NODE=S069

Ξ_b^-

$I(J^P) = \frac{1}{2}(\frac{1}{2}^+)$ 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.

NODE=S069

Ξ_b^- MASS

NODE=S069205

Ξ_b^- MASS

NODE=S069M-
NODE=S069M-

VALUE (MeV)		DOCUMENT ID		TECN	COMMENT
5797.0 ± 0.4 OUR AVERAGE		Error includes scale factor of 1.4. See the ideogram below.			
5797.02 ± 0.63 ± 0.57		[1] AAIJ	24V	LHCB	pp at 13 TeV
5796.70 ± 0.39 ± 0.23		AAIJ	19AB	LHCB	pp at 7, 8 and 13 TeV
5797.72 ± 0.46 ± 0.31		[2] AAIJ	14BJ	LHCB	pp at 7, 8 TeV
5793.4 ± 1.8 ± 0.7		[3] AALTONEN	14B	CDF	$p\bar{p}$ at 1.96 TeV
5774 ±11 ±15		[4] ABAZOV	07K	D0	$p\bar{p}$ at 1.96 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
5795.8 ± 0.9 ± 0.4		[5] AAIJ	13AV	LHCB	Repl. by AAIJ 19AB
5796.7 ± 5.1 ± 1.4		[6] AALTONEN	11X	CDF	Repl. by AALTONEN 14B
5790.9 ± 2.6 ± 0.8		[7] AALTONEN	09AP	CDF	Repl. by AALTONEN 14B
5792.9 ± 2.5 ± 1.7		[8] AALTONEN	07A	CDF	Repl. by AALTONEN 09AP

[1] Uses $\Xi_b^- \to \Xi_c^0 D_s^-$ decays.

NODE=S069M-;LINKAGE=C

[2] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays. Reference Λ_b^0 mass 5619.30 ± 0.34 MeV from AAIJ 14AA.

NODE=S069M-;LINKAGE=B

[3] Uses $\Xi_b^- \to J/\psi\Xi^-$ and $\Xi_c^0\pi^-$ decays.

NODE=S069M-;LINKAGE=AO

[4] Observed in $\Xi_b^- \to J/\psi\Xi^-$ decays with $15.2 \pm 4.4^{+1.9}_{-0.4}$ candidates, a significance of 5.5 sigma.

NODE=S069M-;LINKAGE=AB

[5] Measured in $\Xi_b^- \to J/\psi\Xi^-$ decays.

NODE=S069M-;LINKAGE=A

[6] Measured in $\Xi_b^- \to \Xi_c^0\pi^-$ with $25.8^{+5.5}_{-5.2}$ candidates.

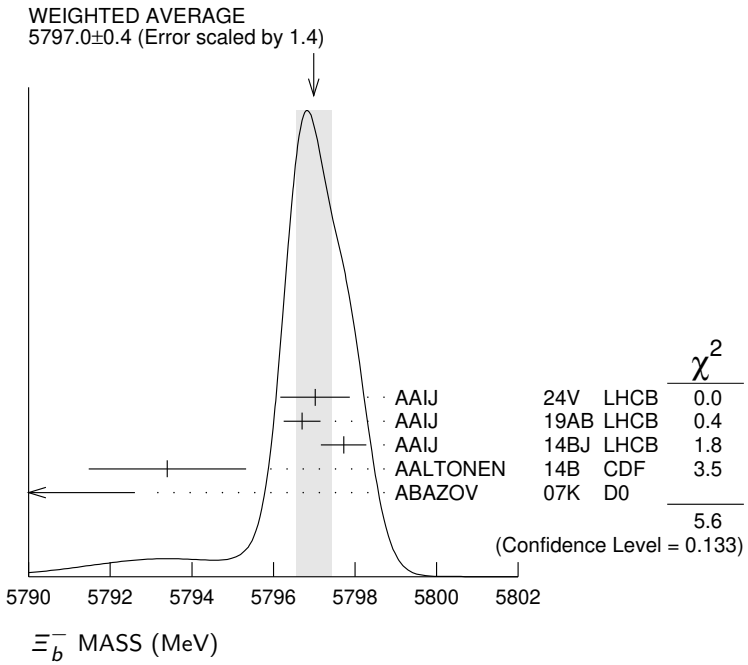
NODE=S069M-;LINKAGE=AT

[7] Measured in $\Xi_b^- \to J/\psi\Xi^-$ decays with 66^{+14}_{-9} candidates.

