NODE=M187

$B_{s1}(5830)^0$

$I(J^P) = 0(1^+)$
I, J, P need confirmation.

Quantum numbers shown are quark-model predictions.

NODE=M187

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

NODE=M187M

NODE=M187M

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
5828.73±0.20 OUR FIT				
5828.65±0.24 OUR AVERAGE				
5828.78±0.09±0.29	SIRUNYAN	18DF	CMS	pp at 8 TeV
5828.40±0.04±0.41	[1] AAIJ	13O	LHCB	pp at 7 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5829.4 ±0.7	[2] AALTONEN	08K	CDF	Repl. by AALTONEN 14I

[1] Uses $B_{s1}(5830)^0 \to B^{*+} K^-$ decay.

NODE=M187M;LINKAGE=AI

[2] Uses two-body decays into K^- and B^+ mesons reconstructed as $B^+ \to J/\psi K^+$, $J/\psi \to \mu^+\mu^-$ or $B^+ \to \overline{D}^0\pi^+$, $\overline{D}^0 \to K^+\pi^-$.

NODE=M187M;LINKAGE=AA

$m_{B^0_{s1}} - m_{B^{*+}}$

NODE=M187DM

NODE=M187DM

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
503.98±0.17 OUR FIT				
504.03±0.12±0.15	[1] AALTONEN	14I	CDF	$p\overline{p}$ at 1.96 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
504.41±0.21±0.14	[2] AALTONEN	08K	CDF	Repl. by AALTONEN 14I

[1] AALTONEN 14I reports $m_{B_{s1}(5830)^0} - m_{B^{*+}} - m_{K^-} = 10.35 \pm 0.12 \pm 0.15$ MeV which we adjusted by the K^- mass.

NODE=M187DM;LINKAGE=AL

[2] Uses two-body decays into K^- and B^+ mesons reconstructed as $B^+ \to J/\psi K^+$, $J/\psi \to \mu^+\mu^-$ or $B^+ \to \overline{D}^0\pi^+$, $\overline{D}^0 \to K^+\pi^-$.

NODE=M187DM;LINKAGE=AA

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

NODE=M187W

NODE=M187W

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
0.5±0.3±0.3	AALTONEN	14I	CDF	$p\overline{p}$ at 1.96 TeV

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

NODE=M187215;NODE=M187

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$B^{*+}K^-$	seen	DESIG=1
Γ_2	$B^{*0}K^0_S$		DESIG=2

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

NODE=M187220

$\Gamma(B^{*+}K^-)/\Gamma_{total}$ Γ_1/Γ

NODE=M187R01
NODE=M187R01

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AALTONEN	08K	CDF	$p\overline{p}$ at 1.96 TeV

$\Gamma(B^{*0}K^0_S)/\Gamma(B^{*+}K^-)$ Γ_2/Γ_1

NODE=M187R00
NODE=M187R00

VALUE	DOCUMENT ID		TECN	COMMENT
0.49±0.12±0.07	[1] SIRUNYAN	18DF	CMS	pp at 8 TeV

[1] With the branching fractions B($B^+ \to J/\psi K^+$) = $(1.026 \pm 0.031) \times 10^{-3}$ and B($B^0 \to J/\psi K^{*0}$) = $(1.28 \pm 0.05) \times 10^{-3}$.

NODE=M187R00;LINKAGE=A

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

NODE=M187

SIRUNYAN	18DF	EPJ C78 939	A.M. Sirunyan *et al.*	(CMS Collab.)	REFID=59328
AALTONEN	14I	PR D90 012013	T. Aaltonen *et al.*	(CDF Collab.)	REFID=56029
AAIJ	13O	PRL 110 151803	R. Aaij *et al.*	(LHCb Collab.)	REFID=54968
AALTONEN	08K	PRL 100 082001	T. Aaltonen *et al.*	(CDF Collab.)	REFID=52235