



$I(J^P) = 0(\frac{1}{2}^+)$ Status: ***
 I, J, P need confirmation.

In the quark model Ω_b^- is ssb ground state. None of its quantum numbers has been measured.

Ω_b^- MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$6165 \pm 10 \pm 13$	¹ ABAZOV	08AL D0	$p\bar{p}$ at 1.96 TeV

¹ Observed in $\Omega_b^- \rightarrow J/\psi \Omega^-$ decays with $17.8 \pm 4.9 \pm 0.8$ candidates, a significance of 5.4 sigma.

Ω_b^- DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad J/\psi \Omega^- \times B(b \rightarrow \Omega_b)$	$(1.1 \pm 0.8) \times 10^{-5}$

Ω_b^- BRANCHING RATIOS

$\Gamma(J/\psi \Omega^- \times B(b \rightarrow \Omega_b))/\Gamma_{\text{total}}$	Γ_1/Γ
VALUE (units 10^{-4})	
$0.11 \pm 0.05 \pm 0.07$	² ABAZOV
	08AL D0
	$p\bar{p}$ at 1.96 TeV

² ABAZOV 08AL reports $[\Gamma(\Omega_b^- \rightarrow J/\psi \Omega^- \times B(b \rightarrow \Omega_b))/\Gamma_{\text{total}}] / [B(\Xi_b^- \rightarrow J/\psi \Xi^- \times B(b \rightarrow \Xi_b^-))] = 0.80 \pm 0.32^{+0.14}_{-0.22}$. We multiply by our best value $B(\Xi_b^- \rightarrow J/\psi \Xi^- \times B(b \rightarrow \Xi_b^-)) = (1.3 \pm 0.9) \times 10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.

Ω_b^- REFERENCES

ABAZOV	08AL PRL 101 232002	V.M. Abazov <i>et al.</i>	(D0 Collab.)
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