$\Xi_c(2980)$

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

$\Xi_c(2980)$ MASSES

$\Xi_c(2980)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
2971.4±3.3 OUR AVERAGE	Error includes scale factor of 2.1. See the ideogram below.				
2969.3±2.2±1.7	756 ± 206	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
$2967.7\pm2.3^{+1.1}_{-1.2}$	78 ± 13	LESIAK	08	BELL	$e^+e^- \approx \Upsilon(4S)$
2978.5±2.1±2.0	405 ± 51	CHISTOV	06	BELL	$e^+e^- \approx \Upsilon(4S)$

WEIGHTED AVERAGE
2971.4±3.3 (Error scaled by 2.1)

			χ^2
AUBERT	08J	BABR	0.6
LESIAK	08	BELL	2.1
CHISTOV	06	BELL	6.0
			8.7

(Confidence Level = 0.013)
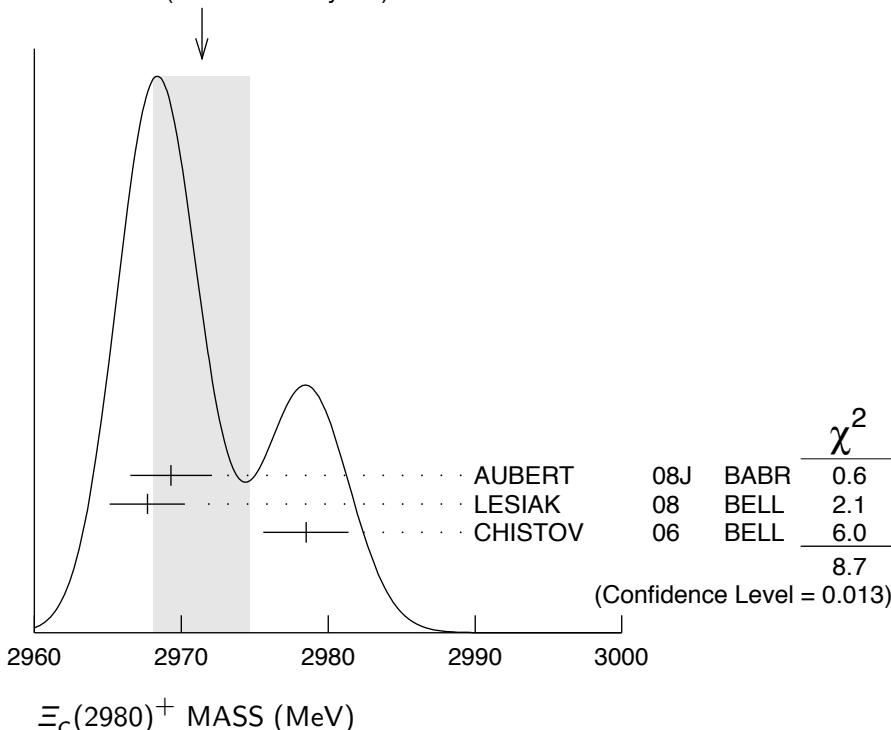
$\Xi_c(2980)^+$ MASS (MeV)

$\Xi_c(2980)^0$ MASS

The evidence is statistically weaker for this charge state.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
2968.0±2.6 OUR AVERAGE	Error includes scale factor of 1.2.				
2972.9±4.4±1.6	67 ± 44	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
$2965.7\pm2.4^{+1.1}_{-1.2}$	57 ± 13	LESIAK	08	BELL	$e^+e^- \approx \Upsilon(4S)$
2977.1±8.8±3.5	42 ± 24	CHISTOV	06	BELL	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2980)$ WIDTHS

$\Xi_c(2980)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
26 ±7 OUR AVERAGE	Error includes scale factor of 1.5. See the ideogram below.				
27 ±8 ±2	756 ± 206	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
18 ±6 ±3	78 ± 13	LESIAK	08	BELL	$e^+e^- \approx \Upsilon(4S)$
43.5±7.5±7.0	405 ± 51	CHISTOV	06	BELL	$e^+e^- \approx \Upsilon(4S)$

WEIGHTED AVERAGE
26±7 (Error scaled by 1.5)

			χ^2
AUBERT	08J	BABR	0.0
LESIAK	08	BELL	1.5
CHISTOV	06	BELL	2.9
			4.3

(Confidence Level = 0.114)

