



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

In the quark model, Ξ_b^0 and Ξ_b^- are an isodoublet (usb, dsb) state; the lowest Ξ_b^0 and Ξ_b^- ought to have $J^P = 1/2^+$. None of $I, J,$ or P have actually been measured.

Ξ_b^0 MASS

Ξ_b^0 MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
5791.7 ± 0.4 OUR AVERAGE			
5791.12 ± 0.60 ± 0.51	¹ AAIJ	24V LHCb	pp at 13 TeV
5794.3 ± 2.4 ± 0.7	AAIJ	14H LHCb	pp at 7 TeV
5791.80 ± 0.39 ± 0.31	² AAIJ	14Z LHCb	pp at 7, 8 TeV
5788.7 ± 4.3 ± 1.4	³ AALTONEN	14B CDF	$p\bar{p}$ at 1.96 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •			
5787.8 ± 5.0 ± 1.3	⁴ AALTONEN	11X CDF	Repl. by AALTONEN 14B

¹ Uses $\Xi_b^0 \rightarrow \Xi_c^+ D_s^-$ decays.

² Uses $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$ and $\Xi_c^+ \rightarrow p K^- \pi^+$ decays. The measurement comes from the mass difference of Ξ_b^0 and Λ_b^0 .

³ Uses $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$ decays.

⁴ Measured in $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$ with $25.3_{-5.4}^{+5.6}$ candidates.

$m_{\Xi_b^0} - m_{\Lambda_b^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
172.3 ± 0.4 OUR AVERAGE			
171.78 ± 0.60 ± 0.33	¹ AAIJ	24V LHCb	pp at 13 TeV
174.8 ± 2.4 ± 0.5	AAIJ	14H LHCb	pp at 7 TeV
172.44 ± 0.39 ± 0.17	² AAIJ	14Z LHCb	pp at 7, 8 TeV
¹ Uses $\Xi_b^0 \rightarrow \Xi_c^+ D_s^-$ and $\Lambda_b^0 \rightarrow \Lambda_c^+ D_s^-$ decays.			
² Uses $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$ and $\Xi_c^+ \rightarrow p K^- \pi^+$ decays.			

Ξ_b^0 MEAN LIFE

“OUR EVALUATION” is an average using rescaled values of the data listed below. The average and rescaling were performed by the Heavy Flavor Averaging Group (HFLAV) and are described at <https://hflav.web.cern.ch/>. The averaging/rescaling procedure takes into account correlations between the measurements and asymmetric lifetime errors.

Ξ_b^0 MEAN LIFE

VALUE (10^{-12} s)	DOCUMENT ID	TECN	COMMENT
1.472 ± 0.016 OUR EVALUATION	(Produced by HFLAV)		
1.475 ± 0.012 ± 0.012	¹ AAIJ	25AJ LHCb	pp at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •			
1.473 ± 0.014 ± 0.013	¹ AAIJ	25AJ LHCb	pp at 13 TeV
1.477 ± 0.026 ± 0.019	¹ AAIJ	14Z LHCb	pp at 7, 8 TeV

¹ Uses $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$, $\Xi_c^+ \rightarrow p K^- \pi^+$ decays. The measurement comes from the value of relative lifetimes of Ξ_b^0 to Λ_b^0 .

τ_{mix} (1/2 π) times the $\Xi_b^0 - \Xi_b^{\prime 0}$ oscillation period

VALUE (s)	DOCUMENT ID	TECN	COMMENT
$>13 \times 10^{-12}$	¹ AAIJ	17BH LHCB	pp at 7, 8 TeV

¹ Uses Ξ_b^{*-} and $\Xi_b^{\prime -}$ decays to $\Xi_b^0 \pi^-$, where $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$, $\Xi_c^+ \rightarrow p K^- \pi^+$.

