NODE=B147

$\Xi_c(3080)$

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

$\Xi_c(3080)$ MASSES

NODE=B147205

$\Xi_c(3080)^+$ MASS

NODE=B147M+
NODE=B147M+

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
3077.2±0.4 OUR AVERAGE					
3076.8±0.7±1.3	0.34k	[1] AAIJ	25AI	LHCB	pp at 13 TeV
3077.9±0.9	596	KATO	16	BELL	e^+e^- Υ region
3077.0±0.4±0.2	403 ± 60	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3076.9±0.3±0.2	210 ± 30	KATO	14	BELL	See KATO 16
3076.7±0.9±0.5	326 ± 40	CHISTOV	06	BELL	See KATO 14

[1] AAIJ 25AI reports 3076.8 ± 0.7 ± 1.3 ± 0.2 MeV value where the third uncertainty is due to the Ξ_c^+ mass.

NODE=B147M+;LINKAGE=A

$\Xi_c(3080)^0$ MASS

NODE=B147M0
NODE=B147M0

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
3079.9±1.4 OUR AVERAGE Error includes scale factor of 1.3.					
3079.3±1.1±0.2	90 ± 27	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
3082.8±1.8±1.5	67 ± 20	CHISTOV	06	BELL	$e^+e^- \approx \Upsilon(4S)$

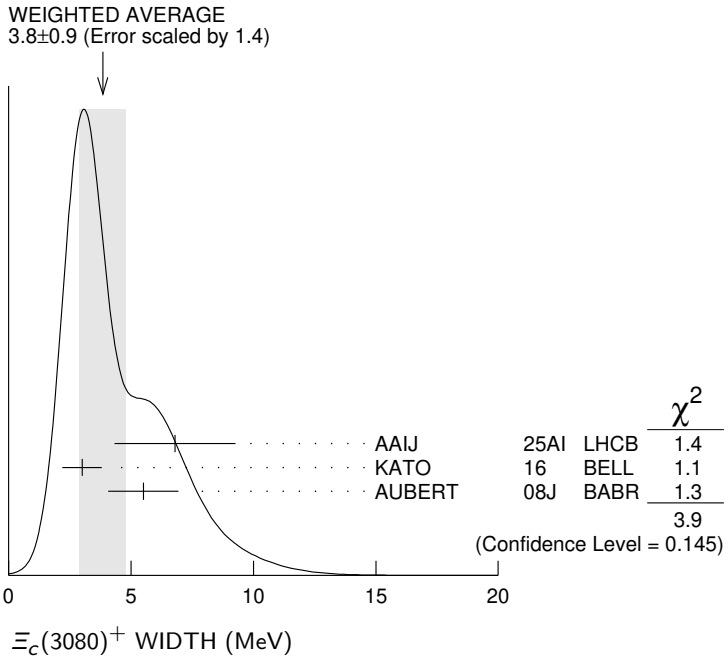
$\Xi_c(3080)$ WIDTHS

NODE=B147210

$\Xi_c(3080)^+$ WIDTH

NODE=B147W+
NODE=B147W+

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
3.8±0.9 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below. [3.6 ± 1.1 MeV OUR 2025 AVERAGE Scale factor = 1.5]					NEW
6.8±2.3±0.9	0.34k	AAIJ	25AI	LHCB	pp at 13 TeV
3.0±0.7±0.4	596	KATO	16	BELL	e^+e^- Υ region
5.5±1.3±0.6	403 ± 60	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2.4±0.9±1.6	210 ± 30	KATO	14	BELL	See KATO 16
6.2±1.2±0.8	326 ± 40	CHISTOV	06	BELL	See KATO 14



$\Xi_c(3080)^0$ WIDTH

NODE=B147W0
NODE=B147W0

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
5.6±2.2 OUR AVERAGE					
5.9±2.3±1.5	90 ± 27	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
5.2±3.1±1.8	67 ± 20	CHISTOV	06	BELL	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(3080)$ DECAY MODES