NODE=S069M-;LINKAGE=AL

[8] Observed in $\Xi_b^- \to J/\psi\Xi^-$ decays with 17.5 ± 4.3 candidates, a significance of 7.7 sigma.

NODE=S069M-;LINKAGE=AA



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

NODE=S069DML
NODE=S069DML

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
177.48±0.24 OUR AVERAGE	Error includes scale factor of 1.1.			
177.68±0.63±0.33	[1] AAIJ	24V	LHCB	pp at 13 TeV
177.71±0.24±0.16	[2] AAIJ	21	LHCB	pp at 7, 8, 13 TeV
177.08±0.47±0.16	[3] AAIJ	17BE	LHCB	pp at 7, 8 TeV
176.2 ±0.9 ±0.1	[4] AAIJ	13AV	LHCB	pp at 7 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
177.73±0.33±0.14	[5] AAIJ	17BE	LHCB	pp at 7, 8 TeV
178.36±0.46±0.16	[2,6] AAIJ	14BJ	LHCB	Repl. by AAIJ 2021

OCCUR=2

[1] Uses $\Xi_b^- \to \Xi_c^0 D_s^-$ and $\Lambda_b^0 \to \Lambda_c^+ D_s^-$ decays.
NODE=S069DML;LINKAGE=F

[2] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to p K^- K^- \pi^+$ decays.Reference decays $\Lambda_b^0 \to \Lambda_c^+ \pi^-$ were used.
NODE=S069DML;LINKAGE=A

[3] Reconstructed in $\Xi_b^- \to J/\psi \Lambda K^-$ decays. Reference decays $\Lambda_b^0 \to J/\psi \Lambda$ were used.
NODE=S069DML;LINKAGE=C

[4] Reconstructed in $\Xi_b^- \to J/\psi \Xi^-$ decays.
NODE=S069DML;LINKAGE=B

[5] Combination of the original statistically independent measurements of AAIJ 17BE and AAIJ 14BJ taking into account correlation between systematic uncertainties.
NODE=S069DML;LINKAGE=E

[6] Combined with AAIJ 17BE.
NODE=S069DML;LINKAGE=D

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

NODE=S069DM
NODE=S069DM

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
5.9 ±0.5 OUR AVERAGE				
5.90±0.87±0.32	[1] AAIJ	24V	LHCB	pp at 13 TeV
5.92±0.60±0.23	[2] AAIJ	14BJ	LHCB	pp at 7, 8 TeV
3.1 ±5.6 ±1.3	[3] AALTONEN	11X	CDF	$p\bar{p}$ at 1.96 TeV

[1] Uses $\Xi_b^- \to \Xi_c^0 D_s^-$ and $\Xi_b^0 \to \Xi_c^+ D_s^-$ decays.
NODE=S069DM;LINKAGE=B

[2] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to p K^- K^- \pi^+$ decays. Uses $m(\Xi_b^0) - m(\Lambda_b^0) = 172.44 \pm 0.39 \pm 0.17$ MeV from AAIJ 14Z.
NODE=S069DM;LINKAGE=A

[3] Derived from measurements in $\Xi_b^0 \to \Xi_c^+ \pi^-$ and $\Xi_b^- \to J/\psi \Xi^-$ from AALTONEN 09AP taking correlated systematic uncertainties into account.
NODE=S069DM;LINKAGE=AT