Ξ_b^0 DECAY MODES

Mode	Fraction (Γ_i/Γ)	Confidence level
Γ_1 $p D^0 K^- \times B(b \rightarrow \Xi_b^0)$	$(1.7 \pm 0.6) \times 10^{-6}$	
Γ_2 $p \bar{K}^0 \pi^- \times B(b \rightarrow \Xi_b^0)/B(\bar{b} \rightarrow B^0)$	$< 1.6 \times 10^{-6}$	90%
Γ_3 $p \bar{K}^0 \pi^-$	$< 5.6 \times 10^{-6}$	90%
Γ_4 $p K^0 K^- \times B(b \rightarrow \Xi_b^0)/B(\bar{b} \rightarrow B^0)$	$< 1.1 \times 10^{-6}$	90%
Γ_5 $p \bar{K}^0 K^-$	$(7.8 \pm 3.3) \times 10^{-6}$	
Γ_6 $\Lambda \pi^+ \pi^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$< 1.7 \times 10^{-6}$	90%
Γ_7 $\Lambda K^- \pi^+ \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$< 8 \times 10^{-7}$	90%
Γ_8 $\Lambda K^+ K^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$< 3 \times 10^{-7}$	90%
Γ_9 $\Lambda \pi^+ \pi^-$	$(1.3 \pm 0.6) \times 10^{-5}$	
Γ_{10} $\Lambda K^- \pi^+$	$(1.3 \pm 0.5) \times 10^{-5}$	
Γ_{11} $\Lambda K^+ K^-$	$< 3.4 \times 10^{-6}$	95%
Γ_{12} $J/\psi \Lambda$	seen	
Γ_{13} $J/\psi \Xi^0$	seen	
Γ_{14} $J/\psi \Xi^- \pi^+ \times B(b \rightarrow \Xi_b^0)$	$(1.2 \pm 0.5) \times 10^{-6}$	
Γ_{15} $\Xi_c^+ D_s^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$(1.7 \pm 0.9) \times 10^{-3}$	
Γ_{16} $\Lambda_c^+ K^- \times B(b \rightarrow \Xi_b^0)$	$(6 \pm 4) \times 10^{-7}$	
Γ_{17} $p K^- \pi^+ \pi^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$(1.9 \pm 0.4) \times 10^{-6}$	
Γ_{18} $p K^- K^- \pi^+ \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$(1.74 \pm 0.31) \times 10^{-6}$	
Γ_{19} $p K^- K^+ K^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0)$	$(1.8 \pm 1.0) \times 10^{-7}$	

Ξ_b^0 BRANCHING RATIOS $\Gamma(pD^0 K^- \times B(b \rightarrow \Xi_b^0))/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE (units 10^{-6})	CL%	DOCUMENT ID	TECN	COMMENT
$1.7 \pm 0.4 \pm 0.4$		¹ AAIJ	14H LHCB	pp at 7 TeV

¹ AAIJ 14H reports $[\Gamma(\Xi_b \rightarrow pD^0 K^- \times B(\bar{b} \rightarrow \Xi_b))]/\Gamma_{\text{total}}] / [B(\bar{b} \rightarrow b\text{-baryon at } Z)] / [B(\Lambda_b^0 \rightarrow pD^0 K^-)] = 0.44 \pm 0.09 \pm 0.06$ which we multiply by our best (shown rounded) values $B(\bar{b} \rightarrow b\text{-baryon at } Z) = (8.4 \pm 1.1) \times 10^{-2}$, $B(\Lambda_b^0 \rightarrow pD^0 K^-) = (4.6 \pm 0.8) \times 10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

 $\Gamma(p\bar{K}^0 \pi^- \times B(b \rightarrow \Xi_b^0)/B(\bar{b} \rightarrow B^0))/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 1.6 \times 10^{-6}$	90	AAIJ	14Q LHCB	pp at 7 TeV

 $\Gamma(p\bar{K}^0 \pi^-)/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 5.6 \times 10^{-6}$	90	¹ AAIJ	25AP LHCB	pp at 7, 8, 13 TeV

¹ Measured relative to $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-$, $\Lambda_c^+ \rightarrow pK_S^0$. The last error includes systematic, the uncertainties on $B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-)$, $\Lambda_c^+ \rightarrow pK_S^0$, and the ratio of $f_{\Xi_b^0}/f_{\Lambda_b^0}$ obtained from AAIJ 19AB by assuming SU(3) flavor symmetry.

 $\Gamma(pK^0 K^- \times B(b \rightarrow \Xi_b^0)/B(\bar{b} \rightarrow B^0))/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 1.1 \times 10^{-6}$	90	AAIJ	14Q LHCB	pp at 7 TeV

 $\Gamma(p\bar{K}^0 K^-)/\Gamma_{\text{total}}$ Γ_5/Γ

VALUE (units 10^{-6})	CL%	DOCUMENT ID	TECN	COMMENT
$7.8 \pm 1.2 \pm 3.1$		¹ AAIJ	25AP LHCB	pp at 7, 8, 13 TeV

¹ Measured relative to $\Lambda_b^0 \rightarrow \Lambda_c^+ K^-$, $\Lambda_c^+ \rightarrow pK_S^0$. The last error includes systematic, the uncertainties on $B(\Lambda_b^0 \rightarrow \Lambda_c^+ K^-)$, $\Lambda_c^+ \rightarrow pK_S^0$, and the ratio of $f_{\Xi_b^0}/f_{\Lambda_b^0}$ obtained from AAIJ 19AB by assuming SU(3) flavor symmetry.

