

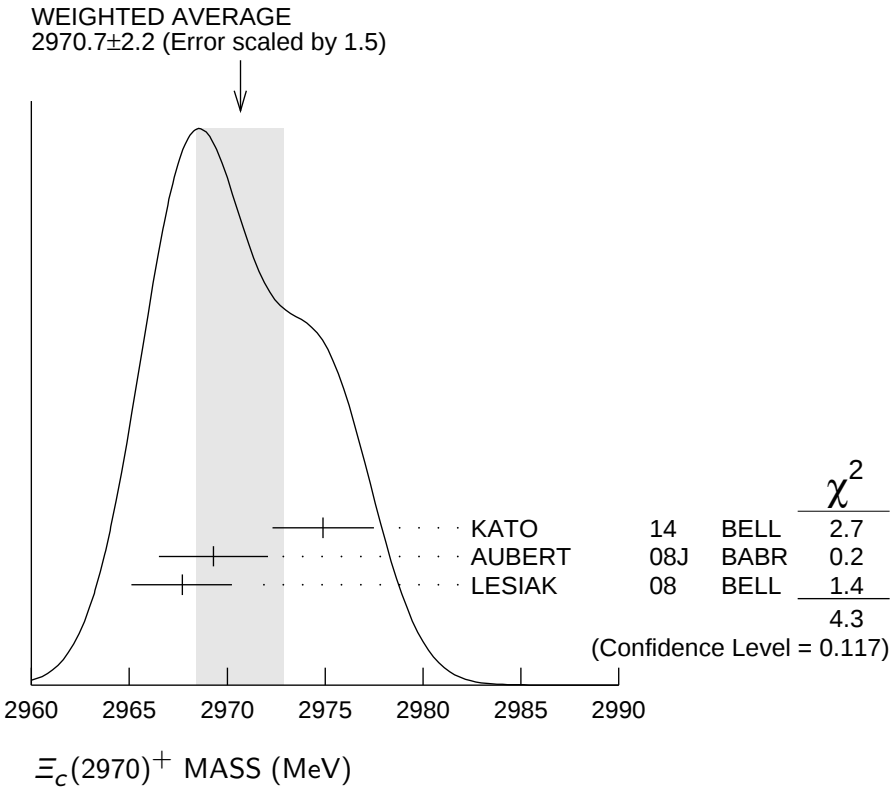
$\Xi_c(2970)$
was $\Xi_c(2980)$

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

$\Xi_c(2970)$ MASSES

$\Xi_c(2970)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2970.7±2.2 OUR AVERAGE	Error includes scale factor of 1.5. See the ideogram below.			
2974.9±1.5±2.1	244 ± 39	KATO	14 BELL	$e^+e^- \Upsilon(1S)$ to $\Upsilon(5S)$
2969.3±2.2±1.7	756 ± 206	AUBERT	08J BABR	$e^+e^- \approx 10.58$ GeV
2967.7±2.3 ^{+1.1} _{-1.2}	78 ± 13	LESIK	08 BELL	$e^+e^- \approx \Upsilon(4S)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2978.5±2.1±2.0	405 ± 51	CHISTOV	06 BELL	See KATO 14



$\Xi_c(2970)^0$ 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±2.4 ^{+1.1} _{-1.2}	57 ± 13	LESIK	08 BELL	$e^+e^- \approx \Upsilon(4S)$
2977.1±8.8±3.5	42 ± 24	CHISTOV	06 BELL	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2970)$ WIDTHS $\Xi_c(2970)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
17.9 ± 3.5 OUR AVERAGE				
$14.8 \pm 2.5 \pm 4.1$	244 ± 39	KATO	14 BELL	$e^+e^- \gamma(1S)$ to $\gamma(5S)$
$27 \pm 8 \pm 2$	756 ± 206	AUBERT	08J BABR	$e^+e^- \approx 10.58$ GeV
$18 \pm 6 \pm 3$	78 ± 13	LESIK	08 BELL	$e^+e^- \approx \gamma(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$43.5 \pm 7.5 \pm 7.0$	405 ± 51	CHISTOV	06 BELL	See KATO 14

 $\Xi_c(2970)^0$ WIDTH

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

 $\Xi_c(2970)$ 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
$\Gamma_3 \quad \Lambda_c^+ \bar{K}$	not seen
$\Gamma_4 \quad \Xi_c 2\pi$	seen
$\Gamma_5 \quad \Xi_c(2645) \pi$	seen

 $\Xi_c(2970)$ BRANCHING RATIOS

$\Gamma(\Lambda_c^+ \bar{K} \pi)/\Gamma_{\text{total}}$	Γ_1/Γ			
VALUE	DOCUMENT ID	TECN	COMMENT	
seen	AUBERT	08J	BABR	$e^+ e^- \approx \gamma(4S)$
seen	CHISTOV	06	BELL	$e^+ e^- \approx \gamma(4S)$

$\Gamma(\Sigma_c(2455)\bar{K})/\Gamma(\Lambda_c^+\bar{K}\pi)$	Γ_2/Γ_1		
VALUE	DOCUMENT ID	TECN	COMMENT
$0.55\pm 0.07\pm 0.13$	AUBERT	08J BABR	$e^+e^- \approx \gamma(4S)$

$\Gamma(\Xi_c(2645)\pi)/\Gamma_{\text{total}}$	Γ_5/Γ		
VALUE	DOCUMENT ID	TECN	COMMENT
seen	LESIK	08 BELL	$e^+e^- \approx \gamma(4S)$

 $\Xi_c(2970)$ 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.)
LESIK	08	PL B665 9	T. Lesiak <i>et al.</i>	(BELLE Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov <i>et al.</i>	(BELLE Collab.)