Σ_b^*

$I(J^P) = 1(\frac{3}{2}^+)$ Status: ***
I, J, P need confirmation.

I, J, P need confirmation. Quantum numbers shown are quark-model predictions.

Σ_b^* MASS

Σ_b^{*+} MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$5832.1 \pm 0.7^{+1.7}_{-1.8}$	[1] AALTONEN	12F	CDF	$p\overline{p}$ at 1.96 TeV

Σ_b^{*-} MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$5835.1 \pm 0.6^{+1.7}_{-1.8}$	[1] AALTONEN	12F	CDF	$p\overline{p}$ at 1.96 TeV

$m_{\Sigma_b^{*+}} - m_{\Sigma_b^{*-}}$

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$-3.0^{+1.0}_{-0.9} \pm 0.1$	[1] AALTONEN	12F	CDF	$p\overline{p}$ at 1.96 TeV

[1] Measured using the fully reconstructed $\Lambda_b^0 \to \Lambda_c^+ \pi^-$ and $\Lambda_c^+ \to K^- \pi^+$ decays.

Σ_b^* WIDTH

Σ_b^{*+} WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$11.5^{+2.7}_{-2.2}{}^{+1.0}_{-1.5}$	[2] AALTONEN	12F	CDF	$p\overline{p}$ at 1.96 TeV

Σ_b^{*-} WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$7.5^{+2.2}_{-1.8}{}^{+0.9}_{-1.4}$	[2] AALTONEN	12F	CDF	$p\overline{p}$ at 1.96 TeV

[2] Measured using the fully reconstructed $\Lambda_b^0 \to \Lambda_c^+ \pi^-$ and $\Lambda_c^+ \to K^- \pi^+$ decays.

$m_{\Sigma_b^*} - m_{\Sigma_b}$

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
$21.2^{+2.0}_{-1.9}{}^{+0.4}_{-0.3}$	[3] AALTONEN	07K	CDF	$p\overline{p}$ at 1.96 TeV

[3] Observed four $\Lambda_b^0 \pi^\pm$ resonances in the fully reconstructed decay mode $\Lambda_b^0 \to \Lambda_c^+ \pi^-$, where $\Lambda_c^+ \to p K^- \pi^+$. Assumes $m_{\Sigma_b^{*+}} - m_{\Sigma_b^+} = m_{\Sigma_b^{*-}} - m_{\Sigma_b^-}$

Σ_b^* DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda_b^0\pi$	dominant

Σ_b^* BRANCHING RATIOS

$\Gamma(\Lambda_b^0\pi)/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
dominant	AALTONEN	07K	CDF	$p\overline{p}$ at 1.96 TeV

Σ_b^* REFERENCES

AALTONEN	12F	PR D85 092011	T. Aaltonen *et al.*	(CDF Collab.)
AALTONEN	07K	PRL 99 202001	T. Aaltonen *et al.*	(CDF Collab.)