NODE=M186

$B^*_{s2}(5840)^0$

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

Quantum numbers shown are quark-model predictions. NODE=M186

$B^*_{s2}(5840)^0$ MASS

NODE=M186M

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
5839.96±0.20 OUR AVERAGE				
[5839.7 ± 0.6 MeV OUR 2012 AVERAGE]				
5839.99±0.05±0.20	AAIJ	13O	LHCB	pp at 7 TeV
5839.7 ±0.7	[1] AALTONEN	08K	CDF	$p\overline{p}$ at 1.96 TeV
5839.6 ±1.1 ±0.7	[2] ABAZOV	08E	D0	$p\overline{p}$ at 1.96 TeV

NODE=M186M
NEW

[1] 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=M186M;LINKAGE=AA

[2] Observed in $B^{*0}_{s2} \to B^+K^-$. Measured production rate of B^{*0}_{s2} relative to B^+ to be (1.15 ± 0.23 ± 0.13)%. NODE=M186M;LINKAGE=AB

$m_{B^{*0}_{s2}} - m_{B^0_{s1}}$

NODE=M186DM

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

NODE=M186DM
NODE=M186DM

[3] 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=M186DM;LINKAGE=AA

$B^*_{s2}(5840)^0$ WIDTH

NODE=M186W

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
1.56±0.13±0.47	[4] AAIJ	13O	LHCB	pp at 7 TeV

NODE=M186W
NODE=M186W

[4] Uses $B^*_{s2}(5840)^0 \to B^{*+}K^-$ decays. NODE=M186W;LINKAGE=AI

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

NODE=M186215;NODE=M186

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

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

NODE=M186220

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

NODE=M186R01
NODE=M186R01

VALUE	DOCUMENT ID		TECN	COMMENT
dominant	AALTONEN	08K	CDF	$p\overline{p}$ at 1.96 TeV
dominant	[5] ABAZOV	08E	D0	$p\overline{p}$ at 1.96 TeV

[5] Measured production rate of B^{*0}_{s2} relative to B^+ to be (1.15 ± 0.23 ± 0.13)%. NODE=M186R01;LINKAGE=AB

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

NODE=M186R02
NODE=M186R02

VALUE	DOCUMENT ID		TECN	COMMENT
0.093±0.013±0.012	AAIJ	13O	LHCB	pp at 7 TeV

$B^*_{s2}(5840)^0$ REFERENCES

NODE=M186

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
ABAZOV	08E	PRL 100 082002	V.M. Abazov *et al.*	(D0 Collab.)	REFID=52232