Ξ_b^- MEAN LIFE

NODE=S069208

"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.
NODE=S069208

Ξ_b^- MEAN LIFE

NODE=S069T-
NODE=S069T-

VALUE (10^{-12} s)	DOCUMENT ID		TECN	COMMENT
1.578±0.021 OUR EVALUATION	(Produced by HFLAV)			→ UNCHECKED ←
1.570±0.023 OUR AVERAGE				
1.578±0.018±0.015	[1,2] AAIJ	24AJ	LHCB	pp at 7, 8, 13 TeV
1.55 $^{+0.10}_{-0.09}$ ±0.03	[3] AAIJ	14T	LHCB	pp at 7, 8 TeV
1.32 ±0.14 ±0.02	AALTONEN	14B	CDF	$p\bar{p}$ at 1.96 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.575±0.019±0.014	[1] AAIJ	24AJ	LHCB	pp at 13 TeV
1.599±0.041±0.022	[4] AAIJ	14BJ	LHCB	pp at 7, 8 TeV
1.56 $^{+0.27}_{-0.25}$ ±0.02	[5] AALTONEN	09AP	CDF	Repl. by AALTONEN 14B

OCCUR=2

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to p K^- K^- \pi^+$ decays. Reference Λ_b^0 lifetime 1.464 ± 0.010 ps from PDG 22.
NODE=S069T-;LINKAGE=C

[2] Supersedes AAIJ 14BJ and AAIJ 24AJ.
NODE=S069T-;LINKAGE=D

[3] Measured in $\Xi_b^- \to J/\psi \Xi^-$ decays.
NODE=S069T-;LINKAGE=A

[4] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to p K^- K^- \pi^+$ decays. Reference Λ_b^0 lifetime 1.479 ± 0.009 ± 0.010 ps from AAIJ 14U.
NODE=S069T-;LINKAGE=B

[5] Measured in $\Xi_b^- \to J/\psi \Xi^-$ decays with 66^{+14}_{-9} candidates.
NODE=S069T-;LINKAGE=AL

MEAN LIFE RATIOS

NODE=S069212

$\tau_{\Xi_b^-}$ / $\tau_{\Lambda_b^0}$ mean life ratio

NODE=S069TR1
NODE=S069TR1

VALUE		DOCUMENT ID		TECN	COMMENT
1.078±0.012±0.007	[1,2]	AAIJ	24AJ	LHCB	pp at 7, 8, 13 TeV

OCCUR=2

• • • We do not use the following data for averages, fits, limits, etc. • • •

1.076±0.013±0.006	[1]	AAIJ	24AJ	LHCB	pp at 13 TeV
1.089±0.026±0.011	[1]	AAIJ	14BJ	LHCB	pp at 7, 8 TeV

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0\pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays. Used $\Lambda_b^0 \to \Lambda_c^+\pi^-$ for normalization.

NODE=S069TR1;LINKAGE=A

[2] Supersedes AAIJ 14BJ and AAIJ 24AJ.

NODE=S069TR1;LINKAGE=B

$\tau_{\Xi_b^-}$ / $\tau_{\Xi_b^0}$ mean life ratio

NODE=S069TR2
NODE=S069TR2

VALUE		DOCUMENT ID		TECN	COMMENT
1.083±0.032±0.016	[1]	AAIJ	14BJ	LHCB	pp at 7, 8 TeV

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0\pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays. Uses Ξ_b^0 measurements from AAIJ 14Z.

