

# $h_b(2P)$

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

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>
<b><math>10259.8 \pm 0.5 \pm 1.1</math></b>	90k	MIZUK	12	BELL $e^+e^- \rightarrow \pi^+\pi^-$ hadrons
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
$10259.8 \pm 0.6^{+1.4}_{-1.0}$	83.9k	<sup>1</sup> ADACHI	12	BELL $10.86 e^+e^- \rightarrow \pi^+\pi^-$ MM

<sup>1</sup> Superseded by MIZUK 12.

## $h_b(2P)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ hadrons	not seen
$\Gamma_2$ $\eta_b(1S)\gamma$	$(22 \pm 5) \%$
$\Gamma_3$ $\eta_b(2S)\gamma$	$(48 \pm 13) \%$

## $h_b(2P)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$				$\Gamma_1/\Gamma$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>not seen</b>	83.9k	ADACHI	12	BELL $10.86 e^+e^- \rightarrow \pi^+\pi^-$ MM

$\Gamma(\eta_b(1S)\gamma)/\Gamma_{\text{total}}$				$\Gamma_2/\Gamma$
<u>VALUE (units <math>10^{-2}</math>)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>22.3 \pm 3.8^{+3.1}_{-3.3}</math></b>	10k	MIZUK	12	BELL $e^+e^- \rightarrow (\gamma)\pi^+\pi^-$ hadrons

$\Gamma(\eta_b(2S)\gamma)/\Gamma_{\text{total}}$				$\Gamma_3/\Gamma$
<u>VALUE (units <math>10^{-2}</math>)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>47.5 \pm 10.5^{+6.8}_{-7.7}</math></b>	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.)