$\Xi_b(6227)$

$J^P = ?^?$ Status: ***

$\Xi_b(6227)$ MASS

VALUE (MeV)		*DOCUMENT ID*		*TECN*	*COMMENT*
6226.9±2.0±0.4	[1,2]	AAIJ	18H	LHCB	pp at 7, 8, 13 TeV

[1] Uses $\Lambda_b^0 K^-$ and $\Xi_b^0 \pi^-$ modes.

[2] Measures mass difference $m(\Xi_b(6227)^-) - m(\Lambda_b^0) = 607.3 \pm 2.0 \pm 0.3$ MeV and uses $m(\Lambda_b^0) = 5619.58 \pm 0.17$ MeV.

$\Xi_b(6227)$ WIDTH

VALUE (MeV)		*DOCUMENT ID*		*TECN*	*COMMENT*
18.1±5.4±1.8	[1]	AAIJ	18H	LHCB	pp at 7, 8, 13 TeV

[1] Uses $\Lambda_b^0 K^-$ and $\Xi_b^0 \pi^-$ modes.

$\Xi_b(6227)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)	Scale factor
Γ_1	$\Lambda_b^0 K^- \times$ B($b \to$ $\Xi_b(6227)$)/B($b \to$ Λ_b^0)	$(3.20 \pm 0.35) \times 10^{-3}$	
Γ_2	$\Xi_b^0 \pi^- \times$ B($b \to$ $\Xi_b(6227)$)/B($b \to$ Ξ_b^0)	(2.8 ±1.1) %	1.8

$\Xi_b(6227)$ BRANCHING RATIOS

$\Gamma(\Lambda_b^0 K^- \times B(b \to \Xi_b(6227))/B(b \to \Lambda_b^0))/\Gamma_{total}$ Γ_1/Γ

VALUE (units 10^{-3})	*DOCUMENT ID*		*TECN*	*COMMENT*
3.20±0.35 OUR AVERAGE				
3.0 ±0.3 ±0.4	AAIJ	18H	LHCB	pp at 7, 8 TeV
3.4 ±0.3 ±0.4	AAIJ	18H	LHCB	pp at 13 TeV

$\Gamma(\Xi_b^0 \pi^- \times B(b \to \Xi_b(6227))/B(b \to \Xi_b^0))/\Gamma_{total}$ Γ_2/Γ

VALUE (units 10^{-3})	*DOCUMENT ID*		*TECN*	*COMMENT*
28±11 OUR AVERAGE Error includes scale factor of 1.8.				
47±10±7	AAIJ	18H	LHCB	pp at 7, 8 TeV
22± 6±3	AAIJ	18H	LHCB	pp at 13 TeV

$\Xi_b(6227)$ REFERENCES

AAIJ 18H PRL 121 072002 R. Aaij *et al.* (LHCb Collab.)