NODE=S069TR2;LINKAGE=AA

Ξ_b^- DECAY MODES

NODE=S069210;NODE=S069

	Mode	Fraction (Γ_i/Γ)	Confidence level	
Γ_1	$J/\psi\Xi^-\times$ B($b\to\ \Xi_b^-$)	$(1.02^{+0.26}_{-0.21})\times10^{-5}$		DESIG=2
Γ_2	$J/\psi\Lambda K^-\times$ B($b\to\ \Xi_b^-$)	$(2.5\ \pm0.4\ )\times10^{-6}$		DESIG=17
Γ_3	$pK^-K^-\times$ B($b\to\ \Xi_b^-$)	$(3.7\ \pm0.8\ )\times10^{-8}$		DESIG=15
Γ_4	pK^-K^-	$(2.3\ \pm0.9\ )\times10^{-6}$		DESIG=14
Γ_5	$p\pi^-\pi^-$	$<1.3\times10^{-6}$	90%	DESIG=16
Γ_6	$pK^-\pi^-$	$(2.3\ \pm1.1\ )\times10^{-6}$		DESIG=13
Γ_7	$\Lambda_b^0\pi^-\times$ B($b\to\ \Xi_b^-$)/B($b\to\ \Lambda_b^0$)	$(7.0\ \pm0.9\ )\times10^{-4}$		DESIG=7
Γ_8	$\Xi_c^0\pi^-$	seen		DESIG=25
Γ_9	$\Xi_c^0D_s^-\times$ B($b\to\ \Xi_b^-$)/B($b\to\ \Lambda_b^0$)	$(1.9\ \pm0.5\ )\times10^{-3}$		DESIG=35
Γ_{10}	$\Sigma(1385)K^-$	$(2.6\ \pm2.3\ )\times10^{-7}$		DESIG=26
Γ_{11}	$\Lambda(1405)K^-$	$(1.9\ \pm1.2\ )\times10^{-7}$		DESIG=27
Γ_{12}	$\Lambda(1520)K^-$	$(7.6\ \pm3.2\ )\times10^{-7}$		DESIG=28
Γ_{13}	$\Lambda(1670)K^-$	$(4.5\ \pm2.3\ )\times10^{-7}$		DESIG=29
Γ_{14}	$\Sigma(1775)K^-$	$(2.2\ \pm1.5\ )\times10^{-7}$		DESIG=30
Γ_{15}	$\Sigma(1915)K^-$	$(2.6\ \pm2.5\ )\times10^{-7}$		DESIG=31
Γ_{16}	$\Lambda_c^+K^-\pi^-$			DESIG=36
Γ_{17}	$\Lambda_c^+K^-K^-$			DESIG=37
Γ_{18}	$\Lambda_c^+\pi^-\pi^-$			DESIG=38
Γ_{19}	$J/\psi\Xi^-$	seen		DESIG=34;OUR EST;→ UNCHECKED ←
Γ_{20}	$\psi(2S)\Xi^-$	seen		DESIG=33;OUR EST;→ UNCHECKED ←
Γ_{21}	$\Xi^-\gamma$	$<1.3\times10^{-4}$	95%	DESIG=32

Ξ_b^- BRANCHING RATIOS

NODE=S069215

$\Gamma(J/\psi\Xi^-\times$ B($b\to\ \Xi_b^-$)$)/\Gamma_{\rm total}$ Γ_1/Γ

NODE=S069R2
NODE=S069R2

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
$0.102^{+0.026}_{-0.021}$ OUR AVERAGE				
$0.098^{+0.023}_{-0.016}\pm0.014$	[1] AALTONEN	09AP	CDF	$p\bar{p}$ at 1.96 TeV
0.16 ±0.07 ±0.02	[2] ABAZOV	07K	D0	$p\bar{p}$ at 1.96 TeV

[1] AALTONEN 09AP reports $[\Gamma(\Xi_b\to\ J/\psi\Xi^-\times$ B($b\to\ \Xi_b^-$) $)/\Gamma_{\rm total}]$ / $[$B($\Lambda_b^0\to\ J/\psi(1S)\Lambda\times$ B($b\to\ \Lambda_b^0$) $)] = 0.167^{+0.037}_{-0.025}\pm0.012$ which we multiply by our best value B($\Lambda_b^0\to\ J/\psi(1S)\Lambda\times$ B($b\to\ \Lambda_b^0$) $) = (5.8\pm0.8)\times10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.

NODE=S069R2;LINKAGE=AA

[2] ABAZOV 07K reports $[\Gamma(\Xi_b\to\ J/\psi\Xi^-\times$ B($b\to\ \Xi_b^-$) $)/\Gamma_{\rm total}]$ / $[$B($\Lambda_b^0\to\ J/\psi(1S)\Lambda\times$ B($b\to\ \Lambda_b^0$) $)] = 0.28\pm0.09^{+0.09}_{-0.08}$ which we multiply by our best value B($\Lambda_b^0\to\ J/\psi(1S)\Lambda\times$ B($b\to\ \Lambda_b^0$) $) = (5.8\pm0.8)\times10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.

