

$\Xi'_b(5935)^-$ 

$J^P = \frac{1}{2}^+$

Status: \*\*\*

 $\Xi'_b(5935)^-$  MASS

| VALUE (MeV)              | DOCUMENT ID       | TECN     | COMMENT          |
|--------------------------|-------------------|----------|------------------|
| <b>5935.02±0.02±0.05</b> | <sup>1</sup> AAIJ | 15H LHCb | $pp$ at 7, 8 TeV |

<sup>1</sup> Not independent of the mass difference measurement below. Observed in  $\Xi_b^0 \pi^-$  channel with  $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$  and  $\Xi_c^+ \rightarrow p K^- \pi^+$ .

$m_{\Xi'_b(5935)^-} - m_{\Xi_b^0} - m_{\pi^-}$

| VALUE (MeV)              | DOCUMENT ID       | TECN     | COMMENT          |
|--------------------------|-------------------|----------|------------------|
| <b>3.653±0.018±0.006</b> | <sup>2</sup> AAIJ | 15H LHCb | $pp$ at 7, 8 TeV |

<sup>2</sup> Observed in  $\Xi_b^0 \pi^-$  channel with  $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$  and  $\Xi_c^+ \rightarrow p K^- \pi^+$ .

 $\Xi'_b(5935)^-$  WIDTH

| VALUE (MeV)     | CL% | DOCUMENT ID       | TECN     | COMMENT          |
|-----------------|-----|-------------------|----------|------------------|
| <b>&lt;0.08</b> | 95  | <sup>3</sup> AAIJ | 15H LHCb | $pp$ at 7, 8 TeV |

<sup>3</sup> Observed in  $\Xi_b^0 \pi^-$  channel with  $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$  and  $\Xi_c^+ \rightarrow p K^- \pi^+$ .

 $\Xi'_b(5935)^-$  DECAY MODES

| Mode   | Fraction ( $\Gamma_i/\Gamma$ ) |
|--|--------------------------------|
| $\Gamma_1 \quad \Xi_b^0 \pi^- \times B(\bar{b} \rightarrow \Xi'_b(5935)^-)/B(\bar{b} \rightarrow \Xi_b^0)$ | (11.8±1.8) %                   |

 $\Xi'_b(5935)^-$  BRANCHING RATIOS

| $\Gamma(\Xi_b^0 \pi^- \times B(\bar{b} \rightarrow \Xi'_b(5935)^-)/B(\bar{b} \rightarrow \Xi_b^0))/\Gamma_{\text{total}}$ | $\Gamma_1/\Gamma$ |          |                  |
|---|-------------------|----------|------------------|
| VALUE   | DOCUMENT ID       | TECN     | COMMENT          |
| <b>0.118±0.017±0.007</b>  | <sup>4</sup> AAIJ | 15H LHCb | $pp$ at 7, 8 TeV |

<sup>4</sup> Observed in  $\Xi_b^0 \pi^-$  channel with  $\Xi_b^0 \rightarrow \Xi_c^+ \pi^-$  and  $\Xi_c^+ \rightarrow p K^- \pi^+$ .

 $\Xi'_b(5935)^-$  REFERENCESAAIJ 15H PRL 114 062004 R. Aaij *et al.* (LHCb Collab.)