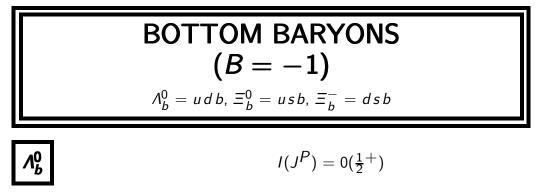
Review of Particle Physics: C. Caso et al. (Particle Data Group), European Physical Journal C3, 1 (1998)



 $I(J^P)$ not yet measured; $0(\frac{1}{2}^+)$ is the quark model prediction. Mass $m = 5624 \pm 9$ MeV (S = 1.8) Mean life $\tau = (1.24 \pm 0.08) \times 10^{-12}$ s $c\tau = 372 \ \mu$ m

These branching fractions are actually an average over weakly decaying *b*-baryons weighted by their production rates in *Z* decay (or high-energy $p\overline{p}$), branching ratios, and detection efficiencies. They scale with the LEP Λ_b production fraction B($b \rightarrow \Lambda_b$) and are evaluated for our value B($b \rightarrow \Lambda_b$) = $(10.1^{+3.9}_{-3.1})\%$.

The branching fractions B(b-baryon $\rightarrow \Lambda \ell^- \overline{\nu}_{\ell}$ anything) and B($\Lambda_b^0 \rightarrow \Lambda_c^+ \ell^- \overline{\nu}_{\ell}$ anything) are not pure measurements because the underlying measured products of these with B($b \rightarrow \Lambda_b$) were used to determine B($b \rightarrow \Lambda_b$), as described in the note "Production and Decay of *b*-Flavored Hadrons."

Λ_b^0 DECAY MODES	Fraction (Γ_i/Γ)	Confidence level	р (MeV/c)
$J/\psi(1S)$ Λ	$(4.7 \pm 2.8) imes 10^{-1}$	-4	1744
$\Lambda_c^+ \pi^-$	seen		2345
$\Lambda_c^+ \pi^-$ $\Lambda_c^+ a_1(1260)^-$	seen		2156
$\Lambda_c^+ \ell^- \overline{ u}_\ell$ anything	$[p] (9.0 {+3.1 \atop -3.8}) \%$		-
$p\pi^-$	$< 5.0 \times 10^{-1}$	-5 90%	2732
р <i>К</i> -	$< 5.0 \times 10^{-10}$	-5 90%	2711

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b-baryon ADMIXTURE (Λ_b , Ξ_b , Σ_b , Ω_b)

Mean life $\tau = (1.20 \pm 0.07) \times 10^{-12}$ s

These branching fractions are actually an average over weakly decaying *b*-baryons weighted by their production rates in *Z* decay (or high-energy $p\overline{p}$), branching ratios, and detection efficiencies. They scale with the LEP Λ_b production fraction B($b \rightarrow \Lambda_b$) and are evaluated for our value B($b \rightarrow \Lambda_b$) = $(10.1^{+3.9}_{-3.1})\%$.

The branching fractions B(*b*-baryon $\rightarrow \Lambda \ell^- \overline{\nu}_{\ell}$ anything) and B($\Lambda_b^0 \rightarrow \Lambda_c^+ \ell^- \overline{\nu}_{\ell}$ anything) are not pure measurements because the underlying measured products of these with B($b \rightarrow \Lambda_b$) were used to determine B($b \rightarrow \Lambda_b$), as described in the note "Production and Decay of *b*-Flavored Hadrons."

b-baryon ADMIXTURE $(\Lambda_b, \Xi_b, \Sigma_b, \Omega_b)$	Fraction (Γ_i/Γ)	<i>p</i> (MeV/ <i>c</i>)
$p\mu^-\overline{ u}$ anything	(4.9± 2.4) %	_
$\Lambda\ell^-\overline{ u}_\ell$ anything	(3.1 + 1.0) %	_
$\Lambda/\overline{\Lambda}$ anything	$(35 \hspace{0.1in} \substack{+12 \ -14}$)%	-
$\Xi^-\ell^-\overline{ u}_\ell$ anything	(5.5^+ $\stackrel{2.0}{2.4}$) $ imes$ 10 $^{-3}$	_

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