NODE=S069R2;LINKAGE=AB

$\Gamma(J/\psi\Lambda K^-\times B(b\to\Xi_b^-))/\Gamma_{total}$ Γ_2/Γ

NODE=S069R09
NODE=S069R09

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
2.45±0.19±0.35	[1,2] AAIJ	17BE	LHCB	pp at 7 and 8 TeV

[1] AAIJ 17BE reports $[\Gamma(\Xi_b\to J/\psi\Lambda K^-\times B(b\to\Xi_b^-))/\Gamma_{total}]$ / $[B(\Lambda_b^0\to J/\psi(1S)\Lambda\times B(b\to\Lambda_b^0))] = (4.19\pm0.29\pm0.15)\times10^{-2}$ which we multiply by our best value $B(\Lambda_b^0\to J/\psi(1S)\Lambda\times B(b\to\Lambda_b^0)) = (5.8\pm0.8)\times10^{-5}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S069R09;LINKAGE=A

[2] Integrated over the b-baryon transverse momentum p_T < 25 GeV and rapidity 2.0 < y < 4.5. NODE=S069R09;LINKAGE=B

$\Gamma(pK^-K^-\times B(b\to\Xi_b^-))/\Gamma_{total}$ Γ_3/Γ

NODE=S069R08
NODE=S069R08

VALUE (units 10^{-8})	DOCUMENT ID		TECN	COMMENT
3.7±0.8±0.2	[1] AAIJ	17F	LHCB	pp at 7, 8 TeV

[1] AAIJ 17F reports $[\Gamma(\Xi_b\to pK^-K^-\times B(\bar{b}\to\Xi_b))/\Gamma_{total}]$ / $[B(B^+\to K^+K^-K^+)]$ / $[B(\bar{b}\to B^+)] = (2.65\pm0.35\pm0.47)\times10^{-3}$ which we multiply by our best values $B(B^+\to K^+K^-K^+) = (3.40\pm0.14)\times10^{-5}$, $B(\bar{b}\to B^+) = (40.8\pm0.7)\times10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best values. NODE=S069R08;LINKAGE=A

$\Gamma(pK^-K^-)/\Gamma_{total}$ Γ_4/Γ

NODE=S069R12
NODE=S069R12

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
2.3±0.9	[1] AAIJ	21AH	LHCB	pp at 7, 8, 13 TeV

[1] Obtained using the ratio of fragmentation and branching fractions relative to the $B^-\to K^+K^-K^-$ decay. NODE=S069R12;LINKAGE=A

$\Gamma(p\pi^-\pi^-)/\Gamma(pK^-K^-)$ Γ_5/Γ_4

NODE=S069R11
NODE=S069R11

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.56	90	[1] AAIJ	17F	LHCB	pp at 7, 8 TeV

OCCUR=3

[1] Measures the ratio as 0.28 ± 0.16 ± 0.13. NODE=S069R11;LINKAGE=A

$\Gamma(pK^-\pi^-)/\Gamma(pK^-K^-)$ Γ_6/Γ_4

NODE=S069R10
NODE=S069R10

VALUE	DOCUMENT ID		TECN	COMMENT
0.98±0.27±0.09	AAIJ	17F	LHCB	pp at 7, 8 TeV

$\Gamma(\Lambda_b^0\pi^-\times B(b\to\Xi_b^-)/B(b\to\Lambda_b^0))/\Gamma_{total}$ Γ_7/Γ

NODE=S069R05
NODE=S069R05

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
7.0±0.9 OUR AVERAGE				
7.3±0.8±0.6	[1] AAIJ	23AV	LHCB	pp at 13 TeV
$5.7\pm1.8^{+0.8}_{-0.9}$	[2] AAIJ	15BA	LHCB	pp at 7, 8 TeV

[1] Measured in the decay chain of $\Xi_b^-\to\Lambda_b^0\pi^-$, $\Lambda_b^0\to\Lambda_c^+\pi^-$ and $\Lambda_b^0\to\Lambda_c^+\pi^-\pi^+\pi^-$, with $\Lambda_c^+\to pK^-\pi^+$. NODE=S069R05;LINKAGE=B

