



$$I(J^P) = ?(?^?) \quad \text{Status: } ***$$

### $\Xi_{cc}^{++}$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>3621.2 ± 0.7 OUR AVERAGE</b>				
3620.6 ± 1.5 ± 0.4 ± 0.3	91	<sup>1</sup> AAIJ	18BA LHCB	$pp$ at 13 TeV
3621.40 ± 0.72 ± 0.27 ± 0.14	313	<sup>2</sup> AAIJ	17BC LHCB	$pp$ at 13 TeV

<sup>1</sup> The third error in AAIJ 18BA value is from the uncertainty of the  $\Xi_c^+$  mass.

<sup>2</sup> The third error in AAIJ 17BC value is from the uncertainty of the  $\Lambda_c^+$  mass. The width of the signal is  $6.6 \pm 0.8$  MeV, consistent with the experimental resolution.

### $\Xi_{cc}^{++}$ MEAN LIFE

VALUE ( $10^{-15}$ s)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>256<sup>+24</sup><sub>-22</sub> ± 14</b>	304	AAIJ	18G LHCB	$pp$ at 13 TeV

### $\Xi_{cc}^{++}$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Lambda_c^+ K^- \pi^+ \pi^+$	seen
$\Gamma_2 \quad \Xi_c^+ \pi^+, \Xi_c^+ \rightarrow p K^- \pi^+$	seen

### $\Gamma(\Lambda_c^+ K^- \pi^+ \pi^+)/\Gamma_{\text{total}} \quad \Gamma_1/\Gamma$

VALUE	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	AAIJ	17BC LHCB	12 std significance

### $\Gamma(\Xi_c^+ \pi^+, \Xi_c^+ \rightarrow p K^- \pi^+)/\Gamma_{\text{total}} \quad \Gamma_2/\Gamma$

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	91	AAIJ	18BA LHCB	5.9 std significance

### $\Gamma(\Xi_c^+ \pi^+, \Xi_c^+ \rightarrow p K^- \pi^+)/\Gamma(\Lambda_c^+ K^- \pi^+ \pi^+) \quad \Gamma_2/\Gamma_1$

VALUE (units $10^{-3}$ )	DOCUMENT ID	TECN	COMMENT
<b>2.2 ± 0.6 ± 0.1</b>	<sup>3</sup> AAIJ	18BA LHCB	Ratio 91 over 289 events

<sup>3</sup> AAIJ 18BA reports  $[\Gamma(\Xi_{cc}^{++} \rightarrow \Xi_c^+ \pi^+, \Xi_c^+ \rightarrow p K^- \pi^+)/\Gamma(\Xi_{cc}^{++} \rightarrow \Lambda_c^+ K^- \pi^+ \pi^+)] / [B(\Lambda_c^+ \rightarrow p K^- \pi^+)] = (3.5 \pm 0.9 \pm 0.3) \times 10^{-2}$  which we multiply by our best value  $B(\Lambda_c^+ \rightarrow p K^- \pi^+) = (6.28 \pm 0.32) \times 10^{-2}$ . Our first error is their experiment's error and our second error is the systematic error from using our best value.

$\Xi_{cc}^{++}$  REFERENCES

AAIJ	18BA	PRL 121	162002	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	18G	PRL 121	052002	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	17BC	PRL 119	112001	R. Aaij <i>et al.</i>	(LHCb Collab.)

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