$\Xi_c(2980)^+$ WIDTH (MeV)
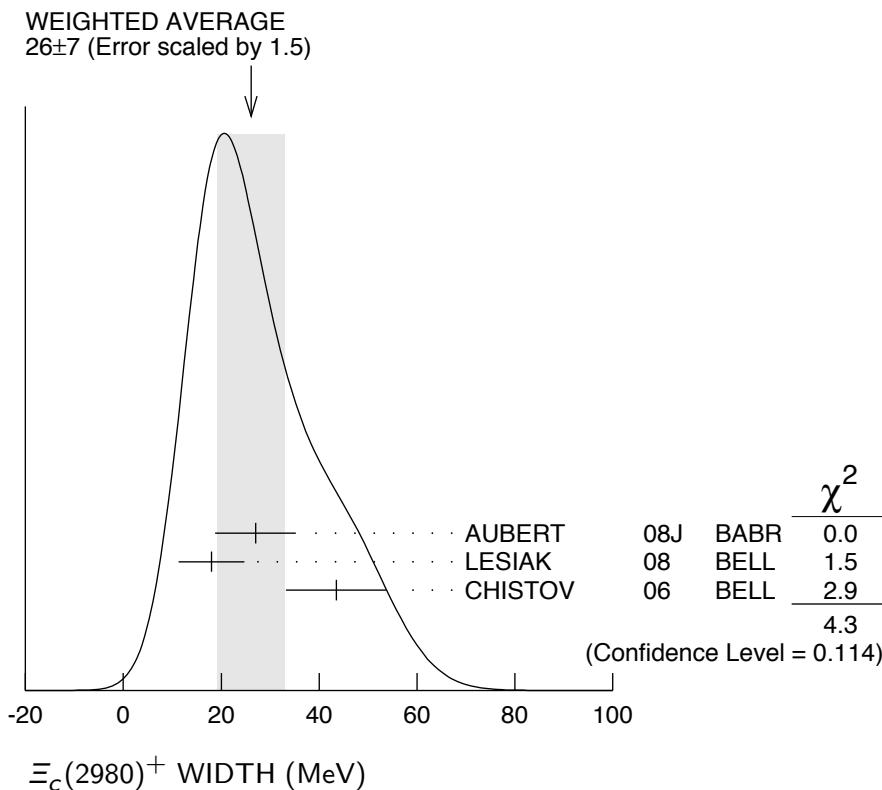
$\Xi_c(2980)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
20±7 OUR AVERAGE	Error includes scale factor of 1.3.				
31±7±8	67 ± 44	AUBERT	08J	BABR	$e^+e^- \approx$ 10.58 GeV
15±6±3	57 ± 13	LESIAK	08	BELL	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2980)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda_c^+ \overline{K} \pi$	seen
Γ_2	$\Sigma_c(2455)\overline{K}$	seen
Γ_3	$\Lambda_c^+ \overline{K}$	not seen
Γ_4	$\Xi_c 2\pi$	seen
Γ_5	$\Xi_c(2645)\pi$	seen

$\Xi_c(2980)$ BRANCHING RATIOS

$\Gamma(\Lambda_c^+ \overline{K} \pi)/\Gamma_{total}$ $\hspace{6cm}$ Γ_1/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AUBERT	08J	BABR	$e^+ e^- \approx \Upsilon(4S)$
seen	CHISTOV	06	BELL	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\Sigma_c(2455)\overline{K})/\Gamma(\Lambda_c^+ \overline{K} \pi)$ $\hspace{4cm}$ Γ_2/Γ_1

VALUE	DOCUMENT ID		TECN	COMMENT
0.55±0.07±0.13	AUBERT	08J	BABR	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\Xi_c(2645)\pi)/\Gamma_{total}$ $\hspace{6cm}$ Γ_5/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
seen	LESIAK	08	BELL	$e^+ e^- \approx \Upsilon(4S)$

$\Xi_c(2980)$ REFERENCES

AUBERT	08J	PR D77 012002	B. Aubert *et al.*	(BABAR Collab.)
LESIAK	08	PL B665 9	T. Lesiak *et al.*	(BELLE Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov *et al.*	(BELLE Collab.)