



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

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

Σ_b^* MASS

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

Σ_b^{*+} MASS

VALUE (MeV)	DOCUMENT ID
5829.0 ± 3.4 OUR FIT	

Σ_b^{*-} MASS

VALUE (MeV)	DOCUMENT ID
5836.4 ± 2.8 OUR FIT	

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

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
21.2 ± 2.0 OUR FIT			
21.2^{+2.0+0.4}_{-1.9-0.3}	¹ AALTONEN	07K	CDF $p\bar{p}$ at 1.96 TeV

¹ Observed four $\Lambda_b^0 \pi^\pm$ resonances in the fully reconstructed decay mode $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-$, where $\Lambda_c^+ \rightarrow p K^- \pi^+$. Assumes $m_{\Sigma_b^{*+}} - m_{\Sigma_b^+} = m_{\Sigma_b^{*-}} - m_{\Sigma_b^-}$

Σ_b^* DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Lambda_b^0 \pi$	dominant

Σ_b^* BRANCHING RATIOS

$\Gamma(\Lambda_b^0 \pi)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
dominant	AALTONEN	07K	CDF	$p\bar{p}$ at 1.96 TeV

Σ_b^* REFERENCES

AALTONEN 07K PRL 99 202001 T. Aaltonen *et al.* (CDF Collab.)