 $\Gamma(\Lambda \pi^+ \pi^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}$ Γ_6/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 1.7 \times 10^{-6}$	90	AAIJ	16W LHCB	pp at 7, 8 TeV

 $\Gamma(\Lambda K^- \pi^+ \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}$ Γ_7/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 0.8 \times 10^{-6}$	90	AAIJ	16W LHCB	pp at 7, 8 TeV

 $\Gamma(\Lambda K^+ K^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}$ Γ_8/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$< 0.3 \times 10^{-6}$	90	AAIJ	16W LHCB	pp at 7, 8 TeV

$\Gamma(\Lambda\pi^+\pi^-)/\Gamma_{\text{total}}$
 Γ_9/Γ

VALUE (units 10^{-6})	DOCUMENT ID	TECN	COMMENT
13±6±1	¹ AAIJ	25J LHCB	pp at 7, 8, 13 TeV

¹ AAIJ 25J reports $(11.0 \pm 2.6 \pm 4.1) \times 10^{-6}$ from a measurement of $[\Gamma(\Xi_b^0 \rightarrow \Lambda\pi^+\pi^-)/\Gamma_{\text{total}}] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-)] / [B(\Lambda_c^+ \rightarrow \Lambda\pi^+)]$ assuming $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = (4.30 \pm 0.36) \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = (1.24 \pm 0.08) \times 10^{-2}$, which we rescale to our best (shown rounded) values $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = (4.9 \pm 0.4) \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = (1.32 \pm 0.05) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

 $\Gamma(\Lambda K^-\pi^+)/\Gamma_{\text{total}}$
 Γ_{10}/Γ

VALUE (units 10^{-6})	DOCUMENT ID	TECN	COMMENT
13±5±1	¹ AAIJ	25J LHCB	pp at 7, 8, 13 TeV

¹ AAIJ 25J reports $(10.4 \pm 1.4 \pm 3.7) \times 10^{-6}$ from a measurement of $[\Gamma(\Xi_b^0 \rightarrow \Lambda K^-\pi^+)/\Gamma_{\text{total}}] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-)] / [B(\Lambda_c^+ \rightarrow \Lambda\pi^+)]$ assuming $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = (4.30 \pm 0.36) \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = (1.24 \pm 0.08) \times 10^{-2}$, which we rescale to our best (shown rounded) values $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = (4.9 \pm 0.4) \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = (1.32 \pm 0.05) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

 $\Gamma(\Lambda K^+K^-)/\Gamma_{\text{total}}$
 Γ_{11}/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<3.4 × 10⁻⁶	95	¹ AAIJ	25J LHCB	pp at 7, 8, 13 TeV

¹ AAIJ 25J reports $< 2.8 \times 10^{-6}$ from a measurement of $[\Gamma(\Xi_b^0 \rightarrow \Lambda K^+K^-)/\Gamma_{\text{total}}] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-)] / [B(\Lambda_c^+ \rightarrow \Lambda\pi^+)]$ assuming $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = (4.30 \pm 0.36) \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = (1.24 \pm 0.08) \times 10^{-2}$, which we rescale to our best (shown rounded) values $B(\Lambda_b^0 \rightarrow \Lambda_c^+\pi^-) = 4.9 \times 10^{-3}$, $B(\Lambda_c^+ \rightarrow \Lambda\pi^+) = 1.32 \times 10^{-2}$.

 $\Gamma(J/\psi\Lambda)/\Gamma(J/\psi\Xi^0)$
 Γ_{12}/Γ_{13}

VALUE (units 10^{-3})	DOCUMENT ID	TECN	COMMENT
8.2±2.1±0.9	¹ AAIJ	20U LHCB	pp at 7, 8 and 13 TeV

¹ The Cabibbo suppressed $\Xi_b \rightarrow J/\psi\Lambda$ decay is observed for the first time.

