

$\chi_{c2}(3930)$

$$I^G(J^{PC}) = 0^+(2^{++})$$

was $\chi_{c2}(2P)$ $\chi_{c2}(3930)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3927.2 ± 2.6 OUR AVERAGE				
3926.7 ± 2.7 ± 1.1	76 ± 17	AUBERT	10G BABR	10.6 $e^+e^- \rightarrow e^+e^- D\bar{D}$
3929 ± 5 ± 2	64	UEHARA	06 BELL	10.6 $e^+e^- \rightarrow e^+e^- D\bar{D}$

 $\chi_{c2}(3930)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
24 ± 6 OUR AVERAGE				
21.3 ± 6.8 ± 3.6	76 ± 17	AUBERT	10G BABR	10.6 $e^+e^- \rightarrow e^+e^- D\bar{D}$
29 ± 10 ± 2	64	UEHARA	06 BELL	10.6 $e^+e^- \rightarrow e^+e^- D\bar{D}$

 $\chi_{c2}(3930)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\gamma\gamma$	seen
Γ_2 $K\bar{K}\pi$	
Γ_3 $K^+K^-\pi^+\pi^-\pi^0$	
Γ_4 $D\bar{D}$	seen
Γ_5 D^+D^-	seen
Γ_6 $D^0\bar{D}^0$	seen
Γ_7 $\pi^+\pi^-\eta_c(1S)$	not seen
Γ_8 $K\bar{K}$	not seen

 $\chi_{c2}(3930)$ PARTIAL WIDTHS $\chi_{c2}(3930) \Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\bar{K}\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$	$\Gamma_2\Gamma_1/\Gamma$			
VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
<2.1	90	DEL-AMO-SA..11M	BABR	$\gamma\gamma \rightarrow K_S^0 K^\pm \pi^\mp$

$\Gamma(K^+K^-\pi^+\pi^-\pi^0) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$	$\Gamma_3\Gamma_1/\Gamma$			
VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
<3.4	90	DEL-AMO-SA..11M	BABR	$\gamma\gamma \rightarrow K^+K^-\pi^+\pi^-\pi^0$

$\Gamma(D\bar{D}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ $\Gamma_4\Gamma_1/\Gamma$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
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0.21±0.04 OUR AVERAGE

0.24±0.05±0.04	76 ± 17	AUBERT	10G BABR	10.6 e ⁺ e ⁻ → e ⁺ e ⁻ D \bar{D}
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0.18±0.05±0.03	64	¹ UEHARA	06 BELL	10.6 e ⁺ e ⁻ → e ⁺ e ⁻ D \bar{D}
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¹ Assuming B(D⁺D⁻) = 0.89 B(D⁰ \bar{D}^0).

$\Gamma(\pi^+\pi^-\eta_c(1S)) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ $\Gamma_7\Gamma_1/\Gamma$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
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<18	90	LEES	12AE BABR	e ⁺ e ⁻ → e ⁺ e ⁻ $\pi^+\pi^-\eta_c$
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$\Gamma(K\bar{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ $\Gamma_8\Gamma_1/\Gamma$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
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<0.256	90	UEHARA	13 BELL	$\gamma\gamma \rightarrow K_S^0 K_S^0$
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$\chi_{c2}(3930)$ BRANCHING RATIOS

$\Gamma(D^+D^-)/\Gamma(D^0\bar{D}^0)$ Γ_5/Γ_6

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
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0.74±0.43±0.16	64	UEHARA	06 BELL	10.6 e ⁺ e ⁻ → e ⁺ e ⁻ D \bar{D}
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$\chi_{c2}(3930)$ REFERENCES

UEHARA	13	PTEP 2013 123C01	S. Uehara <i>et al.</i>	(BELLE Collab.)
LEES	12AE	PR D86 092005	J.P. Lees <i>et al.</i>	(BABAR Collab.)
DEL-AMO-SA...	11M	PR D84 012004	P. del Amo Sanchez <i>et al.</i>	(BABAR Collab.)
AUBERT	10G	PR D81 092003	B. Aubert <i>et al.</i>	(BABAR Collab.)
UEHARA	06	PRL 96 082003	S. Uehara <i>et al.</i>	(BELLE Collab.)