# $\Xi_b^-$

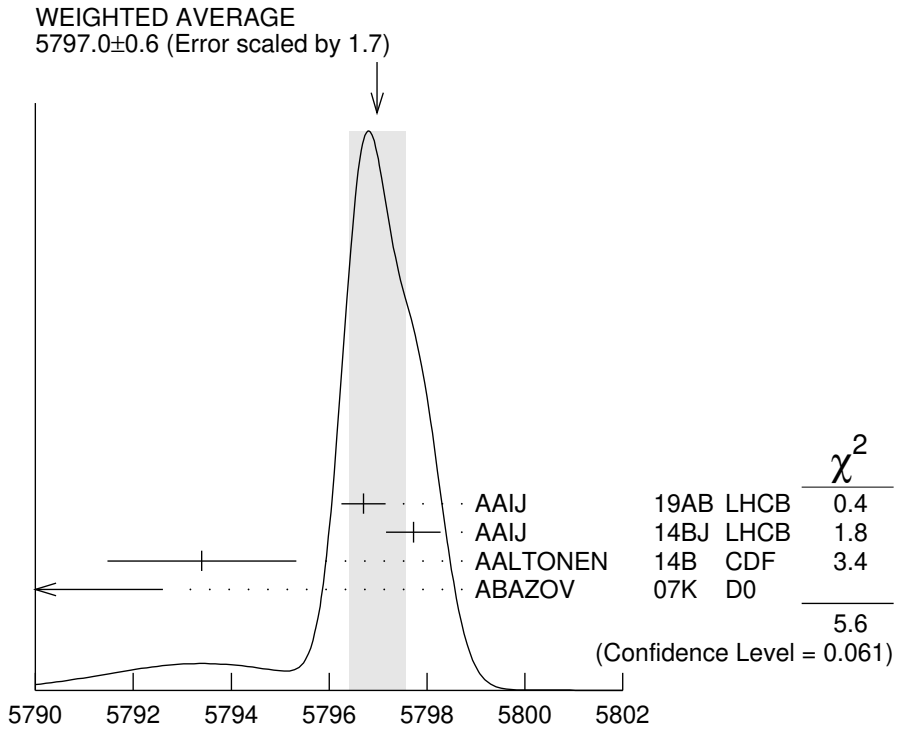
$I(J^P) = \frac{1}{2}(\frac{1}{2}^+)$ Status: ***
$I$, $J$, $P$ need confirmation.

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

## $\Xi_b^-$ MASS

### $\Xi_b^-$ MASS

| *VALUE* (MeV) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **5797.0 ± 0.6 OUR AVERAGE** | Error includes scale factor of 1.7. See the ideogram below. | | | |
| 5796.70± 0.39± 0.23 | AAIJ | 19AB | LHCB | $pp$ at 7, 8 and 13 TeV |
| 5797.72± 0.46± 0.31 | [1] AAIJ | 14BJ | LHCB | $pp$ at 7, 8 TeV |
| 5793.4 ± 1.8 ± 0.7 | [2] AALTONEN | 14B | CDF | $p\overline{p}$ at 1.96 TeV |
| 5774 ±11 ±15 | [3] ABAZOV | 07K | D0 | $p\overline{p}$ at 1.96 TeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| 5795.8 ± 0.9 ± 0.4 | [4] AAIJ | 13AV | LHCB | Repl. by AAIJ 19AB |
| 5796.7 ± 5.1 ± 1.4 | [5] AALTONEN | 11X | CDF | Repl. by AALTONEN 14B |
| 5790.9 ± 2.6 ± 0.8 | [6] AALTONEN | 09AP | CDF | Repl. by AALTONEN 14B |
| 5792.9 ± 2.5 ± 1.7 | [7] AALTONEN | 07A | CDF | Repl. by AALTONEN 09AP |




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

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

[3] 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.