NODE=B147215;NODE=B147

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$\Lambda_c^+ \overline{K}\pi$	seen	DESIG=1;OUR EST;→ UNCHECKED ←
Γ_2	$\Xi_c^+ \pi^+ \pi^-$	seen	DESIG=9
Γ_3	$\Sigma_c(2455)\overline{K}$	seen	DESIG=2;OUR EST;→ UNCHECKED ←
Γ_4	$\Sigma_c(2455)^{++} K^-$	seen	DESIG=7;OUR EST;→ UNCHECKED ←
Γ_5	$\Sigma_c(2520)^{++} K^-$	seen	DESIG=8;OUR EST;→ UNCHECKED ←
Γ_6	$\Sigma_c(2455)\overline{K} + \Sigma_c(2520)\overline{K}$	seen	DESIG=3;OUR EST;→ UNCHECKED ←
Γ_7	$\Lambda_c^+ \overline{K}$	not seen	DESIG=4;OUR EST;→ UNCHECKED ←
Γ_8	$\Lambda_c^+ \overline{K}\pi^+\pi^-$	not seen	DESIG=5;OUR EST;→ UNCHECKED ←
Γ_9	ΛD^+	seen	DESIG=6;OUR EST;→ UNCHECKED ←

$\Xi_c(3080)$ BRANCHING RATIOS

NODE=B147220

$\Gamma(\Sigma_c(2455)\overline{K})/\Gamma(\Lambda_c^+\overline{K}\pi)$ Γ_3/Γ_1

NODE=B147R01
NODE=B147R01

VALUE	DOCUMENT ID		TECN	COMMENT	
0.45±0.06 OUR AVERAGE					
0.45±0.05±0.05	AUBERT	08J	BABR	in $\Lambda_c^+ K^-\pi^+$	
0.44±0.12±0.07	AUBERT	08J	BABR	in $\Lambda_c^+ K_S^0\pi^-$	OCCUR=2

$\Gamma(\Sigma_c(2520)^{++} K^-)/\Gamma(\Sigma_c(2455)^{++} K^-)$ Γ_5/Γ_4

NODE=B147R03
NODE=B147R03

VALUE	DOCUMENT ID		TECN	COMMENT
1.07±0.27±0.04	KATO	16	BELL	234 and 176 evts

$[\Gamma(\Sigma_c(2455)\overline{K}) + \Gamma(\Sigma_c(2520)\overline{K})]/\Gamma(\Lambda_c^+\overline{K}\pi)$ Γ_6/Γ_1

NODE=B147R02
NODE=B147R02

VALUE	DOCUMENT ID		TECN	COMMENT	
0.89±0.12 OUR AVERAGE					
0.95±0.14±0.06	AUBERT	08J	BABR	in $\Lambda_c^+ K^-\pi^+$	
0.78±0.21±0.05	AUBERT	08J	BABR	in $\Lambda_c^+ K_S^0\pi^-$	OCCUR=2

$\Gamma(\Xi_c^+\pi^+\pi^-)/\Gamma_{total}$ Γ_2/Γ

NODE=B147R04
NODE=B147R04

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	0.34k	AAIJ	25AI	LHCB	pp at 13 TeV

$\Gamma(\Lambda D^+)/\Gamma(\Sigma_c(2455)^{++} K^-)$ Γ_9/Γ_4

NODE=B147R00
NODE=B147R00

VALUE	DOCUMENT ID		TECN	COMMENT
1.29±0.30±0.15	KATO	16	BELL	186 and 176 evts

$\Xi_c(3080)$ REFERENCES

NODE=B147

AAIJ	25AI	PRL 135 161901	R. Aaij *et al.*	(LHCb Collab.)
KATO	16	PR D94 032002	Y. Kato *et al.*	(BELLE Collab.)
KATO	14	PR D89 052003	Y. Kato *et al.*	(BELLE Collab.)
AUBERT	08J	PR D77 012002	B. Aubert *et al.*	(BABAR Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov *et al.*	(BELLE Collab.)

REFID=63651
REFID=57420
REFID=55801
REFID=52168
REFID=51431