

$B_{s2}^*(5840)^0$

$I(J^P) = 0(2^+)$ Status: ***
I, J, P need confirmation.

Quantum numbers shown are quark-model predictions.

$B_{s2}^*(5840)^0$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
5839.7 ± 0.6 OUR AVERAGE			
5839.7 ± 0.7	¹ AALTONEN	08K CDF	$\rho\bar{p}$ at 1.96 TeV
5839.6 ± 1.1 ± 0.7	² ABAZOV	08E D0	$\rho\bar{p}$ at 1.96 TeV

¹ Uses two-body decays into K^- and B^+ mesons reconstructed as $B^+ \rightarrow J/\psi K^+$, $J/\psi \rightarrow \mu^+\mu^-$ or $B^+ \rightarrow \bar{D}^0\pi^+$, $\bar{D}^0 \rightarrow K^+\pi^-$.
² Observed in $B_{s2}^{*0} \rightarrow B^+ K^-$. Measured production rate of B_{s2}^{*0} relative to B^+ to be $(1.15 \pm 0.23 \pm 0.13)\%$.

$m_{B_{s2}^{*0}} - m_{B_{s1}^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
10.5 ± 0.6	³ AALTONEN	08K CDF	$\rho\bar{p}$ at 1.96 TeV

³ Uses two-body decays into K^- and B^+ mesons reconstructed as $B^+ \rightarrow J/\psi K^+$, $J/\psi \rightarrow \mu^+\mu^-$ or $B^+ \rightarrow \bar{D}^0\pi^+$, $\bar{D}^0 \rightarrow K^+\pi^-$.

$B_{s2}^*(5840)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad B^+ K^-$	dominant

$B_{s2}^*(5840)^0$ BRANCHING RATIOS

$\Gamma(B^+ K^-)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
dominant		AALTONEN	08K CDF	$\rho\bar{p}$ at 1.96 TeV	
dominant		⁴ ABAZOV	08E D0	$\rho\bar{p}$ at 1.96 TeV	

⁴ Measured production rate of B_{s2}^{*0} relative to B^+ to be $(1.15 \pm 0.23 \pm 0.13)\%$.

$B_{s2}^*(5840)^0$ REFERENCES

AALTONEN	08K	PRL 100 082001	T. Aaltonen <i>et al.</i>	(CDF Collab.)
ABAZOV	08E	PRL 100 082002	V.M. Abazov <i>et al.</i>	(D0 Collab.)