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

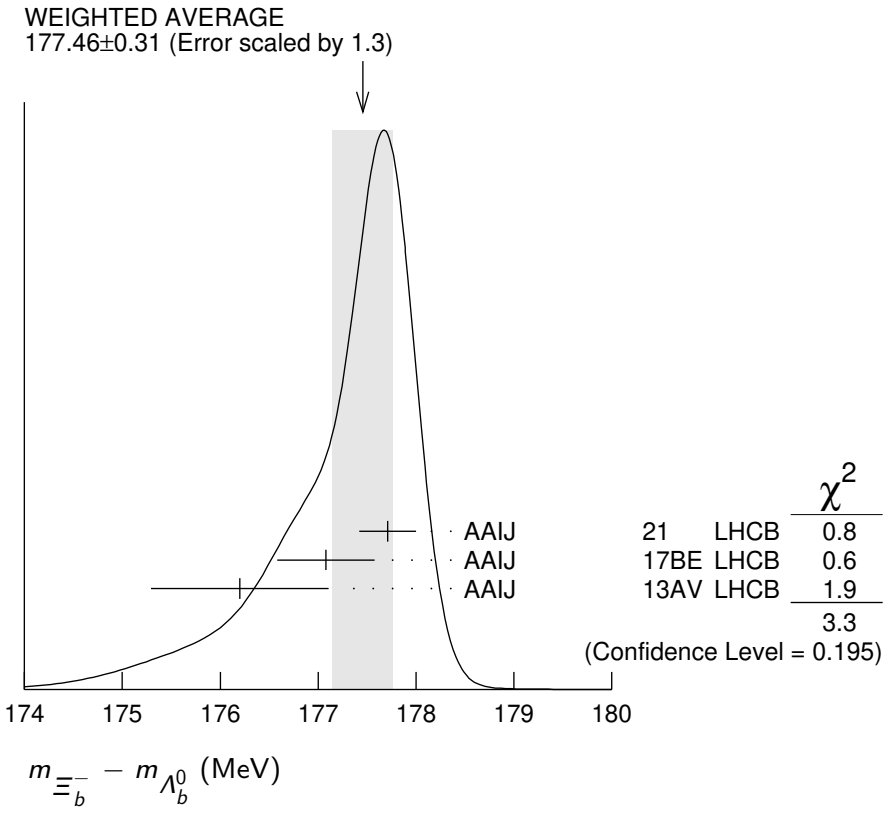
[5] Measured in $\Xi_b^- \to \Xi_c^0\pi^-$ with $25.8^{+5.5}_{-5.2}$ candidates.

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

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

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

| *VALUE* (MeV) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **177.46±0.31 OUR AVERAGE** | Error includes scale factor of 1.3. See the ideogram below. | | | |
| 177.71±0.24±0.16 | [1] AAIJ | 21 | LHCB | $pp$ at 7, 8, 13 TeV |
| 177.08±0.47±0.16 | [2] AAIJ | 17BE | LHCB | $pp$ at 7, 8 TeV |
| 176.2 ±0.9 ±0.1 | [3] 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 | [4] AAIJ | 17BE | LHCB | $pp$ at 7, 8 TeV |
| 178.36±0.46±0.16 | [1,5] AAIJ | 14BJ | LHCB | Repl. by AAIJ 2021 |




| | | | $\chi^2$ |
|---|---|---|---|
| AAIJ | 21 | LHCB | 0.8 |
| AAIJ | 17BE | LHCB | 0.6 |
| AAIJ | 13AV | LHCB | 1.9 |
| | | | 3.3 |

(Confidence Level = 0.195)

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0\pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays.Reference decays $\Lambda_b^0 \to \Lambda_c^+\pi^-$ were used.

[2] Reconstructed in $\Xi_b^- \to J/\psi\Lambda K^-$ decays. Reference decays $\Lambda_b^0 \to J/\psi\Lambda$ were used.

[3] Reconstructed in $\Xi_b^- \to J/\psi\Xi^-$ decays.

[4] Combination of the original statistically independent measurements of AAIJ 17BE and AAIJ 14BJ taking into account correlation between systematic uncertainties.
[5] Combined with AAIJ 17BE.

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

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **5.9 ±0.6 OUR AVERAGE** | | | | |
| 5.92±0.60±0.23 | [1] AAIJ | 14BJ | LHCB | $pp$ at 7, 8 TeV |
| 3.1 ±5.6 ±1.3 | [2] AALTONEN | 11X | CDF | $p\overline{p}$ at 1.96 TeV |

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0\pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays. Uses $m(\Xi_b^0) - m(\Lambda_b^0)$ = 172.44 ± 0.39 ± 0.17 MeV from AAIJ 14Z.
[2] 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.

