

$\Lambda_b(6152)^0$

$$J^P = \frac{5}{2}^+$$

Status: ***

Quantum numbers are based on quark model expectations.

$\Lambda_b(6152)^0$ MASS

$\Lambda_b(6152)^0$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
6152.5 ± 0.4 OUR AVERAGE			
6152.7 ± 1.2 ± 0.2	¹ SIRUNYAN	20K CMS	pp at 13 TeV
6152.51 ± 0.26 ± 0.27	² AAIJ	19AJ LHCB	pp at 7, 8, 13 TeV

¹ SIRUNYAN 20K measures $m(\Lambda_b(6152)^0) - m(\Lambda_b^0) = 533.1 \pm 1.1 \pm 0.4$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.57 \pm 0.16$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

² Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$m_{\Lambda_b(6152)^0} - m_{\Lambda_b^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
532.89 ± 0.26 ± 0.10	¹ AAIJ	19AJ LHCB	pp at 7, 8, 13 TeV

¹ Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$m_{\Lambda_b(6152)^0} - m_{\Lambda_b(6146)^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
6.34 ± 0.32 ± 0.02	AAIJ	19AJ LHCB	pp at 7, 8, 13 TeV

$\Lambda_b(6152)^0$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2.1 ± 0.8 ± 0.3	¹ AAIJ	19AJ LHCB	pp at 7, 8, 13 TeV

¹ Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$\Lambda_b(6152)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Lambda_b^0 \pi^+ \pi^-$	seen

$\Lambda_b(6152)^0$ BRANCHING RATIOS

$\Gamma(\Lambda_b^0 \pi^+ \pi^-)/\Gamma_{\text{total}}$		Γ_1/Γ	
VALUE	DOCUMENT ID	TECN	COMMENT
seen	SIRUNYAN	20K LHCB	pp at 13 TeV
seen	AAIJ	19AJ LHCB	pp at 7, 8, 13 TeV

$\Lambda_b(6152)^0$ REFERENCES

SIRUNYAN	20K	PL B803 135345	A.M. Sirunyan <i>et al.</i>	(CMS Collab.)
AAIJ	19AJ	PRL 123 152001	R. Aaij <i>et al.</i>	(LHCb Collab.)
