

$\eta_c(2S)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

$\eta_c(2S)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
3594 ± 5	¹ EDWARDS	82C CBAL	$e^+ e^- \rightarrow \gamma X$

¹ Assuming mass of $\psi(2S) = 3686$ MeV.

$\eta_c(2S)$ WIDTH

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<8.0	95	EDWARDS	82C CBAL	$e^+ e^- \rightarrow \gamma X$

$\eta_c(2S)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 hadrons	seen
Γ_2 $\gamma\gamma$	

$\eta_c(2S)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$	Γ_1/Γ
VALUE	DOCUMENT ID TECN COMMENT
seen	EDWARDS 82C CBAL $e^+ e^- \rightarrow \gamma X$
$\Gamma(\gamma\gamma)/\Gamma_{\text{total}}$	Γ_2/Γ
VALUE	CL% DOCUMENT ID TECN COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●	
<0.01	90 LEE 85 CBAL $\psi' \rightarrow \text{photons}$

$\eta_c(2S)$ REFERENCES

LEE 85 SLAC 282 (SLAC)
 EDWARDS 82C PRL 48 70 +Partridge, Peck+ (CIT, HARV, PRIN, STAN, SLAC)

OTHER RELATED PAPERS

OREGLIA 82 PR D25 2259 +Partridge+ (SLAC, CIT, HARV, PRIN, STAN)
 PORTER 81 SLAC Summer Inst. 355+Edwards+ (CIT, HARV, PRIN, STAN, SLAC)
 BARTEL 78B PL 79B 492 +Dittmann, Duinker, Olsson, O'Neill+ (DESY, HEIDP)