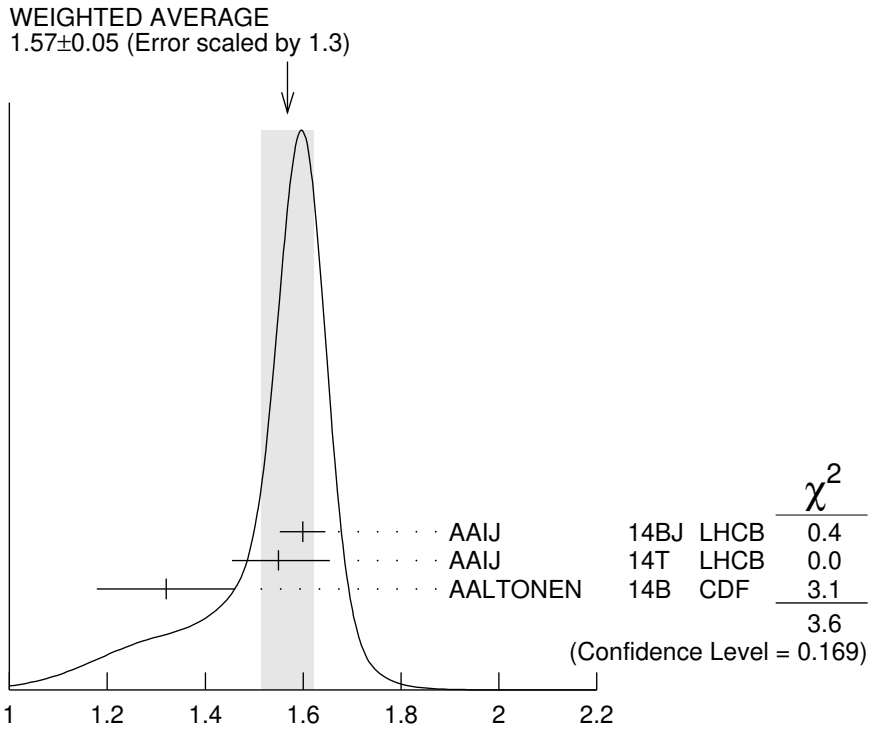
## $\Xi_b^-$ MEAN LIFE

"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.

## $\Xi_b^-$ MEAN LIFE

| VALUE ($10^{-12}$ s) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **1.572±0.040 OUR EVALUATION** (Produced by HFLAV) | | | | |
| **1.57 ±0.05 OUR AVERAGE** Error includes scale factor of 1.3. See the ideogram below. | | | | |
| 1.599±0.041±0.022 | [1] AAIJ | 14BJ | LHCB | $pp$ at 7, 8 TeV |
| $1.55\ ^{+0.10}_{-0.09}\ \pm0.03$ | [2] AAIJ | 14T | LHCB | $pp$ at 7, 8 TeV |
| 1.32 ±0.14 ±0.02 | AALTONEN | 14B | CDF | $p\overline{p}$ at 1.96 TeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| $1.56\ ^{+0.27}_{-0.25}\ \pm0.02$ | [3] AALTONEN | 09AP | CDF | Repl. by AALTONEN 14B |

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0\pi^-$, $\Xi_c^0 \to pK^-K^-\pi^+$ decays. Reference $\Lambda_b^0$ lifetime 1.479 ± 0.009 ± 0.010 ps from AAIJ 14U.
[2] Measured in $\Xi_b^- \to J/\psi\Xi^-$ decays.
[3] Measured in $\Xi_b^- \to J/\psi\Xi^-$ decays with $66^{+14}_{-9}$ candidates.




## MEAN LIFE RATIOS

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

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **1.089±0.026±0.011** | [1] AAIJ | 14BJ | LHCB | $pp$ at 7, 8 TeV |

[1] Reconstructed in $\Xi_b^- \to \Xi_c^0 \pi^-$, $\Xi_c^0 \to p K^- K^- \pi^+$ decays. Reference $\Lambda_b^0 \to \Lambda_c^+ \pi^-$.

