

$\eta_c(2S)$

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

OMITTED FROM SUMMARY TABLE  
Needs confirmation.

### $\eta_c(2S)$ MASS

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

<sup>1</sup> 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 ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ hadrons	seen
$\Gamma_2$ $\gamma\gamma$	

### $\eta_c(2S)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	EDWARDS	82C CBAL	$e^+e^- \rightarrow \gamma X$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
not seen	ABREU	980 DLPH	$e^+e^- \rightarrow e^+e^- + \text{hadrons}$

$\Gamma(\gamma\gamma)/\Gamma_{\text{total}}$	$\Gamma_2/\Gamma$			
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

ABREU	980 PL B441 479	P. Abreu <i>et al.</i>	(DELPHI Collab.)
LEE	85 SLAC 282	R.A. Lee	(SLAC)
EDWARDS	82C PRL 48 70	C. Edwards <i>et al.</i>	(CIT, HARV, PRIN+)

### OTHER RELATED PAPERS

OREGLIA	82 PR D25 2259	M.J. Oreglia <i>et al.</i>	(SLAC, CIT, HARV+)
PORTER	81 SLAC Summer Inst. 355	F.C. Porter <i>et al.</i>	(CIT, HARV, PRIN+)
BARTEL	78B PL 79B 492	W. Bartel <i>et al.</i>	(DESY, HEIDP)