 $\Gamma(J/\psi\Xi^-\pi^+ \times B(b \rightarrow \Xi_b^0))/\Gamma_{\text{total}}$
 Γ_{14}/Γ

VALUE (units 10^{-5})	DOCUMENT ID	TECN	COMMENT
0.12±0.02±0.05	¹ AAIJ	25AA LHCB	pp at 13 TeV

¹ AAIJ 25AA reports $[\Gamma(\Xi_b^0 \rightarrow J/\psi\Xi^-\pi^+ \times B(b \rightarrow \Xi_b^0))/\Gamma_{\text{total}}] / [B(\Xi_b^- \rightarrow J/\psi\Xi^- \times B(b \rightarrow \Xi_b^-))] = (11.9 \pm 1.4 \pm 0.6) \times 10^{-2}$ which we multiply by our best (shown rounded) value $B(\Xi_b^- \rightarrow J/\psi\Xi^- \times B(b \rightarrow \Xi_b^-)) = (1.0 \pm 0.4) \times 10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) value.

$$\Gamma(\Xi_c^+ D_s^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}} \quad \Gamma_{15}/\Gamma$$

VALUE (units 10^{-3})	DOCUMENT ID	TECN	COMMENT
1.7±0.9±0.2	¹ AAIJ	24V	LHCB pp at 13 TeV

¹ AAIJ 24V reports $[\Gamma(\Xi_b^0 \rightarrow \Xi_c^+ D_s^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+ D_s^-)] = (15.8 \pm 1.1 \pm 7.7) \times 10^{-2}$ which we multiply by our best (shown rounded) value $B(\Lambda_b^0 \rightarrow \Lambda_c^+ D_s^-) = (1.10 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) value.

$$\Gamma(\Lambda_c^+ K^- \times B(b \rightarrow \Xi_b^0))/\Gamma(p D^0 K^- \times B(b \rightarrow \Xi_b^0)) \quad \Gamma_{16}/\Gamma_1$$

VALUE	DOCUMENT ID	TECN	COMMENT
0.35±0.19±0.01	¹ AAIJ	14H	LHCB pp at 7 TeV

¹ AAIJ 14H reports $[\Gamma(\Xi_b \rightarrow \Lambda_c^+ K^- \times B(\bar{b} \rightarrow \Xi_b))/\Gamma(\Xi_b \rightarrow p D^0 K^- \times B(\bar{b} \rightarrow \Xi_b))] \times [B(\Lambda_c^+ \rightarrow p K^- \pi^+)] / [B(D^0 \rightarrow K^- \pi^+)] = 0.57 \pm 0.22 \pm 0.21$ which we multiply or divide by our best (shown rounded) values $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.37 \pm 0.21) \times 10^{-2}$, $B(D^0 \rightarrow K^- \pi^+) = (3.936 \pm 0.030) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

$$\Gamma(p K^- \pi^+ \pi^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}} \quad \Gamma_{17}/\Gamma$$

VALUE (units 10^{-6})	DOCUMENT ID	TECN	COMMENT
1.9±0.4±0.2	¹ AAIJ	18Q	LHCB pp at 7, 8 TeV

¹ AAIJ 18Q reports $[\Gamma(\Xi_b \rightarrow p K^- \pi^+ \pi^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}] / [B(\Lambda_c^+ \rightarrow p K^- \pi^+)] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-)] = (6.2 \pm 0.8 \pm 0.2 \pm 0.8) \times 10^{-3}$ which we multiply by our best (shown rounded) values $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.37 \pm 0.21) \times 10^{-2}$, $B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-) = (4.9 \pm 0.4) \times 10^{-3}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

$$\Gamma(p K^- K^- \pi^+ \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}} \quad \Gamma_{18}/\Gamma$$

VALUE (units 10^{-6})	DOCUMENT ID	TECN	COMMENT
1.74±0.27±0.14	¹ AAIJ	18Q	LHCB pp at 7, 8 TeV

¹ AAIJ 18Q reports $[\Gamma(\Xi_b \rightarrow p K^- K^- \pi^+ \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}] / [B(\Lambda_c^+ \rightarrow p K^- \pi^+)] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-)] = (5.6 \pm 0.6 \pm 0.4 \pm 0.5) \times 10^{-3}$ which we multiply by our best (shown rounded) values $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.37 \pm 0.21) \times 10^{-2}$, $B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-) = (4.9 \pm 0.4) \times 10^{-3}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) values.

$$\Gamma(p K^- K^+ K^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}} \quad \Gamma_{19}/\Gamma$$

VALUE (units 10^{-6})	DOCUMENT ID	TECN	COMMENT
0.18±0.10±0.01	^{1,2} AAIJ	18Q	LHCB pp at 7, 8 TeV

