

$\Upsilon(1D)$

$$J^{PC} = 0^-(2^{--})$$

OMITTED FROM SUMMARY TABLE

J needs confirmation.

$\Upsilon(1D)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
10161.1±0.6±1.6	38	BONVICINI 04	CLE3	$\Upsilon(3S) \rightarrow \gamma X$

$\Upsilon(1D)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\gamma\gamma \Upsilon(1S)$	seen
Γ_2 $\gamma\chi_{bJ}(1P)$	
Γ_3 $\eta \Upsilon(1S)$	
Γ_4 $\pi^+\pi^- \Upsilon(1S)$	

$\Upsilon(1D)$ BRANCHING RATIOS

$\Gamma(\eta \Upsilon(1S))/\Gamma(\gamma\gamma \Upsilon(1S))$					Γ_3/Γ_1
VALUE	CL%	DOCUMENT ID	TECN	COMMENT	
<0.25	90	BONVICINI 04	CLE3	$\Upsilon(3S) \rightarrow \gamma X$	

$\Gamma(\pi^+\pi^- \Upsilon(1S))/\Gamma(\gamma\gamma \Upsilon(1S))$					Γ_4/Γ_1
VALUE	CL%	DOCUMENT ID	TECN	COMMENT	
<1.2	90	¹ BONVICINI 04	CLE3	$\Upsilon(3S) \rightarrow \gamma X$	

¹ Assuming *J* = 2.

$\Upsilon(1D)$ REFERENCES

BONVICINI 04 PR D70 032001 G. Bonvicini *et al.* (CLEO Collab.)