



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

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

### $\Sigma_b^*$ MASS

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

#### $\Sigma_b^{*+}$ MASS

VALUE (MeV)	DOCUMENT ID
<b>5829.0 ± 3.4 OUR FIT</b>	

#### $\Sigma_b^{*-}$ MASS

VALUE (MeV)	DOCUMENT ID
<b>5836.4 ± 2.8 OUR FIT</b>	

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

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

<sup>1</sup> 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  $m_{\Sigma_b^{*+}} - m_{\Sigma_b^+} = m_{\Sigma_b^{*-}} - m_{\Sigma_b^-}$

### $\Sigma_b^*$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Lambda_b^0 \pi$	dominant

### $\Sigma_b^*$ BRANCHING RATIOS

$\Gamma(\Lambda_b^0 \pi)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
<b>dominant</b>	AALTONEN	07K	CDF	$p\bar{p}$ at 1.96 TeV

### $\Sigma_b^*$ REFERENCES

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