(?^?)$ Status: ∗∗

OMITTED FROM SUMMARY TABLE

NODE=B156205

$\Xi_c(2930)$ MASSES

$\Xi_c(2930)^+$ MASS

NODE=B156A03

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

NODE=B156A04

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
2938.55±0.30 OUR AVERAGE					
2938.5 ±0.9 ± 2.3	1.5k	[1] AAIJ	23X	LHCB	$B^- \to \Lambda_c^+ \overline{\Lambda}_c^- K^-$
2938.55±0.21± 0.22	10.4k	[2] AAIJ	20X	LHCB	pp at 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2928.9 ±3.0 $^{+0.9}_{-12.0}$	61	LI	18A	BELL	$e^+ e^-$ at $\Upsilon(4S)$
2931 ±3 ± 5	34	AUBERT	08H	BABR	$\Upsilon(4S) \to B\overline{B}$

[1] AAIJ 23X studies the $\Lambda_c^+ K^-$ system within $B^- \to \Lambda_c^+ \overline{\Lambda}_c^- K^-$ decays. NODE=B156A04;LINKAGE=B

[2] AAIJ 20X uses a prompt $\Lambda_c^+ K^-$ sample and reports 2938.55 ± 0.21 ± 0.17 ± 0.14 MeV where the last uncertainty is due to the Λ_c^+ mass. Observes that the broader resonance at 2930 MeV seen in $B^- \to K^- \Lambda_c^+ \overline{\Lambda}_c^-$ by LI 18A and AUBERT 08H resolves into two narrower peaks at approximately 2939 MeV and 2923 MeV. NODE=B156A04;LINKAGE=A

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

NODE=B156A01

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
13.4±5.3 $^{+1.7}_{-12.1}$	21	[1] LI	18D	BELL	$e^+ e^-$ at $\Upsilon(4S)$

[1] This LI 18D value is not independent of the mass measurements. NODE=B156A01;LINKAGE=A

NODE=B156210

$\Xi_c(2930)$ WIDTHS

$\Xi_c(2930)^+$ WIDTH

NODE=B156A05

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

NODE=B156A06

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. • • •					
11.0±1.9± 7.5	1.5k	[2] AAIJ	23X	LHCB	$B^- \to \Lambda_c^+ \overline{\Lambda}_c^- K^-$
19.5±8.4 $^{+5.9}_{-7.9}$	61	LI	18A	BELL	$e^+ e^-$ at $\Upsilon(4S)$
36 ±7 ±11	34	AUBERT	08H	BABR	$\Upsilon(4S) \to B\overline{B}$

[1] AAIJ 20X uses a prompt $\Lambda_c^+ K^-$ sample and observes that the broader resonance at 2930 MeV seen in $B^- \to K^- \Lambda_c^+ \overline{\Lambda}_c^-$ by LI 18A and AUBERT 08H resolves into two narrower peaks at approximately 2939 MeV and 2923 MeV. NODE=B156A06;LINKAGE=A

[2] AAIJ 23X studies the $\Lambda_c^+ K^-$ system within $B^- \to \Lambda_c^+ \overline{\Lambda}_c^- K^-$ decays. NODE=B156A06;LINKAGE=B

NODE=B156215;NODE=B156

$\Xi_c(2930)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$\Lambda_c^+ K^-$	seen	DESIG=1
Γ_2	$\Lambda_c^+ K_S^0$	seen	DESIG=2

$\Xi_c(2930)$ BRANCHING RATIOS

NODE=B156225

$\Gamma(\Lambda_c^+ K^-)/\Gamma_{total}$ Γ_1/Γ

NODE=B156R01
NODE=B156R01

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	1.5k	AAIJ	23X	LHCB	$B^- \to \Lambda_c^+ \overline{\Lambda}_c^- K^-$
seen	10.4k	AAIJ	20X	LHCB	pp at 13 TeV
seen	61	LI	18A	BELL	Significance 5.1 std
seen	34	AUBERT	08H	BABR	$e^+ e^-$ at $\Upsilon(4S)$

$\Gamma(\Lambda_c^+ K_S^0)/\Gamma_{total}$ Γ_2/Γ

NODE=B156R00
NODE=B156R00

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	21	LI	18D	BELL	Significance 4.1 std

$\Xi_c(2930)$ REFERENCES

NODE=B156

AAIJ 23X PR D108 012020 R. Aaij *et al.* (LHCb Collab.) REFID=62300
AAIJ 20X PRL 124 222001 R. Aaij *et al.* (LHCb Collab.) REFID=60564
LI 18A EPJ C78 252 Y.B. Li *et al.* (BELLE Collab.) REFID=59162
LI 18D EPJ C78 928 Y.B. Li *et al.* (BELLE Collab.) REFID=59326
AUBERT 08H PR D77 031101 B. Aubert *et al.* (BABAR Collab.) REFID=52169