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

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

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

## $\Xi_b^-$ DECAY MODES

| | Mode | Fraction ($\Gamma_i/\Gamma$) | Confidence level |
|---|---|---|---|
| $\Gamma_1$ | $J/\psi \Xi^- \times$ B($b \to \Xi_b^-$) | $(1.02^{+0.26}_{-0.21}) \times 10^{-5}$ | |
| $\Gamma_2$ | $J/\psi \Lambda K^- \times$ B($b \to \Xi_b^-$) | $(2.5 \pm 0.4) \times 10^{-6}$ | |
| $\Gamma_3$ | $p K^- K^- \times$ B($b \to \Xi_b^-$) | $(3.7 \pm 0.8) \times 10^{-8}$ | |
| $\Gamma_4$ | $p K^- K^-$ | seen | |
| $\Gamma_5$ | $p \pi^- \pi^-$ | | |
| $\Gamma_6$ | $p K^- \pi^-$ | seen | |

| | | | | |
|---|---|---|---|---|
| $\Gamma_7$ | $\Lambda_b^0\pi^-\times$ B$(b\to\ \Xi_b^-)$/B$(b\to\ \Lambda_b^0)$ | $(7.0\ \pm0.9\ )\times10^{-4}$ | | |
| $\Gamma_8$ | $\Xi_c^0\pi^-$ | seen | | |
| $\Gamma_9$ | $\Sigma(1385)K^-$ | $(2.6\ \pm2.3\ )\times10^{-7}$ | | |
| $\Gamma_{10}$ | $\Lambda(1405)K^-$ | $(1.9\ \pm1.2\ )\times10^{-7}$ | | |
| $\Gamma_{11}$ | $\Lambda(1520)K^-$ | $(7.6\ \pm3.2\ )\times10^{-7}$ | | |
| $\Gamma_{12}$ | $\Lambda(1670)K^-$ | $(4.5\ \pm2.3\ )\times10^{-7}$ | | |
| $\Gamma_{13}$ | $\Sigma(1775)K^-$ | $(2.2\ \pm1.5\ )\times10^{-7}$ | | |
| $\Gamma_{14}$ | $\Sigma(1915)K^-$ | $(2.6\ \pm2.5\ )\times10^{-7}$ | | |
| $\Gamma_{15}$ | $\Xi^-\gamma$ | $<1.3$ | $\times10^{-4}$ | 95% |

## $\Xi_b^-$ BRANCHING RATIOS

### $\Gamma(J/\psi\Xi^-\times$ B$(b\to\ \Xi_b^-))/\Gamma_{\text{total}}$ $\Gamma_1/\Gamma$

| *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 | $p\overline{p}$ at 1.96 TeV |
| $0.16\ \pm0.07\ \pm0.02$ | [2] ABAZOV | 07K | D0 | $p\overline{p}$ at 1.96 TeV |

[1] AALTONEN 09AP reports $[\Gamma(\Xi_b\to\ J/\psi\Xi^-\times$ B$(b\to\ \Xi_b^-)\ )/\Gamma_{\text{total}}]$ / $[$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.

[2] ABAZOV 07K reports $[\Gamma(\Xi_b\to\ J/\psi\Xi^-\times$ B$(b\to\ \Xi_b^-)\ )/\Gamma_{\text{total}}]$ / $[$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.

### $\Gamma(J/\psi\Lambda K^-\times$ B$(b\to\ \Xi_b^-))/\Gamma_{\text{total}}$ $\Gamma_2/\Gamma$

| *VALUE* (units $10^{-6}$) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **$2.45\pm0.19\pm0.35$** | [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$(b\to\ \Xi_b^-)\ )/\Gamma_{\text{total}}]$ / $[$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.

[2] Integrated over the $b$-baryon transverse momentum $p_T\ <25$ GeV and rapidity $2.0<$ y $<4.5$.