[2] A signal is reported with a significance of 3.2 standard deviations in the decay chain of $\Xi_b^-\to\Lambda_b^0\pi^-$, $\Lambda_b^0\to\Lambda_c^+\pi^-$, and $\Lambda_c^+\to pK^-\pi^+$. NODE=S069R05;LINKAGE=A

$\Gamma(\Xi_c^0\pi^-)/\Gamma_{total}$ Γ_8/Γ

NODE=S069R16
NODE=S069R16

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AAIJ	16O	LHCB	pp at 7, 8 TeV

$\Gamma(\Xi_c^0D_s^-\times B(b\to\Xi_b^-)/B(b\to\Lambda_b^0))/\Gamma_{total}$ Γ_9/Γ

NODE=S069R15
NODE=S069R15

VALUE (units 10^{-3})	DOCUMENT ID		TECN	COMMENT
1.9±0.5±0.2	[1] AAIJ	24V	LHCB	pp at 13 TeV

[1] AAIJ 24V reports $[\Gamma(\Xi_b^-\to\Xi_c^0D_s^-\times B(b\to\Xi_b^-)/B(b\to\Lambda_b^0))/\Gamma_{total}]$ / $[B(\Lambda_b^0\to\Lambda_c^+D_s^-)] = (16.9\pm1.3\pm4.4)\times10^{-2}$ which we multiply by our best value $B(\Lambda_b^0\to\Lambda_c^+D_s^-) = (1.10\pm0.10)\times10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S069R15;LINKAGE=A

$\Gamma(\Sigma(1385)K^-)/\Gamma_{total}$ Γ_{10}/Γ

NODE=S069R01
NODE=S069R01

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.26±0.11±0.20	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^-\to RK^-$ decay, with $R\to pK^-$. NODE=S069R01;LINKAGE=A

$\Gamma(\Lambda(1405)K^-)/\Gamma_{total}$ Γ_{11}/Γ

NODE=S069R02
NODE=S069R02

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.19±0.06±0.10	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^- \to RK^-$ decay, with $R \to pK^-$.

NODE=S069R02;LINKAGE=A

$\Gamma(\Lambda(1520)K^-)/\Gamma_{total}$ Γ_{12}/Γ

NODE=S069R03
NODE=S069R03

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.76±0.09±0.31	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^- \to RK^-$ decay, with $R \to pK^-$.

NODE=S069R03;LINKAGE=A

$\Gamma(\Lambda(1670)K^-)/\Gamma_{total}$ Γ_{13}/Γ

NODE=S069R04
NODE=S069R04

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.45±0.07±0.22	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^- \to RK^-$ decay, with $R \to pK^-$.

NODE=S069R04;LINKAGE=A

$\Gamma(\Sigma(1775)K^-)/\Gamma_{total}$ Γ_{14}/Γ

NODE=S069R06
NODE=S069R06

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.22±0.08±0.13	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^- \to RK^-$ decay, with $R \to pK^-$.

NODE=S069R06;LINKAGE=A

$\Gamma(\Sigma(1915)K^-)/\Gamma_{total}$ Γ_{15}/Γ

NODE=S069R07
NODE=S069R07

VALUE (units 10^{-6})	DOCUMENT ID		TECN	COMMENT
0.26±0.09±0.23	[1] AAIJ	21AH	LHCB	pp at 7, 8 and 13 TeV

[1] Obtained from an amplitude analysis of quasi-two-body contributions to the $\Xi_b^- \to RK^-$ decay, with $R \to pK^-$.

