

$\Xi_c(3080)$

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

A narrow peak seen in the $\Lambda_c^+ K^- \pi^+$ and $\Lambda_c^+ K_S^0 \pi^-$ mass spectra.

$\Xi_c(3080)$ MASSES

$\Xi_c(3080)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3076.94 ± 0.28 OUR AVERAGE				
3076.9 ± 0.3 ± 0.2	210 ± 30	KATO	14 BELL	$e^+ e^- \Upsilon(1S) \text{ to } \Upsilon(5S)$
3077.0 ± 0.4 ± 0.2	403 ± 60	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
3076.7 ± 0.9 ± 0.5	326 ± 40	CHISTOV	06 BELL	See KATO 14

$\Xi_c(3080)^0$ MASS

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	$e^+ e^- \approx 10.58 \text{ GeV}$
3082.8 ± 1.8 ± 1.5	67 ± 20	CHISTOV	06 BELL	$e^+ e^- \approx \Upsilon(4S)$

$\Xi_c(3080)$ WIDTHS

$\Xi_c(3080)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
4.3 ± 1.5 OUR AVERAGE Error includes scale factor of 1.3.				
2.4 ± 0.9 ± 1.6	210 ± 30	KATO	14 BELL	$e^+ e^- \Upsilon(1S) \text{ to } \Upsilon(5S)$
5.5 ± 1.3 ± 0.6	403 ± 60	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
6.2 ± 1.2 ± 0.8	326 ± 40	CHISTOV	06 BELL	See KATO 14

$\Xi_c(3080)^0$ WIDTH

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

$\Xi_c(3080)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Lambda_c^+ \bar{K} \pi$	seen
$\Gamma_2 \quad \Sigma_c(2455) \bar{K}$	seen
$\Gamma_3 \quad \Sigma_c(2455) \bar{K} + \Sigma_c(2520) \bar{K}$	seen
$\Gamma_4 \quad \Lambda_c^+ \bar{K}$	not seen
$\Gamma_5 \quad \Lambda_c^+ \bar{K} \pi^+ \pi^-$	not seen

$\Xi_c(3080)$ BRANCHING RATIOS

$$\Gamma(\Sigma_c(2455)\bar{K})/\Gamma(\Lambda_c^+\bar{K}\pi) \quad \Gamma_2/\Gamma_1$$

VALUE	DOCUMENT ID	TECN	COMMENT
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0.45±0.06 OUR AVERAGE

0.45±0.05±0.05	AUBERT	08J	BABR in $\Lambda_c^+ K^- \pi^+$
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0.44±0.12±0.07	AUBERT	08J	BABR in $\Lambda_c^+ K_S^0 \pi^-$
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$$[\Gamma(\Sigma_c(2455)\bar{K}) + \Gamma(\Sigma_c(2520)\bar{K})]/\Gamma(\Lambda_c^+\bar{K}\pi) \quad \Gamma_3/\Gamma_1$$

VALUE	DOCUMENT ID	TECN	COMMENT
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0.89±0.12 OUR AVERAGE

0.95±0.14±0.06	AUBERT	08J	BABR in $\Lambda_c^+ K^- \pi^+$
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0.78±0.21±0.05	AUBERT	08J	BABR in $\Lambda_c^+ K_S^0 \pi^-$
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 $\Xi_c(3080)$ REFERENCES

KATO	14	PR D89 052003	Y. Kato <i>et al.</i>	(BELLE Collab.)
AUBERT	08J	PR D77 012002	B. Aubert <i>et al.</i>	(BABAR Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov <i>et al.</i>	(BELLE Collab.)