¹ AAIJ 18Q reports $[\Gamma(\Xi_b \rightarrow p K^- K^+ K^- \times B(b \rightarrow \Xi_b^0)/B(b \rightarrow \Lambda_b^0))/\Gamma_{\text{total}}] / [B(\Lambda_c^+ \rightarrow p K^- \pi^+)] / [B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-)] = (0.57 \pm 0.28 \pm 0.08 \pm 0.10) \times 10^{-3}$ which we multiply by our best (shown rounded) values $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.37 \pm 0.21) \times 10^{-2}$, $B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-) = (4.9 \pm 0.4) \times 10^{-3}$. Our first error is their experiment's

error and our second error is the systematic error from using our best (shown rounded) values.

² AAIJ 18Q sees excess with a significance of 2.3σ . Using $B(\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-) = (0.430 \pm 0.036) \times 10^{-2}$ and $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.46 \pm 0.24) \times 10^{-2}$ the authors set two sided limit [0.11–0.25] at 90% C.L.

P AND CP VIOLATION ASYMMETRIES

$a_P(\Xi_b^0 \rightarrow p K^- K^- \pi^+)$

Observable calculated as average of the triple products for Ξ_b^0 and Ξ_b^0 , which is sensitive to parity violation.

VALUE (%)	DOCUMENT ID	TECN	COMMENT
$-3.04 \pm 5.19 \pm 0.36$	¹ AAIJ	18AG LHCB	pp at 7, 8 TeV

¹ Measured over full phase space of the decay.

$a_{CP}(\Xi_b^0 \rightarrow p K^- K^- \pi^+)$

Observable calculated as half of the difference between triple products for Ξ_b^0 and Ξ_b^0 , which is sensitive to CP violation.

VALUE (%)	DOCUMENT ID	TECN	COMMENT
$-3.58 \pm 5.19 \pm 0.36$	¹ AAIJ	18AG LHCB	pp at 7, 8 TeV

¹ Measured over full phase space of the decay.

$\Delta A_{CP}(\Xi_b^0 \rightarrow p K^- \pi^+ \pi^-)$

$\Delta A_{CP} \equiv A_{CP}(\Xi_b^0 \rightarrow p K^- \pi^+ \pi^-) - A_{CP}(\Xi_b^0 \rightarrow (\Xi_c^+ \rightarrow p K^- \pi^+) \pi^-)$

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
$-17 \pm 11 \pm 1$	¹ AAIJ	19AH LHCB	pp at 7 and 8 TeV

¹ Full phase space.

$\Delta A_{CP}(\Xi_b^0 \rightarrow p K^- \pi^+ K^-)$

$\Delta A_{CP} \equiv A_{CP}(\Xi_b^0 \rightarrow p K^- \pi^+ K^-) - A_{CP}(\Xi_b^0 \rightarrow (\Xi_c^+ \rightarrow p K^- \pi^+) \pi^-)$

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
$-6.8 \pm 8.0 \pm 0.8$	¹ AAIJ	19AH LHCB	pp at 7 and 8 TeV

¹ Full phase space.

$A_{CP}(\Xi_b^0 \rightarrow p \bar{K}^0 K^-)$

VALUE	DOCUMENT ID	TECN	COMMENT
$0.22 \pm 0.15 \pm 0.11$	AAIJ	25AP LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^0 \rightarrow \Lambda K^- \pi^+)$

VALUE	DOCUMENT ID	TECN	COMMENT
$0.27 \pm 0.12 \pm 0.05$	¹ AAIJ	25J LHCB	pp at 7, 8, 13 TeV

¹ Measured relative to $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-$ decay.

Ξ_b^0 REFERENCES

AAIJ	25AA	EPJ C85 812	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	25AJ	PR D112 052012	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	25AP	JHEP 2510 169	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	25J	PRL 134 101802	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	24V	EPJ C84 237	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	20U	PRL 124 111802	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	19AB	PR D99 052006	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	19AH	EPJ C79 745	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	18AG	JHEP 1808 039	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	18Q	JHEP 1802 098	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	17BH	PRL 119 181807	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	16W	JHEP 1605 081	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	14H	PR D89 032001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	14Q	JHEP 1404 087	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	14Z	PRL 113 032001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AALTONEN	14B	PR D89 072014	T. Aaltonen <i>et al.</i>	(CDF Collab.)
AALTONEN	11X	PRL 107 102001	T. Aaltonen <i>et al.</i>	(CDF Collab.)
