

$h_b(2P)$

$$I^G(J^{PC}) = ?^?(1^{+-})$$

OMITTED FROM SUMMARY TABLE

Quantum numbers are quark model predictions.

$h_b(2P)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
10259.8 ± 0.5 ± 1.1	90k	MIZUK	12 BELL	$e^+e^- \rightarrow \pi^+\pi^-$ hadrons
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
10259.8 ± 0.6 ^{+1.4} _{-1.0}	83.9k	¹ ADACHI	12 BELL	10.86 $e^+e^- \rightarrow \pi^+\pi^-$ MM

¹ Superseded by MIZUK 12.

$h_b(2P)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 hadrons	not seen
Γ_2 $\eta_b(1S)\gamma$	(22 ± 5) %
Γ_3 $\eta_b(2S)\gamma$	(48 ± 13) %

$h_b(2P)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$				Γ_1/Γ
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
not seen	83.9k	ADACHI	12 BELL	10.86 $e^+e^- \rightarrow \pi^+\pi^-$ MM

$\Gamma(\eta_b(1S)\gamma)/\Gamma_{\text{total}}$				Γ_2/Γ
<u>VALUE (units 10⁻²)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
22.3 ± 3.8^{+3.1}_{-3.3}	10k	MIZUK	12 BELL	$e^+e^- \rightarrow (\gamma)\pi^+\pi^-$ hadrons

$\Gamma(\eta_b(2S)\gamma)/\Gamma_{\text{total}}$				Γ_3/Γ
<u>VALUE (units 10⁻²)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
47.5 ± 10.5^{+6.8}_{-7.7}	26k	MIZUK	12 BELL	$e^+e^- \rightarrow (\gamma)\pi^+\pi^-$ hadrons

$h_b(2P)$ REFERENCES

ADACHI	12	PRL 108 032001	I. Adachi <i>et al.</i>	(BELLE Collab.)
MIZUK	12	PRL 109 232002	R. Mizuk <i>et al.</i>	(BELLE Collab.)