NODE=S069R07;LINKAGE=A

$\Gamma(\Lambda_c^+ K^- K^-)/\Gamma(\Lambda_c^+ K^- \pi^-)$ Γ_{17}/Γ_{16}

NODE=S069R17
NODE=S069R17

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
4.5±1.1±0.5	AAIJ	24T	LHCB	pp at 7, 8, 13 TeV

$\Gamma(\Lambda_c^+ \pi^- \pi^-)/\Gamma(\Lambda_c^+ K^- \pi^-)$ Γ_{18}/Γ_{16}

NODE=S069R18
NODE=S069R18

VALUE	DOCUMENT ID		TECN	COMMENT
$<6.5 \times 10^{-2}$	AAIJ	24T	LHCB	pp at 7, 8, 13 TeV

$\Gamma(\psi(2S)\Xi^-)/\Gamma(J/\psi\Xi^-)$ Γ_{20}/Γ_{19}

NODE=S069R14
NODE=S069R14

VALUE	DOCUMENT ID		TECN	COMMENT
$0.84^{+0.21}_{-0.19}\pm0.10\pm0.02$	[1] HAYRAPETY...24R		CMS	pp at 13 TeV

[1] HAYRAPETYAN 24R value last uncertainty comes from the uncertainties in the branching fractions of the charmonium states.

NODE=S069R14;LINKAGE=A

$\Gamma(\Xi^-\gamma)/\Gamma_{total}$ Γ_{21}/Γ

NODE=S069R13
NODE=S069R13

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.3 \times 10^{-4}$	95	[1] AAIJ	22F	LHCB	pp at 13 TeV

[1] Used $\Xi_b^- \to \Xi^- J/\psi$ as normalization and an integrated luminosity of 5.4 fb^{-1}.

NODE=S069R13;LINKAGE=A

P VIOLATION ASYMMETRY

NODE=S069230

$A_P(\Xi_b)$, $\Xi_b^- - \Xi_b^+$ production asymmetry

NODE=S069A03

$A_P(\Xi_b) = [\sigma(\Xi_b^-) - \sigma(\Xi_b^+)]/[\sigma(\Xi_b^-) + \sigma(\Xi_b^+)]$

NODE=S069A03
NODE=S069A03

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
−2 ±4 OUR AVERAGE				
1.1±5.6±1.9	[1,2] AAIJ	19AB	LHCB	pp at 7 and 8 TeV
−3.9±4.9±2.5	[1,2] AAIJ	19AB	LHCB	pp at 13 TeV

OCCUR=2

[1] Baryon kinematic range $p_T < 20$ GeV/c and $2 < \eta < 6$.

NODE=S069A03;LINKAGE=A

[2] Measured using previous measurements of $A_P(\Lambda_b)$ in AAIJ 17BF.

NODE=S069A03;LINKAGE=B

CP VIOLATION in Ξ_b deays

NODE=S069240

$A_{CP}(\Xi_b) = [\mathrm{B}(\Xi_b^- \to f) - \mathrm{B}(\Xi_b^+ \to \bar{f})\,]/\mathrm{Sum}$

NODE=S069240

$A_{CP}(\Xi_b^- \to \Sigma(1385)K^-)$

NODE=S069A01
NODE=S069A01

VALUE	DOCUMENT ID	TECN	COMMENT
$(-27\pm34\pm73)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^- \to \Lambda(1405)K^-)$

NODE=S069A02
NODE=S069A02

VALUE	DOCUMENT ID	TECN	COMMENT
$(-1\pm24\pm32)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^- \to \Lambda(1520)K^-)$

NODE=S069A04
NODE=S069A04

VALUE	DOCUMENT ID	TECN	COMMENT
$(-5\pm9\pm8)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^- \to \Lambda(1670)K^-)$

NODE=S069A05
NODE=S069A05

VALUE	DOCUMENT ID	TECN	COMMENT
$(3\pm14\pm10)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^- \to \Sigma(1775)K^-)$

NODE=S069A06
NODE=S069A06

VALUE	DOCUMENT ID	TECN	COMMENT
$(-47\pm26\pm14)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

$A_{CP}(\Xi_b^- \to \Sigma(1915)K^-)$

NODE=S069A07
NODE=S069A07

VALUE	DOCUMENT ID	TECN	COMMENT
$(11\pm26\pm22)\times10^{-2}$	AAIJ	21AH LHCB	pp at 7, 8, 13 TeV

Ξ_b^- REFERENCES

NODE=S069

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