### $\Gamma(pK^-K^-\times$ B$(b\to\ \Xi_b^-))/\Gamma_{\text{total}}$ $\Gamma_3/\Gamma$

| *VALUE* (units $10^{-8}$) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **$3.7\pm0.8\pm0.2$** | [1] AAIJ | 17F | LHCB | $pp$ at 7, 8 TeV |

[1] AAIJ 17F reports $[\Gamma(\Xi_b\to\ pK^-K^-\times$ B$(\overline{b}\to\ \Xi_b)\ )/\Gamma_{\text{total}}]$ / $[$B$(B^+\to\ K^+K^-K^+)]$ / $[$B$(\overline{b}\to\ B^+)] = (2.65\pm0.35\pm0.47)\times10^{-3}$ which we multiply by our best values B$(B^+\to\ K^+K^-K^+) = (3.40\pm0.14)\times10^{-5}$, B$(\overline{b}\to\ B^+) =$

$(40.8 \pm 0.7) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best values.

### $\Gamma(pK^-K^-)/\Gamma_{total}$ $\Gamma_4/\Gamma$

| 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.

### $\Gamma(p\pi^-\pi^-)/\Gamma(pK^-K^-)$ $\Gamma_5/\Gamma_4$

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

[1] Measures the ratio as $0.28 \pm 0.16 \pm 0.13$.

### $\Gamma(pK^-\pi^-)/\Gamma(pK^-K^-)$ $\Gamma_6/\Gamma_4$

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

### $\Gamma(\Lambda_b^0\pi^- \times B(b \to \Xi_b^-)/B(b \to \Lambda_b^0))/\Gamma_{total}$ $\Gamma_7/\Gamma$

| VALUE (units $10^{-4}$) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **7.0±0.9 OUR AVERAGE** | | | | |
| $7.3 \pm 0.8 \pm 0.6$ | [1] AAIJ | 23AV | LHCB | $pp$ at 13 TeV |
| $5.7 \pm 1.8^{+0.8}_{-0.9}$ | [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 $\Lambda_c^+ \to pK^-\pi^+$.

[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 $\Lambda_c^+ \to pK^-\pi^+$.

### $\Gamma(\Xi_c^0\pi^-)/\Gamma_{total}$ $\Gamma_8/\Gamma$

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

### $\Gamma(\Sigma(1385)K^-)/\Gamma_{total}$ $\Gamma_9/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Lambda(1405)K^-)/\Gamma_{total}$ $\Gamma_{10}/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Lambda(1520)K^-)/\Gamma_{total}$ $\Gamma_{11}/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Lambda(1670)K^-)/\Gamma_{total}$ $\Gamma_{12}/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Sigma(1775)K^-)/\Gamma_{total}$ $\Gamma_{13}/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Sigma(1915)K^-)/\Gamma_{total}$ $\Gamma_{14}/\Gamma$

| 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 $R \to pK^-$.

### $\Gamma(\Xi^-\gamma)/\Gamma_{total}$ $\Gamma_{15}/\Gamma$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **$<1.3\times10^{-4}$** | 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$^{-1}$.

## $P$ VIOLATION ASYMMETRY

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

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

| 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 |

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

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

## CP VIOLATION in $\Xi_b$ deays

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

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

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

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

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

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

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

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

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

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

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

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

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

## $\Xi_b^-$ REFERENCES


| | | | | |
|---|---|---|---|---|
| AAIJ | 23AV | PR D108 072002 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 22F | JHEP 2201 069 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 21 | PR D103 012004 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 21AH | PR D104 052010 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 19AB | PR D99 052006 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 17BE | PL B772 265 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 17BF | PL B774 139 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 17F | PRL 118 071801 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 16O | PR D93 092007 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 15BA | PRL 115 241801 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 14AA | PRL 112 202001 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 14BJ | PRL 113 242002 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 14T | PL B736 154 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 14U | PL B734 122 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 14Z | PRL 113 032001 | R. Aaij *et al.* | (LHCb Collab.) |
| AALTONEN | 14B | PR D89 072014 | T. Aaltonen *et al.* | (CDF Collab.) |
| AAIJ | 13AV | PRL 110 182001 | R. Aaij *et al.* | (LHCb Collab.) |
| AALTONEN | 11X | PRL 107 102001 | T. Aaltonen *et al.* | (CDF Collab.) |
| AALTONEN | 09AP | PR D80 072003 | T. Aaltonen *et al.* | (CDF Collab.) |
| AALTONEN | 07A | PRL 99 052002 | T. Aaltonen *et al.* | (CDF Collab.) |
| ABAZOV | 07K | PRL 99 052001 | V.M. Abazov *et al.* | (D0 Collab.) |