

$\Xi_b(6227)^0$

$J^P = \text{?}^{\text{?}}$

Status: \* \* \*

$\Xi_b(6227)^0$  MASS

| VALUE (MeV)                                                                                                                                                                                                                                                                                                    | DOCUMENT ID         | TECN | COMMENT                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------|--------------------------------|
| $6226.8^{+1.4}_{-1.5} \pm 0.6$                                                                                                                                                                                                                                                                                 | <sup>1,2</sup> AAIJ | 21   | LHCB <i>pp</i> at 7, 8, 13 TeV |
| <sup>1</sup> AAIJ 21 measures $m(\Xi_b(6227)^0) - m(\Xi_b^-) = 429.8^{+1.4}_{-1.5} \pm 0.3$ MeV. We have adjusted the measurement to our best value of $m(\Xi_b^-) = 5797.0 \pm 0.6$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values. |                     |      |                                |
| <sup>2</sup> Uses $\Xi_b^- \pi^+$ decays.                                                                                                                                                                                                                                                                      |                     |      |                                |

$\Xi_b(6227)^0$  WIDTH

| VALUE (MeV)                               | DOCUMENT ID       | TECN | COMMENT                        |
|-------------------------------------------|-------------------|------|--------------------------------|
| $18.6^{+5.0}_{-4.1} \pm 1.4$              | <sup>1</sup> AAIJ | 21   | LHCB <i>pp</i> at 7, 8, 13 TeV |
| <sup>1</sup> Uses $\Xi_b^- \pi^+$ decays. |                   |      |                                |

$\Xi_b(6227)^0$  DECAY MODES

| Mode                                                                                          | Fraction ( $\Gamma_i/\Gamma$ ) |
|-----------------------------------------------------------------------------------------------|--------------------------------|
| $\Gamma_1 \quad \Xi_b^- \pi^+ \times B(b \rightarrow \Xi_b(6227)^0)/B(b \rightarrow \Xi_b^-)$ | $(4.5 \pm 0.9) \%$             |

$\Xi_b(6227)^0$  BRANCHING RATIOS

| $\Gamma(\Xi_b^- \pi^+ \times B(b \rightarrow \Xi_b(6227)^0)/B(b \rightarrow \Xi_b^-))/\Gamma_{\text{total}}$ |             |      |         | $\Gamma_1/\Gamma$         |
|--------------------------------------------------------------------------------------------------------------|-------------|------|---------|---------------------------|
| VALUE (%)                                                                                                    | DOCUMENT ID | TECN | COMMENT |                           |
| <b>4.5±0.8±0.4</b>                                                                                           | AAIJ        | 21   | LHCB    | <i>pp</i> at 7, 8, 13 TeV |

$\Xi_b(6227)^0$  REFERENCES

|      |    |                |                       |                |
|------|----|----------------|-----------------------|----------------|
| AAIJ | 21 | PR D103 012004 | R. Aaij <i>et al.</i> | (LHCb Collab.) |
|------|----|----------------|-----------------------|----------------|