

**$B_{s1}(5830)^0$**

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

Quantum numbers shown are quark-model predictions.

### $B_{s1}(5830)^0$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>5828.7 ± 0.4 OUR AVERAGE</b>	Error includes scale factor of 1.2.		
5828.40 ± 0.04 ± 0.41	<sup>1</sup> AAIJ	130	LHCB $pp$ at 7 TeV
5829.4 ± 0.7	<sup>2</sup> AALTONEN	08K	CDF $p\bar{p}$ at 1.96 TeV

<sup>1</sup> Uses  $B_{s1}(5830)^0 \rightarrow B^{*+} K^-$  decay.

<sup>2</sup> Uses two-body decays into  $K^-$  and  $B^+$  mesons reconstructed as  $B^+ \rightarrow J/\psi K^+$ ,  $J/\psi \rightarrow \mu^+ \mu^-$  or  $B^+ \rightarrow \bar{D}^0 \pi^+$ ,  $\bar{D}^0 \rightarrow K^+ \pi^-$ .

### $m_{B_{s1}^0} - m_{B^{*+}}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>504.41 ± 0.21 ± 0.14</b>	<sup>3</sup> AALTONEN	08K	CDF $p\bar{p}$ at 1.96 TeV

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

### $B_{s1}(5830)^0$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad B^{*+} K^-$	dominant

### $B_{s1}(5830)^0$ BRANCHING RATIOS

$\Gamma(B^{*+} K^-)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
dominant		AALTONEN	08K	CDF $p\bar{p}$ at 1.96 TeV	

### $B_{s1}(5830)^0$ REFERENCES

AAIJ	130	PRL 110 151803	R. Aaij <i>et al.</i>	(LHCb Collab.)
AALTONEN	08K	PRL 100 082001	T. Aaltonen <i>et al.</i>	(CDF Collab.)